Perspectives for Germany

Our Strategy for Sustainable Development

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Abbreviations

ACEA =	Association des Constructeurs Européens d' Automobiles European Automobile Manufacturers' Association
BAföG =	Bundesausbildungsförderungs-Gesetz German Education and Training Assistance Act
B.A.U.M. =	Bundesdeutscher Arbeitskreis für Umweltbewusstes Management e.V. German Environmental Management Association
BBR =	Bundesamt für Bauwesen und Raumordnung Federal Office for Building and Regional Planning
BDI =	Bundesverband der Industrie e.V. National Association of German Industries
BfN =	Bundesamt für Naturschutz Federal Agency for the Nature Conservation
BfR =	Bundesinstitut für Risikobewertung Federal Institute for Risk Assessment
BImSchG =	Bundes-Immissionsschutzgesetz Federal Emission Control Act
BLE =	Bundesanstalt für Landwirtschaft und Ernährung Federal Agency for Agriculture and Food
BLK =	Bund-Länder-Kommission Bund-Länder Commission for Educational Planning and Research Promotion
BLV =	Bundesamt für Verbraucherschutz und Lebensmittelsicherheit Federal Office for Consumer Protection and Food Safety
BMBF =	Bundesministerium für Bildung und Forschung Federal Ministry of Education and Research
BMF =	Bundesfinanzministerium Federal Ministry of Finance
BMG =	Bundesministerium für Gesundheit Federal Ministry for Health
BMI =	Bundesministerium für Inneres Federal Ministry of the Interior
BMU =	Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
BMVBW =	Bundesministerium für Verkehr, Bau- und Wohnungswesen Federal Ministry of Transport, Building and Housing
BMVEL =	Bundesministerium für Verbraucherschutz, Landwirtschaft und Ernährung Federal Ministry for Consumer Protection, Food and Agriculture
BMWi =	Bundesministerium für Wirtschaft und Technologie Federal Ministry of Economics and Technology
BMZ =	Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung Federal Ministry for Economic Cooperation and Development

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BSE = Bovine Spongiform Encephalopathy, “mad cow“ disease
BTU-Programm = Beteilgungsprogramm für kleine Technologieunternehmen
Venture capital for small technology businesses
BUND = Bund für Umwelt- und Naturschutz Deutschland
Friends of the Earth Germany
CAP = Common Agricultural Policy
CBD = Convention on Biological Diversity
CF_4 = Tetrafluormethane
C_2F_6 = Hexafluorethane
C_3F_8 = Octafluoropropane
CFC = Chlorofluorohydrocarbons
CH_4 = Methane
CHP = Combined Heat Power Cycle
CMA = Zentrale Marketinggesellschaft der deutschen Agrarwirtschaft
Central Marketing Association of the German Agricultural Industry
CO = Carbon monoxide
CO_2 = Carbon dioxide
CSD = United Nations Commission on Sustainable Development
DAX = Deutscher Aktienindex
German Stock Market Index
dB(A) = Decibel - unit to measure a sound level, measured by a particular frequency curve (A) as a reference
DBK = Deutsche Bischofskonferenz
German Conference of Bishops
DBU = Deutsche Bundesstiftung Umwelt
German Federal Foundation for the Environment
dena = Deutsche Energieagentur
German Energy Agency
DFG = Deutsche Forschungsgemeinschaft
Central public funding organisation for academic research
DGB = Deutscher Gewerkschaftsbund
German trades union umbrella organisation
DIW = Deutsches Institut für Wirtschaftsforschung
German Institute for Economic Research
DLG = Deutsche Landwirtschaftsgesellschaft
German Agricultural Society
DLR = Deutsches Zentrum für Luft- und Raumfahrt
German Aerospace Center
DNR = Deutscher Naturschutzring
German League for Nature Conservation and Environmental Protection
DVL = Deutscher Verband für Landschaftspflege
German Association for Landcare
EC = European Communities
ECE = cf. UNECE
EEA = European Environment Agency
EEG = Erneuerbare-Energien-Gesetz
Renewable Energies Act

EIA =	European Union Environmental Impact Assessment Guidelines
EJ =	Exa-Joule = 10^{18} Joule
EFSA =	European Food Safety Authority
EKD =	Evangelische Kirche Deutschland Protestant Church in Germany
EMAS =	Eco-Management and Audit-Scheme
EU =	European Union
EVU =	Energieversorgungs-Unternehmen Energy suppliers
FAO =	Food and Agriculture Organization of the United Nations
FHC =	Fluorohydrocarbons (chlorine free)
FSC =	Forest Stewardship Council
FSGV =	Forschungsgesellschaft für Straßen- und Verkehrswesen Research Association for Roads and Traffic
G 7 =	Amalgamation of the seven largest industrial nations of the world
G 8 =	Amalgamation of the seven largest industrial nations of the world and Russia
GAK =	Bund-Länder-Gemeinschaftsaufgabe „Verbesserung der Agrarstruktur und des Küstenschutzes“ Bund-Länder Joint Task “Improvement of the Agricultural Structure and of Coastal Protection”
GDP =	Gross Domestic Product
GJ =	Giga Joule = 10^9 Joule
GPA =	Global Programme of Action for the Protection of the Maritime Environment from Land-based Activities
GuD-Kraftwerke =	Gas- und Dampfturbinen-Kraftwerke Gas and Steam Turbine Power Stations
GTZ =	Gesellschaft für Technische Zusammenarbeit Government-owned corporation for international cooperation
HC =	Hydrocarbons
HCFC =	Halogenated Chlorofluorohydrocarbons
HRG =	Hochschulrahmengesetz Framework Act for Higher Education
IEA =	International Energy Agency
ILO =	International Labour Organisation
IMF =	International Monetary Fund
IPCC =	International Panel on Climate Change
IPPCD =	Directive Concerning Integrated Pollution Prevention and Control
JUMP =	JUgend Mit Perspektive Federal Action Programme Against Youth Unemployment
kWh/a =	kilowatt hours p.a.
KWK-Gesetz =	Kraft-Wärme-Kopplung Gesetz (cf. CHP)
MAP =	Marktanreizprogramm Erneuerbare Energien Market Incentive Programme Renewable Energies
MISEREOR =	German Catholic Bishops’ Organisation for Development Cooperation

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MJ = Mega-Joule = 10^6 Joule
NABU = Naturschutzbund Deutschland e.V.
German Society for Environmental Protection
NBS-Köln = Neubaustrecke Köln
New track Cologne
NEC-directive = EC-directive on national emission ceilings
NH_3 = Ammonium
NMVOC = Non-Methane Volatile Organic Compounds
NO_X = Nitrogen Oxides
N_2O = Nitrous Oxide (Happy Gas))
NGO = Non-governmental organisation
OECD = Organisation for Economic Cooperation and Development
ÖPNV = Öffentlicher Personennahverkehr
Local public passenger transport
OSC = Organisation for Security and Cooperation in Europe
OSPAR Convention= Convention for the Protection of the Marine Environment in the North East Atlantic
p.a. = per annum, per year
PEC = Primary Energy Consumption
PISA = Programme for International Student Assessment
PJ = Peta Joule = 10^{15} Joule
PLANAK = Planungsausschuss für Agrarstruktur und Küstenschutz
Planning Committee for Agricultural Structure and Coastal Protection
PIC Convention = Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
POP Convention = Stockholm Convention on Persistent Organic Pollutants
QS = Qualität und Sicherheit GmbH
R&D = Research and development
RWI = Rheinisch-Westfälisches Institut für Wirtschaftsforschung
Rhineland Westphalia Institute for Economic Research
SF_6 = Sulphur Hexafluoride
SMS = Short Messaging Service
SO_2 = Sulphure Dioxide
SPD = Sozialdemokratische Partei Deutschlands
Social Democratic Party Germany
SRU = Der Rat von Sachverständigen für Umweltfragen
The German Council of Environmental Advisors
TA-Luft = Technische Anleitung zur Reinhaltung der Luft
Technical Instructions on Air Pollution Control
TOP = Technologieorientiertes Besuchs- und Informationsprogramm
Technology-oriented Visiting and Information Programme
TWh = Terawatt hours = 10^{12} Wh
UBA = Umweltbundesamt
Federal Environmental Agency
UMTS = Universal Mobile Telecommunications System
UN = United Nations
UNCED = United Nations Conference on Environment and Development
UNCTAD = United Nations Conference on Trade and Development

UNECE =	United Nations Economic Commission for Europe
UNEP =	United Nations Environment Programme
UNESCO =	United Nations Educational, Scientific and Cultural Organization
UNFCCC =	United Nations Framework Convention on Climate Change
UN-HABITAT =	United Nations Human Settlements Programme
VDA =	Verband der Automobilindustrie German Automobile Manufacturers' Association
VDEW =	Verband der Elektrizitätswirtschaft German Electricity Association
VENRO =	Verband Entwicklungspolitik Deutscher Nichtregierungsorganisationen Association of German Development NGOs
VES =	Verkehrswirtschaftliche Energiestrategie Transport Energy Strategy
VOC =	Volatile Organic Compounds
vzbv =	Verbraucherzentrale Bundesverband e.V. The Federation of German Consumer Organisations
WEO =	World Environmental Organisation
WGL =	Wissenschaftsgemeinschaft Gottfried Wilhelm Leibnitz e.V. Leibnitz Association
WI =	Wuppertal Institut für Klima, Umwelt, Energie GmbH Wuppertal Institute for Climate, Environment, Energy
WTO =	World Trade Organisation
WZB =	Wissenschaftszentrum Berlin für Sozialforschung Social Science Research Center Berlin
ZIP =	Zukunftsinvestitionsprogramm Federal Government's Future Investment Programme

A. From Idea to Strategy

The model of sustainable development became known worldwide in 1987 when the World Commission on Environment and Development (Brundtland Commission) presented its report “Our Common Future”. At the United Nations Conference on Environment and Development in Rio de Janeiro in 1992, the international community of states announced the model of sustainable development and a global programme of action for the 21st Century under Agenda 21. This called upon signatory states to form a strategy targeted at development that is economically competitive, socially fair and ecologically sustainable.

> “Sustainable Development is a form of development which meets the needs of the generation of today without jeopardising the chance for future generations to meet their own needs.”
> *World Commission on Environment and Development (Brundtland Commission), 1987*

That is the crucial idea: the model of sustainable development links the needs of today’s generations with the life prospects of future generations and, by a form of contract between the generations, demands that long-term development is designed in a manner, which is fair to both.

The German Federal Government has recognised sustainability as a cross-sectional task and has made it a fundamental principle of its policy. The most important reform projects of this parliamentary term are oriented towards sustainability. The basis is formed by the consolation of the national budget: with the aim of reducing new borrowing to nil by 2006, we are creating financial stability and returning freedom of decision and creativity to future generations. With the tax reform and the two Acts for promote families, we are easing the burden on families and employees and offering companies more room to manoeuvre. The ecological

tax reform provides stimulus for increasing energy efficiency and reduces incidental wage costs. The pension reform re-evaluates responsibility between the generations in that it reinforces individual responsibility with additional provisions sponsored by the Government. Conditions are therefore in place to ensure that statutory pension schemes can be still financed by the contributions payer in the future.

Reorientation towards a sustainable agricultural policy focusing on consumer protection has also already been introduced with a series of measures. The common task of agricultural structure and coastal protection has been brought into line with these principles as a central support programme at national and regional level. In addition, the introduction of the "*Bio-Siegel*" (Eco Seal) offers consumers clarity and security when purchasing ecologically produced food products.

Furthermore, with conservation of the natural foundations of life, particularly in terms of climate protection and opening the doors to the energy supply of the future, the course has been set for sustainable development: between 1998 and 2001 the share of wind power was increased through statutory support from 3,000 to 8,000 megawatts and many jobs were created in this industry of the future. In the year 2000, by voluntary agreement with trade and industry, the German Government agreed upon more extensive and demanding targets for reducing CO_2. There is also great potential for energy saving in the redevelopment of existing buildings. Investments of EUR 5 billion, including around EUR 1 billion of federal funds, will be dedicated to this area.

The Federal Government is committed to the task defined in Rio. With this document, it is presenting its Strategy for Sustainable Development in time for the World Summit on Sustainable Development in Johannesburg in September 2002.

It goes without saying that such a strategy is never finalised, but rather it must be adapted to new times and new priorities. We require intensive social dialogue on how we wish to live in the future, how we wish to respond in trade and industry and in society to the challenges of the globalised world. Rather than stirring up fears about the future, such a dialogue will allow us to release creative powers to take new directions. Such a dialogue offers young and old the chance of developing together a new contract between the generations. It offers society as a whole the opportunity to gain the broadest possible consensus on the adjustments that need to be made and to redefine the term “common good”.

Germany is inseparably linked to the world. It follows from this that there can no longer be local or national islands of prosperity and security in the long term. On the contrary, global sustainable development can only be achieved if developing countries are also able to take advantage of their opportunities and the poorest also have a share in the advantages of economic development and international networks.

Is there still any sense to a national Strategy on Sustainability against this backdrop?

The answer to this question is a definite “yes”. “Think global, act local” is rightfully the motto of the Local Agenda 21, which has been very successful in our country. Our patterns of production and consumption, our use of resources have direct consequences on the global availability of natural resources and development opportunities of other countries. On the other hand, it is precisely the industrial nations that can prove with a strategy for sustainable development that it is also possible to link this with successful economic development. This also offers perspectives for developing countries. A national strategy bringing together economic, ecological and social dimensions in an integrated vision, and succeeding in practice, would also exercise great appeal internationally.

In the next few years, the national Strategy for Sustainability will set priorities, highlight aims and measures and implement the key ideas of sustainable development. It is to be the basis of further political reforms as well as change in company and consumer behaviour. Far over and above the ecological challenge, the strategy serves as the basis for a comprehensive policy for the future that does justice to cross-generation responsibility for economically, ecologically and socially workable development.

The Federal Government has had the support of extensive preliminary work and accompanying research in working out its strategy. An important contribution was made in particular by the report of the German Bundestag's Enquete Commission "*Schutz des Menschen und der Umwelt*" (Protection of Man and the Environment).

What can such a strategy achieve, what can it not achieve? It should highlight the important trends in trade and industry and society and on this basis clarify the adjustments required for our country, draw up the model of sustainable development and fix targets.

The second stage concerns highlighting as far as possible the concrete and practical steps necessary for implementation. Sustainability should not be left in theoretical discussions of principle. For this reason, the German Government decided from the outset to gain practical experience from pilot projects in parallel with working out the strategy, using concrete measures to advance sustainable development in our country. Such projects are in progress or being prepared for three primary areas of action. The projects to be chosen were primarily those which set themselves the task of optimisation between economic, ecological and social interests and which can be expected to serve as a stimulus for trade and industry and employment, as well as environmental protection.

B. The Model of Sustainable Development

I. Intergeneration equity

1. Working out a new intergeneration contract

Which adjustments need to be made by today's generation so that future generations also have good conditions by which to shape their lives? The answer to this key question of sustainable development is a new intergeneration contract. The balance of interests between the generations is the focus of discussion on national debt, the pension reform, the conservation of natural foundations of life and also the costs of the health service.

The new intergeneration contract assumes a basic consensus on values and recognised social models. The fundamental ethical principle of sustainability takes into account the life prospects of future generations and reads as follows: each generation must solve its own problems and not burden the next generation with them. Those who create economic and social policies on a whim and leave future generations with rising national debts contravene this principle. The same applies if investments for the future economy are neglected, and more rapid and short-term consumption comes to the fore. The principle applies equally to the conservation of natural foundations of life and the pension reform.

Intergeneration equity does not only apply between different generations, but also within one generation. Everyone in the North and South must have the chance to lead a life fit for a human being according to their own ideas. In particular, this includes participation by the poorest in economic development and international networking.

There can only be workable sustainable development for the One World, not for individual countries, cultural circles or groups of states.

All in all, sustainability is based on an ethical approach. In addition to the justified interests of people living today, we also take into account the life opportunities of children and grandchildren when making necessary adjustments. This is why we pursue climate protection, increase energy efficiency and build up renewable energies.

Over and above the approach of intergeneration responsibility, we require a basic consensus on values and social models for sustainable development. In view of the rapid structural change in trade and industry and society, social cohesion can only be maintained if everyone in his place contributes to ensuring that no one is excluded and help is provided for those who find it difficult to adjust to changes. Churches and welfare associations, schools and clubs, employers and trades unions, ultimately the whole of civil society is called upon to help. This task cannot be delegated to the welfare state alone.

In order to pass down from one generation to another such values and attitudes, which are characteristic of our culture and the European social model, children and young people require credible models and experience of practised solidarity. These attitudes are lived and basic values are communicated mainly within an intact family. The strengthening of families is therefore a great aim of sustainable development. The families must also ensure that relatives, friends and neighbours, and the whole environment of young people set examples, demonstrate understanding and help other people in daily life.

It is a common misconception to believe that families and schools are the only ones able to communicate values that shape lives. This can have little success, if the young people discover that completely different values apply in social reality. Time and time again, the churches point emphatically to the connections mentioned above.

Through pastoral care, social work and religious education they make an important contribution to passing values on to the next generation on the basis of Christian belief.

In a pluralistic society, in which other religions and non-religious attitudes are common, we require a dialogue on values and social models. This is also true because with greater individualism many traditional models for people living together can no longer expect to be universally applicable. For example, there are other long-term relationships today besides marriage and family. Consensus on values and social models must be redefined time and again, especially in an open and pluralistic society. The preparation of this strategy was therefore accompanied by broad social dialogue, the results of which have been incorporated in this document. This process does not end on presentation of the strategy, however. On the contrary, it is a continuous development, as economic and social change make new adjustments necessary at any time. Finally, we also require this dialogue when implementing the aims and measures set out here.

2. Practising intergeneration equity

The responsibility of generations living today for the life prospects of future generations, which is embodied in an intergeneration contract, cannot be left on paper, it must also be practised. The responsibility of generations is not proven in speech, but rather in actions. Each generation must solve its own problems and not burden future generations with them.

This is not about an ethic of renunciation. On the contrary, according to the principle of sustainable development, the needs of today's generation are to be balanced against the life prospects of future generations. The challenge for politics and society is to do justice to responsibility for future generations, without neglecting the needs of today's generations. We are called upon to find new paths to reach this goal, using imagination and creativity.

a) Conserving natural foundations of life

The environmental policy of the last 30 years has resulted in successes, of which our country can be proud. In particular, measures in technical environmental protection, for example, the purification of waste gases from power stations and motor vehicles and sewage purification, have drastically reduced the strain of harmful chemicals on the environment. In addition, massive investment in environmental protection in former East Germany has improved the air quality considerably and evidence of new life is displayed by the return of sensitive species of fish to rivers and lakes.

Indisputable successes in technical environmental protection do not alter the fact that too little attention has been paid to the less obvious effects on the environment in other areas. Our present way of life, our production and consumption still endanger the natural foundations of life of today's generation and even more so, those of future generations. Among the clear signals for this are the impending changes in climate, the continuing loss of natural areas, and the ever-lengthening red list of extinct animal and plant species.

Society and production have to rely on nature. As the earth with its natural resources is handed over in trust to each generation, each generation is obliged to hand down to future generations an intact natural environment. Therefore, consumption of natural goods should not be greater than their ability to regenerate.

Also, the burden of harmful chemicals on natural goods should not exceed nature's tolerance. Finally, dangers and unjustifiable risks for human health are to be avoided.

b) Managing a quantum leap - increasing efficiency

Each litre of oil consumed today is irretrievably lost to future generations. If we do not change our current way of production and consumption, within a few generations we will use up the minerals and fossil energy sources formed over millions of years of the earth's history. This is as much an economic problem as it is an ecological and social problem. With a growing population, the accessibility of important mineral resources and other natural resources and - more so - their rising prices will become a limiting factor for economic development.

Only by using natural resources sparingly and with care will future generations be given opportunities for life and room to manoeuvre. We require a quantum leap in energy and resource efficiency to achieve this aim. In the context of an efficiency revolution, we require low-consumption cars as well as highly efficient power stations and low-energy houses. Scientists developed the vision of increasing efficiency by "Factor 4" and "Factor 10". This certainly cannot be implemented in the short term, but the vision clarifies the direction we must take.

Numerous examples demonstrate that such leaps in efficiency are also attainable. In particular, traditional energy-intensive and raw material-intensive industries, such as the steel industry, have made amazing progress. Using new technology, management of the flow of materials and recycling of scrap metal have drastically reduced the use of energy and raw materials in producing one tonne of steel (specific consumption). In 1955, 2.45 tonnes of ore, scrap metal and alloy were required to produce one tonne of rolled steel – today we can manage this with just 1.55 tonnes.

Sustainable development requires to separate consumption of energy and resources from economic growth. From an international viewpoint, we have already made good progress in this direction. Modern cars have become lighter, electricity consumption by television sets and washing machines has been reduced, and the boilers for central heating have become more economical. The efficiency strategy can only be successful in the long term, however, if efficiency gains are not sapped by rising production, increasing traffic and more consumption.

Increasing efficiency is not, therefore, a miracle cure by itself. It will only lead to success, if our behaviour considers using natural resources sparingly and with care in our way of life and as consumers. Incidentally, that does not mean that we will have less comfort or enjoyment of life. It usually pays to handle resources with care - in cash. An example in energy consumption: private households in Germany consume at least 14 billion kilowatt hours through electrical equipment in stand by mode. This costs them around EUR 2.3 billion each year and is the equivalent of the output of two large power stations. A family can save up to EUR 150 each year if, for example, they do not leave their television or computer on standby and consider low energy consumption when buying new equipment.

The efficiency revolution pursued in a well-directed manner makes good sense not only ecologically, but also economically. In view of a growing world population and sharply rising demand from newly industrialising countries, such as China and India, we must also expect rising prices for raw materials and energy in the future. Those who use goods that are becoming increasingly scarce in a more efficient way will be able to hold their ground in global competition. Given this, ratios for resource and energy efficiency will become global trademarks of successful national economies in the future. Most companies have known this for a long time: they are specifically looking for opportunities to save energy and invest in modern energy technology, resulting again in stimulus for further growth and employment.

In order to push ahead with the efficiency revolution, we must set demanding goals, mobilise people's creativity, make use of innovation potential, test new technologies and use them in day-to-day life. Politics and trade and industry, science and environmental associations are presented with a broad field in which to develop together this efficiency strategy for our country. From an international viewpoint, Germany is in a good position both in terms of technology and implementation. We should make use of these strengths.

c) Running sustainable economies

Economy and ecology have often been understood as opposites in the past. This was wrong, as both have a great deal in common, and not just the word stem 'eco' (from Greek: *oikos,* the house). House (in German: *Haus*) is to be understood in a broad sense as the house of life and as the quintessence of cross-generational responsibility. This broad sense is reflected well by the German word "*Haushalten*", which embodies the old basic rules that apply equally to economy and ecology. For example, the rule of the forest owner not to fell more trees than can grow again in his forest, or the farmer's principle of not using seeds to make bread.

These seemingly old-fashioned principles have more relevance today than ever before. Do we invest in our future and the future of our children, or do we consume tomorrow's seeds? Should we run sound economies, or live on a whim? The economic opportunities and room to manoeuvre of current and future generations depend on the answers to these crucial questions.

At present, every fifth euro from tax revenue in the national budget has to be spent on interest. These funds are no longer available for important investments, for example, in education and research. The state also has to counteract the effects of a high level of debt on interest and the stability of monetary value: we have to escape the debt trap. For this reason, the Federal Government has introduced a strict path of consolidation. New debts have been quickly reduced in the last two years, and we want to achieve a balanced budget by 2006. By doing this, we will return freedom of decision and creativity to future generations. In its report "*Nachhaltigkeit in der Finanzpolitik*" (Sustainability in Financial Policy), the Scientific Advisory Council of the German Federal Ministry of Finance confirmed the need for consistent consolidation and demanded that such consolidation be followed and reviewed on a sound scientific basis.

The strategy of sustainability also requires a critical review of the tasks carried out by the federation, the *Länder*[1] and municipalities. Where, in future, should we rely more on the individual responsibility of those concerned, where do people need support in coming to terms with the structural change? Experience over the last few decades shows that these questions need to be asked and answered time and again. State services should not generally be considered an inviolable vested right.

Rather, it is essential to shape structural change in a manner that is economically successful and socially sustainable. What opportunities does it offer? What qualifications do employees need and how should companies position themselves in order to seize these opportunities? What markets are opening up, what are the technologies, products and services appropriate to these markets? Those who ask questions in this way do not regard the liberalisation of the European energy market, the trend reversal in agriculture, the admission of Central and Eastern European countries into the European Union as a threat, but rather as a welcome challenge. The aim must be for employees and companies, trades unions and industrial associations, as well as universities and research institutions to make the

[1] The German federal states are called "*Länder*". This term shall be used throughout the document.

active shaping of structural change their own affair, to regard themselves as participants and not victims of structural change.

We also need to take new directions and break up old structures in politics for sustainable economic development. The challenge is to integrate the various areas of politics in such a way that economic growth, stable employment, social cohesion and environmental protection go hand in hand. Each area of politics must be geared towards the demands of sustainable development.

From a long-term and economic point of view, goal conflicts, for example, between economic and ecological needs, clearly diminish. It is also in the interests of the economy to conserve natural foundations of life and use natural resources sparingly. In the short term, a company can perhaps expect to make savings, for example, on costs for maintaining clean air or sewage treatment. While, in the long term, the national economy will profit from production that is environmentally sustainable and treats resources with care. The right directions need to be set in a market economy to bring into line macro economy and business economy, long-term and short-term perspectives.

On the one hand, these include legal regulations and instructions to ensure that important environmental standards are observed. However, the knock-on impact of pricing is just as important. It stimulates innovation among market participants to find the most favourably priced ways of avoiding negative effects on the environment. If prices reflect scarcity of natural resources and costs reflect the strain on the environment, the conflict between short-term and long-term goals will be overcome and this will contribute significantly to sustainable development. In this context, the right direction has been set, for example, by the moderate increase in energy taxes as part of the ecological tax reform. The increase is phased and can therefore be budgeted for by all participants.

Finally, sustainable economic development can also be characterised by companies assuming responsibility for their production and products.

Energy-saving manufacturing processes and integrated environmental protection are practised with the aid of effective environmental management. Many companies are already taking this path. Product responsibility includes the demands of consumer protection as well as beneficial use or disposal of products at the end of their life cycle. It also includes consumer information related to health and the environment on properties of the product or qualities of the company. Clear labelling of products and transparent company reports should allow consumers to opt consciously for products and companies that voluntarily observe high standards of environmental and consumer protection. In this way, sustainability can become a quality seal for products and companies.

II. Quality of life

The concept of sustainability sounds unwieldy and aloof, but it has a vital and simple core belief: it is about maintaining, and, if possible, improving, a good quality of life, for everyone, now and in the future. Everyone should have the chance of taking charge of his/her own life, of learning and of working, of taking responsibility for him/herself and for other people, and of living in a healthy and safe environment embedded in a network of social relationships. Human beings with their potential and their responsibilities are central to this.

For quality of life it is absolutely essential that the environment is in good order. However, quality of life involves more than this. It involves health, opportunities for personal development, satisfying work, appropriate living space, sufficient income, social recognition as well as good schools, a town, which is safe and in which life is worth living, with many different kinds of cultural events. In saying this, quality of life cannot be separated into different compartments. Only the interplay of all the above factors will do proper justice to human beings in the many different contexts in which they live, and serve to form quality of life in its totality.

1. Protect the environment - enjoy nature

In the 1960s and 1970s, the desired “blue skies over the Ruhr” became the starting signal for an environmental policy still on the starting line. From the outset, this image represented more than the endeavour to reduce air pollution by harmful chemicals. It hit upon people’s awareness of life, the joy of life, and the dream of making life worth living again in the Ruhr, which was still heavily polluted at that time. At the latest by the time of the reactor accident at Chernobyl, the threat to man and nature dominated discussion on environmental policy.

Even today, dangers for man and environment should not be talked down. Impending climate changes, the extinction of animal and plant species and continuing loss of natural areas demonstrate the actual severity. It is all the more important for us to recognise the value of nature for people. Clearly, we are protecting nature for its own sake. Adonis or pheasant’s eye and storks should have the right to live in their natural habitat in Germany. A place in which storks live is certainly also a good place for people. Intact landscapes, lakes and forests and diverse flora and fauna form part of the wealth of our country. It is essential to rediscover and preserve this wealth.

As a contrast to the hectic rush of modern day-to-day life, the noise in towns and the stress of work, it is increasingly important to be able to relax in natural surroundings. Whether it be an evening walk in the local woods, cycling or running at the weekend, an intact and diverse landscape makes an essential difference to a region’s quality of life. It also determines the appeal of a region from the point of view of investors, who will find it easier to obtain qualified staff and sought-after experts if based at an attractive location.

However, the encroachment of mobile people on nature will become more and more the source of its endangerment. This applies particularly to sensitive ecosystems such as mountains and lakes with their important areas of shallow water and reeds. Under certain circumstances, the negative incidental effects of tourism will be a real danger to these extremely important natural habitats. Skiers and lift equipment on steep escarpments are contributing to the erosion of the sparse turf on the mountains. Many sports boat drivers do not maintain the required distance from reeds and therefore damage the breeding and nesting sites of many animal species. In addition, many modern “outdoor” sports that encroach upon the last refuges of rare animal and plant species can become a problem.

Against this backdrop, those in positions of responsibility in the regions concerned must counteract such behaviour and ensure that tourism is compatible with nature. It is not about excluding from nature those seeking relaxation or doing sports. Rather, certain regulations need to be enforced to ensure that these sensitive natural habitats continue to be areas in which important animal and plant species can live in the future and people are able to enjoy nature.

With its amendment to the Federal Nature Conservation Act, which came into force in April 2002, the Federal Government made its contribution to the necessary balancing of people’s interests in nature against nature’s particular need for protection. That is to say, the protection of nature should not shut people out, it should be implemented with people and for people. This includes marking protected areas as well as treating unprotected areas in a way that is friendly to nature. At the same time, this should enhance the population’s acceptance of nature protection.

2. Preserve a lively town - develop rural areas

Local Agenda 21 has been the active motor of sustainable development in Germany for a long time. In more than 2,300 towns, districts and municipalities, citizens have got together with local politicians and experts to develop ideas. They have discussed and implemented energy-saving measures for street lighting, proposals on natural development of town parks, the establishment of children's playgrounds and the creation of areas for young people. Complex subjects, such as economic and urban development in municipalities and solving traffic problems, are also on the agenda. This participation of citizens in local politics and their great commitment are hopeful signs. It serves to disprove those who believe that sustainable development is simply a matter for politicians and experts.

An efficient state relies to a considerable extent on local strengths, their quality and their commitment, as the future of the town is crucial for the future of society. In Germany, more than 58 million people live in towns. The town is the most important area for these people's lives. It is here that they live and work, spend their leisure time, meet friends, and travel around by car or public transport.

Yet, the appeal of towns has its drawbacks. For example, a massive increase in traffic, which reduces the residential quality of a town through noise and exhaust fumes, divides the town in various ways and leads to considerable environmental pollution. In addition, many towns have had to battle with the consequences of the change from an industrial economy to an economy based on services and knowledge. Often, creating new jobs in other areas cannot compensate for the loss of simple industrial jobs. Social focus points are still the exception in Germany, and yet the emergence of disadvantaged parts of towns, in which social, economic, housing and urban development problems are intensifying, is ever more frequent.

Investment is required for a policy on towns of the future and towns in which life is worth living. The Federal Government has accepted this challenge. Promotion of urban development, with around EUR 350 million annually, and the programme "*Soziale Stadt*" (Social Town), with around EUR 76 million, are key instruments for meeting this challenge. The programme "Soziale Stadt" aims to offer citizens security, orientation and perspectives in their immediate environment in a time of structural upheaval. That is why the programme is not limited to building matters, but includes social, economic, ecological and cultural points of view so that our towns continue to function properly. The programme "*Stadtumbau Ost*" (City Restructuring East), which has been provided with almost EUR 1.5 billion, tackles problems of urban development and residential economy associated with the high residential vacancy rates in former East Germany, and, in particular, it offers new perspectives on urban living.

However, state initiatives alone are not enough. People themselves must also become active in their own residential districts. This applies equally to tenants and house owners, local politicians, churches, social institutions and trade and industry. Development for the renewal of town districts, which was started up by the programme "*Soziale Stadt*", needs to be strengthened and extended to other town districts. It is precisely the living form of the town that offers great potential for development and innovation.

The same applies to rural areas, which make up some three quarters of the landmass of Germany. Agriculture and forestry are still very important here in terms of economy. However, as only 3% of all employees are still working in agriculture, the development of rural areas requires the development of different perspectives and the exploitation of new potential. Incidentally, this is by no means about areas that have a poor infrastructure and a low population density. Rather, the diversity of rural regions is so great that generalisations about sustainable development in these regions are strictly limited.

For example, with its small cultivated areas, numerous smallholdings for agriculture and forestry and its great appeal to tourists, the Black Forest has different potential for development than Western Pomerania, with its large competitive agricultural businesses and sparse population. Thanks to their function as a place of residence and relaxation, rural areas close to conurbations have different opportunities for development than regions with a poor infrastructure that are unable to benefit from being close to cities. In a number of rural areas it was possible to motivate industrial companies and craft businesses to settle there and in doing so opening up new job opportunities. The apparent disadvantage of being far from buyers and suppliers is more than compensated for by their greater accessibility than locations in built-up areas plagued by heavy traffic.

Each model of sustainable development should strengthen the particular features of rural areas. It should build on their strengths, involve local people, and be developed as far as possible beyond the region.

Despite the diversity, the development of rural areas over the last few decades has revealed fundamental problems that can be traced back to the same causes. Technical advances and structural change in agriculture has resulted in ever-smaller numbers of businesses being able to produce more and more. As a result of the liberalisation of the agricultural markets, which has now begun, and the increasing pressure of competition, the agricultural businesses holding their ground in the market are those able to produce at low costs through specialisation, intensification and increased output. This process, which is comparable with industrialisation and was reinforced by assistance under former agricultural policy, has significant effects.

Initially, there began a process of migration from rural areas into the towns as a result of structural change in agriculture, the ever-declining availability of jobs in rural areas, as well as the general development towards a service economy. The speed of this development was determined primarily in the conurbations.

For several years now, however, there have been increasing indications for a trend reversal, which certainly represents an opportunity for the rural areas, even though possible conflicts of use and increased environmental pollution, e.g. from tourism, should not be overlooked. Specialisation and intensification of agricultural production also causes environmental pollution. The pressure to cut costs also holds dangers of quality factors fading into the background for the sake of sheer quantity of production. The BSE crisis is an example of this, as it was caused in part by feeding ruminants on cheap animal meal.

Agriculture and the entire food industry were put under the microscope at the time of the BSE crisis. In response to the discovery of this deplorable state of affairs, the Federal Government adjusted agricultural policy so that it focuses on consumer protection and, therefore, preventive health protection. This policy tackles the cause of the problems described above and offers rural areas new perspectives for development, taking into account economic, ecological and social dimensions. These include production methods that are both friendly to nature and observe high requirements of keeping animals in a way that is fair to the animals. As a result, there will be an increase in confidence in the quality of the products and, therefore, also in demand. This will secure the economic foundations of agriculture, as will the concept of a multi-functional agriculture, which will represent, in particular, an improvement in the region’s upstream and downstream value added chain. The development opportunities of rural areas will be reinforced in a sustainable manner by a great diversity of agricultural products, stronger regional marketing and new tasks for the agricultural industry in looking after cultivated areas.

3. Developing the culture of sustainability

Sustainable development is not simply the technocratic route to efficient methods of business, production that does cause waste, and a healthy life. Technical innovations are important, but on their own they are not sufficient to act as the driving force for sustainable development. Sustainable development has a lot to do with the imaginative and creative vision of how we want to live in the future. In this sense, it is a creative task, which challenges the creative potential of our society on the basis of values, social models and our cultural tradition as a whole. Sustainable development does not simply mean the continuation of trends from the past. It invites us to leave the old beaten track and find new directions. Over and above the material constraints, the question of how we want to live in the future returns politics to the creative task and social discussion on this question to the crucial point at which sustainable development becomes relevant.

The cultural dimension of sustainability can thus be discerned. With daring for new things and exploration of unknown paths, and developing from this a vision about how we want to live in the future, culture in its many forms can push ahead with this creative process and prevent old wine being poured into new bottles. As a source of inspiration, renewal and creativity, cultural diversity is as important for us as biological diversity is for nature. The identity and creative power of our country are reflected in the creative works of artists, architecture, music, film and arts and crafts. In Germany, however, politics, trade and industry and society on the one hand, and cultural artists on the other, have often withdrawn into their inherited areas of work and have therefore limited the mutually stimulating exchange of ideas. Sustainable development must therefore also be about advancing this exchange so that the igniting spark can jump across boundaries.

In addition, culture has a lot to do with quality of life. Libraries, museums, theatres, concert halls, cinemas – they all contribute significantly to our quality of life and determine the appeal of our towns. It is a task for everyone, particularly in times of tight public budgets, to secure the foundations of rich cultural life in Germany.

According to the German Basic Law[2], the *Länder* have the primary authority to promote art and culture. Within the framework of responsibility for the whole state, the Federal Government's tasks relating to cultural policy focus on improving general conditions for the development of art and culture, constructing and supporting cultural institutions of importance to the whole state, as well as maintaining and protecting cultural heritage. In 2001, the Federal Government invested over EUR 920 million in the promotion of culture, financing a wealth of projects, initiatives and institutions.

The policy of sustainable development is still not sufficiently associated with art and culture. On the other hand, art and cultural policy have not yet taken up the challenges and opportunities of sustainability as matters for their own discussion. The Sustainable Development Council considers there to be good potential to change this situation, with contributions of contemporary art and culture gaining the power to set new directions at a national level. According to the Council, this is an important opportunity to break down old perceptions and open our eyes to new horizons.

4. Live healthily and grow old

We all want to be healthy, and if possible, stay healthy up to an old age. On a scale of factors, which together define quality of life, health takes first place in all surveys. On closer inspection, however, a fundamental contradiction marks the seemingly clear picture. On the one hand, health, fitness and a good, healthy appearance are high on the list. Here we find advertising and the media portraying

[2] German constitution.

an ideal image, to which many people aspire. Whole industries survive on people's desire to make their own appearance more like that of the ideal image, or at least keep up the illusion that such an image is possible.

On the other hand, there are lifestyles and patterns of behaviour in broad sections of society that are generally accepted as being damaging to health. This begins with nutrition, then smoking and excessive consumption of alcohol, and finally, the fact that only a minority of people take part in sports on a regular basis. Although studies show that habits are a deciding factor of health, many people are not prepared or not able to draw the appropriate conclusions for their own behaviour.

The old saying "prevention is better than cure" still applies today. For many heart and cardiovascular diseases, as well as for disease patterns related to the spinal column, disease can be prevented effectively through healthy behaviour, while therapeutic measures can only restore health to a limited extent. Preventive health care is therefore the key to cutting the costs of our health service.

Public discussion over the last few years has concentrated on subjects such as cost-cutting, reduction in the range of services and contributions by the insured. These are certainly important matters, but do they show us the way to a sustainable policy on health? According to studies, the health of the population can only be influenced to a very limited extent by medical care, while 20% to 30% of current health expenditure could be avoided through preventive measures. Should we not rather be asking ourselves which patterns of behaviour and measures help maintain and promote health?

A rethink is required for a sustainable health policy: it is about health and not about illness. This new viewpoint widens perspectives and opens up new options for action. Five aspects characterise the model of a sustainable health policy:

- The starting point is an integrated view of people, taking into account their life history, how they are embedded in private and social relationships, as well as their professional environment. In this way, risk factors such as dietary habits, social isolation or strain at the workplace can be understood in their complexity and tackled specifically.

- Illness is not always inevitable. Every person has resources to promote health and can reduce strain and take measures themselves. Providing information about these opportunities, and making it possible for citizens to mobilise and take up such opportunities, are among the most important measures of a sustainable health policy. Those who know what is good and what is not will not readily hand over responsibility for their own health to the doctor's surgery. Self-help in terms of health is also an important factor in tracking down and mobilising own resources. Reinforcing self-help therefore forms part of sustainable further development of the health care system.

- Building on the principle of the responsible patient, who acts responsibly for himself and his health, measures for the prevention of illness and health promotion represent worthwhile and necessary investments for the future. These not only relate to the behaviour of individuals, but must also concern the general conditions in which people live. Such conditions include schools that promote health and effective protection of health and safety standards at work, as well as regular medical check-ups, patient training and information directed at target groups on, e.g., healthy eating and sport. Prevention is a community task, in which citizens take part, as well as many other parties at national, regional and municipal level, e.g., health insurance companies, doctors and other service providers, charities and self-help associations, and also companies themselves, trades unions and political players.

- Environment, nutrition and health belong together. Good quality, highly nutritious foodstuffs belong to a healthy diet. These are only available if agricultural production, processing and marketing are all geared towards this aim. Individual sectors can no longer be considered in isolation, but should be understood as a part of a whole, affecting all other sectors. In this way, for example in the food sector, we achieve an “integrated examination”, which includes the composition of the soil as much as it does production and purchasing of animal food, keeping of animals, standards of hygiene in abattoirs, processing in industry and marking of ingredients on packaging. In this case, consumer protection and health protection are in many ways the same.

- A reform of the existing health system must be based on the aim of providing a good quality and equally favourably priced service for patients. A system of quality assurance that is transparent to the public on the one hand, and economic incentives for providing services that are favourably priced and directed at patients on the other, are important elements of this. As part of effective quality assurance, we require clear demands for diagnosis and treatment of particularly relevant illnesses. At the same time, incentives are necessary to achieve better links between areas of support (prevention, treatment, rehabilitation) for the increasing number of chronically ill.

The Federal Government and the German Bundestag have made important adjustments in this parliamentary term for the sustainable health policy outlined above. Prevention and promotion of health in the workplace are again embodied in the Social Security Code V as services financed in solidarity by statutory health insurance companies. Particular emphasis is placed on the “reduction of socially-related inequality of health opportunities”. This passage enables support measures to be implemented as part of the health care system for specific target groups, in this case socially disadvantaged groups. Finally, the balance between health insurance companies, achieved through the reform of the so-called risk structure balance, has provided economic incentives to optimise medical care for the chronically ill.

Pre-conditions for high-quality foodstuffs have improved significantly with the re-orientation of agricultural policy and the emphasis on consumer protection in matters of health. With the Action Programme for Environment and Health, a process of examination has begun of the possible risks from the environment and their effects on human health, whereby cross-sector problems are looked at from different perspectives.

A "*Runder Tisch Gesundheit*" (Round Table on Health Issues) was set up to enable existing funds in the health sector to be used more effectively and efficiently. With relevant participants from the health system (statutory health insurance companies, doctors and other employees of the health system, hospitals, chemists, the pharmaceuticals industry, representatives of patients), the Federal Ministry for Health has set up the working programme "*Qualitätssicherung und Steuerung im Gesundheitswesen*" (Quality Assurance and Management in the Health Care Sector) for this Initiative. Due to the great significance of this subject area, a working group entitled "*Stärkung der Prävention*" (Strengthening Prevention) was also established and is currently working on respective concepts.

In addition, when resources are limited, it makes sense to set priorities in the form of health targets. A model project involving all the relevant parties is currently being conducted for this purpose. A guideline on selection and development of concrete health aims is already being prepared. By July 2002, five of the chosen health targets will be realised in strategies and measures.

5. Fighting crime - ensuring safety

A life without the threat of violence is an essential requirement for personal development. Freedom can only be developed if the safety of citizens is guaranteed at the same time. Those who refrain from going to the theatre or cinema, because they are afraid of being bothered on the underground or attacked on the way home, are limited in their freedom.

Likewise, the home represents a protected area of life, which burglary infringes upon massively, besides damaging property. Worrying about the safety of one's own life and that of the family can severely restrict quality of life. Guaranteeing national security and protecting citizens from crime and extremism is therefore one of the key tasks of the state.

On the other hand, however, the aim of an open and free society should not be sacrificed for the good of public safety. The tension between freedom and safety needs to be resolved in such a way that crime and extremism can be combated effectively within the framework of free constitutional order.

Crime statistics for the year 2000 and other statistics show that Germany is still one of the safest countries in the world. The continual decline in crime as a whole since 1995 continued in the year 2000. This applies particularly to crimes that considerably affect citizens' feeling of safety. There was a further drop in the number of recorded residential burglaries and muggings. Car thefts also fell considerably and are now at their lowest level since 1993. In addition, the ratio of crimes solved rose from 52.8 % (1999) to 53.2 %, thus reaching its highest level since 1966.

Despite these successes, there should be no rest in fending off dangers and combating crime, and this requires diverse strategies and approaches. Local police work is just as important as the common fight against cross-border and international crime. Within the framework of international cooperation, crucial importance is attached to effective cooperation by police and judicial authorities within the European Union. Substantial progress in this area is making Europe more accessible to its citizens.

As in other areas of politics, it is also true of national security that prevention is better and ultimately cheaper than clearing up damage that has already been done. For this reason, the German Federal Government considers preventive combating of crime to be an essential focus of its work. Such an approach requires consideration of the many causes of crime, for example, social exclusion and inadequate care for children and young people. Strengthening families and their ability to offer security to children and young people form the basis of this. In addition, all-day schools and better services for caring for children and young people are an important step as a particular focus of social attention. Youth work, which mobilises young people and offers meaningful opportunities for leisure time activities, also plays an important part. Above all, youth education and training, which opens up job opportunities to young people and help them find their place in society, is an important exercise to bridge gaps.

These examples show that preventive combating of crime is a task, which cannot be tackled by the state alone. Rather, it is a task for the whole of society, one in which all social groups must participate, and everyone must assume individual responsibility and demonstrate civil courage. Our common aim should be to create social conditions in which crime loses its breeding ground and the sense of right and wrong is reinforced.

The terrorist attacks in the U.S.A. made the vulnerability of modern industrial societies suddenly clear to Germany as well. The attacks were directed against democratic, open societies. The extent of the violence, the logistical network of the perpetrators and their long-term cross-border strategies necessitate decisive administrative, operational, and legislative action also in the area of national security.

With the law on combating international terrorism, the Federal Government has adapted numerous security laws to the new threat. The aim of the regulations is to prevent terrorists from even entering Germany. At the same time, the law makes it easer to identify extremists already in Germany and put a stop to their activities faster.

In addition to intensifying international cooperation, sustainable development requires a state founded on the rule of law that protects freedom. Security within and outside Germany represents an important contribution to quality of life and social cohesion.

III. Social cohesion

Rapid economic structural change, with its consequences for jobs and its need for people to adjust to changed circumstances, represents a test for the social state and for the inner cohesion of our society. Practised solidarity and social cohesion are the elementary pre-conditions of a society that is socially just and economically successful. Only on this basis we can overcome the challenges that face us and actively shape structural change in the economy and in employment. Working as actively as possible to combat poverty and social exclusion, preventing a division of society into winners and losers, involving all classes of the population in economic development and enabling them to participate in social and political life are all elements which mark the social dimension of sustainable development.

In Germany we have a well-cultivated system of social protection. The various areas of social security insure us against the great risks in life of old age, illness, invalidity, the need for long-term care and unemployment.

In addition, social welfare protects people who are not insured, or whose insurance is not sufficient, against poverty or particular serious difficulties. Social security is essential for people coming to terms with economic structural change and its social consequences. As it is no longer usual to have one job for life, changing from one job to another represents a critical point in time. It is the combination of social security (unemployment benefit) and gaining qualifications in new or different areas that enable us to change jobs as quickly as possible.

We can be justifiably proud of the achievements of our welfare state. Guaranteeing social cohesion in times of economic and social decline cannot, however, be achieved by the state's security systems alone. Intensive discussion over the last few years on the high level of social security contributions and the debts of the nation, *Länder* and municipalities reveal the financial constraints of the welfare state. We need to reshape our welfare system in a way that is innovative, socially just and economically efficient at the same time. This requires a difficult balancing act: doing justice to needs of social protection and social balance on the one hand, and not burdening working people with excessive taxes and contributions on the other. For this we need to achieve the transition from a mainly passive welfare state to an active welfare state. The pension reform adopted by the Federal Government shows that this is possible. The pension reform - one of the greatest social reforms of the post war period – provides the tried and tested support system with a new and more stabile basis. At the same time, it has two new pillars of support: state sponsored private pensions and the extension of company pensions.

This is not all that needs to be done to reshape of the welfare state, however. Structural change goes further. We still have the task of reviewing, modernising and adapting our welfare state to new requirements.

Social cohesion is not only a question of functioning social security systems. The exclusion of certain groups of the population can also threaten social cohesion. Here the state has only limited opportunities to act. The extent to which the homeless or other marginal groups drop out of society or the extent to which we succeed in integrating foreigners depends quite essentially upon the behaviour of every individual, for example in living accommodation, in school, in the workplace and in public transport. Companies and trades unions, churches and sports clubs and civil society as a whole are called upon to make their contribution in preventing social exclusion. The programme "*Soziale Stadt*" (Social Town) makes a significant contribution to this.

A new awareness of social responsibility can also grow, if thoughts arise from actual experience or present dangers and there is mounting awareness of how each of us and our country as a whole rely on practised solidarity. A reverse trend has shown until now that this is not a simple matter. Until now, increasing individualism has marked the face of modern society, which poses a great challenge to social cohesion and therefore the social dimension of sustainable development.

This trend has many positive sides to it. The tendency for people to have greater economic independence, the diversity of lifestyles, the opportunity of freeing oneself from the pressure to adapt to narrow social surroundings: these are all an expression of our awareness of freedom in life. No one is forcing people to be limited by society making up their minds for them. These achievements of a free society are now common knowledge and are not up for sale.

However, the drawbacks of individualism have since become more clearly apparent. Those who live alone, are not members of a club, but take part in

sport at a fitness studio, no longer turn to family members or neighbours if they require care, but take care of themselves by paying the relevant service providers, are at face value no longer relying on basic social surroundings and are possibly losing their social competence. Fighting out conflicts and reaching agreement within the family, at clubs, with neighbours or at work represent a form of social training, which industrial and knowledge-based economies rely upon, based, with their many participants, on the division of labour. It is for good reason that many companies now place special emphasis on social competence when recruiting, that is the ability to take matters into consideration and work in a team, as well as the ability to solve conflicts within a group in an appropriate manner.

We need to find a new balance between the freedom to shape one's own life and social responsibility. Within families, schools and at the workplace, greater emphasis should be placed on the development of social competence among children and young people, the ability of living and working together. Just as important are the ideals communicated by the media, and in particular by advertising, which characterise social awareness. Motivating people to accept social responsibility and demonstrate commitment voluntarily is dependent on this, and the potential for this is extremely great.

Today, a third of people from the age of 14 take part voluntarily in clubs, initiatives and projects. Some 22 million people support our society through their work, whether by active participation in sports clubs, social institutions, the volunteer fire brigade, citizens' initiatives or nature protection projects. In addition to those already taking part, a further 20 million people in Germany are prepared to take up voluntary work. Encouraging these people to become active was the goal of the campaign "*Was ich kann, ist unbezahlbar*" (What I can do is priceless), which the German Federal Ministry for the Family Affairs, Senior Citizens, Women and Youth started during the International Year of Volunteers 2001. The campaign was met with great response and made a significant contribution to public awareness and enhanced appreciation of voluntary action.

Improvements were made in networking between different activities in the voluntary sector and cooperation between the various supporting organisations, partly as a result of the establishment of the National Advisory Council. Finally, the Federal Government improved considerably the basic legal and financial conditions for voluntary action by raising the allowance for voluntary trainers by 50% and increasing tax incentives for donations.

Public spirit, solidarity and civil courage form the cement of our society, from which there grows a culture of mutual recognition. These values are our social asset. One of the basic interests of sustainable development is to promote these values in such a way that the number of volunteers continues to grow in the coming years and social cohesion is reinforced.

1. Recognising gaps - building bridges

If we want to be active in shaping social cohesion under changed conditions as well, we need to recognise gaps and build bridges as quickly as possible after rifts become apparent.

More than ten years since the establishment of German unification, the merging of East and West is still a key issue for the inner cohesion of our country. There has been enormous success in this direction in the field of trade and industry. In the few years since reunification, more than half a million new, mainly small and medium-sized companies have been established, creating more than three million competitive jobs. The East German economy is recording stronger growth than the West in industry and production-related services. High unemployment despite this has a lot to do with overcapacity in the construction industry. If successes in industries oriented at national competition are no longer offset by special development in the construction industry, this will also have a positive effect on job numbers. Successes up until now, which are plain to see in the cities and municipalities of East Germany, are based on the construction work of East Germans and the

whole country's supporters of solidarity. It is therefore also a success of the joint efforts of people in East and West. A great deal would have been gained for the inner cohesion of Germany, if this fact had found its way deeper in to the public's consciousness.

Unemployment, which is still too high, particularly in former East Germany, remains a great challenge. Over the last three years, the Federal Government has set the pre-conditions for a trend reversal. It has focused economic support on industry and production-related services and also improved growth opportunities through structural reforms. In addition, around 22 billion euros were made available for active labour market policy in the national budget for 2001, of which 10 billion euros went to former East Germany.

With its Action Programme Against Youth Unemployment (JUMP), the Federal Government is opening up additional opportunities for training, qualifications and employment for young people. The programme was started successfully in 1999 and will continue until 2003. One particular focus of this programme is former East Germany, to which 50% of the funds have been allocated since 2001. This is based on the realisation that it makes more sense to finance employment rather than unemployment. It is particularly important to create opportunities for young people and the long-term unemployed and to qualify as many unemployed people as possible to meet the demands of the labour market. The "*Ausbildungsprogramm Ost 2002*" (Professional Training Programme East 2002) shall create 14,000 additional trainee posts in former East Germany and Berlin in 2002.

In some regions of east Germany, but also of West Germany, the combination of high unemployment and loss of qualified employees, as well as local focuses of social and urban development, have caused problems. These problems are closely related to structural change since 1990. Most people had to find new directions in professional life, young people and parents had to adjust to different requirements and procedures at schools, and there were also fundamental changes in childcare and medical support. On the whole, this far-reaching personal and social restructuring contributed to the fact that not just a few young people lost their orientation in this upheaval and looked for security in groups prepared to carry out acts of violence and right wing extremism.

In order to deal with this situation effectively, we must provide young people with prospects for their personal and professional lives, and it is also for this reason that great importance is attached to the German Federal Government's Action Programme against Youth Unemployment. In addition, the offer of discussion to those willing to take part, the redoubled efforts of youth work and measures to improve quality of life in areas of social attention are important elements in the package.

The number of long-term unemployed people has become a problem, which needs to be taken seriously, for the social cohesion of our society as well as for economic development. With the accelerated structural change in trade and industry, job changes have become more frequent, as has the temporary unemployment associated with them. These cases of short-term unemployment are not that serious in terms of their social effects, while, in contrast, long-term unemployment leads to a devaluation of abilities and can mean a drop in economic and social status. In addition to those poorly qualified, this primarily affects older employees. In times of economic decline, they are the first to be made redundant and they then find it difficult to find new employment.

As the personal, economic and social consequences of long-term unemployment are so serious, combating them represents a primary aim of sustainable development. The Federal Government and the legislator emphasised this as early as 1999 with the reform of the Labour Promotion Act. With the Job-AQTIV Act, which came into force on 1 January 2002, this course of action will be followed consistently.

Preventive combating of long-term unemployment is prominent among the measures. Employees should not have to be unemployed for a long time before they can take advantage of effective measures. The job seeker's professional strengths and opportunities for using such strengths are to be determined on first contact with the job centre. The primary aim of this is to see that the job seeker gains regular employment as quickly as possible.

In accordance with the principles of sustainability, however, the individual responsibility of the unemployed person is also called upon at the same time. With a form of agreement on targets, the job centre and long-term unemployed person agree on the necessary steps to be taken. This combination of tailor-made help from the state and steps to be taken, for which the individual is responsible, takes those affected seriously and shows them the path, which they themselves must take.

State and social institutions must also be geared more decisively towards a policy of sustainability. This is an important aim of the reform recently introduced by the Federal Institute for Employment, which provides management levels with structures that have been tried and tested in private companies. The core element of sustainable combating of unemployment is effective placement of employees. In future, private employment agencies will participate more in reintegrating the unemployed into the labour market and in this way, they will also support the initiative and creativity of public sector employment agencies. By incorporating competitive elements into so far predominantly state-owned employment agencies, efforts will be increased for the sake of the unemployed and society as a whole to fill as quickly as possible the more than a million vacant positions.

The national Action Programme to Combat Poverty and Social Exclusion concentrates on combating unemployment among groups of people at greatest threat, in particular, people on social welfare, the poorly qualified and the severely disabled.

More than seven million foreigners live in Germany. The extent to which they are integrated in the neighbourhood, the world of work, schools and sport is a crucial factor in determining cohesion and the human face of our society in the long term. Above all, this assumes that we regard the associated cultural diversity of our country as an asset that is not simply demonstrated in the diversity of exotic restaurants. This includes, for example, regarding Islam as a world religion, whose believers are not be equated with its fundamentalist supporters. On the other hand, such an understanding requires a willingness among foreigners to integrate and, in particular, to demonstrate the will to learn the German language.

Until recently, perhaps the greatest obstacle to integration in Germany was the fact that the German law also considered people as foreigners who were born in Germany and were perhaps in their second or third generation of living and working in Germany. With the reform of the laws concerning citizenship in this election period, the principle of descent (*jus sanguinis*) was dropped and, in accordance with legal tradition in most European countries, it was determined, that those born in Germany are German nationals under certain conditions.

However, we still have a long way to go. The unemployment rate among foreigners in Germany is, for example, almost twice as high as it is among native citizens. The most significant reasons for this are inadequate knowledge of the language and shortfalls in professional qualifications.

If third-generation families living in Germany speak little German and socialise almost exclusively with people from their country of origin, there is hardly room for growth in mutual understanding and for them to get to know native citizens and visa versa. This scenario poses a critical question to native citizens. Why do many foreigners withdraw into their own family and familiar environment? Integration can only succeed if foreigners, and particularly those who have been living in our country for a long time, feel they are welcome here. Withdrawal into the security of their own family and their own language is inevitable, if they are looked at askance because they are different, or are even victims of right-wing extremism, or are regarded as a security risk.

Perhaps in no other case is it as clear as it is here that it is not so much the state, but rather us all who are crucially involved in sustainable development. Whether foreign children are welcome in schools or sports grounds and the experiences foreign employees have in dealing with their German colleagues in the workplace could be of more importance to the inclusion of foreigners in our society than well-meaning state-run programmes. Nevertheless, the state has an important function in providing language courses, integration in schools and professional qualifications suited to the foreigners' situation. Investments made in this area, for example, language courses for foreigners who have lived in Germany for a long time, bear rich fruit for cohesion in our country.

2. Two speeds: taking everyone along

There is intensive public discussion on the above-mention focus points. Another subject, which still leads a shadowy existence in public consciousness, is putting social cohesion increasingly to the test: it is not just a few people who feel unable to keep up with the great speed of modernisation.

For example, they feel excluded from recent developments in our society due to inadequate knowledge and skills in dealing with modern communications technology. There is constant talk about email, SMS, Windows and the Internet in daily life, on the television and in the workplace. Until now, many people have not been able to relate to these terms and the world to which they belong. If a workplace is to be equipped with modern information technology, this can trigger fears of failure, especially among older employees.

Similarly, the increasing use of the English language often leads to people feeling excluded. Even at the railway station, the English word “meeting point” has replaced the German word “*Treffpunkt*”. Those who wish to follow the evening news report on stock market developments require an extensive English vocabulary and some knowledge about how the financial markets function. In reality, however, a large majority of German people have no or little knowledge of the English language.

Rapid technological advances, international competition and the economic and social structural change associated with it make great demands on flexibility, the ability and willingness for lifelong learning and constant adjustment to changing circumstances. The speed of change makes many people breathless, they feel as though the ever-accelerating progression of time is passing them by and leaving them behind. Being a flexible person with a continual eagerness to learn, propagated as an ideal in leading articles and high-gloss brochures, is far from being a matter of course.

Many people are unaware of how such experiences exclude people. If the situation remains the same, it will divide society into winners and losers. Experiences of failure associated with this could lead to people withdrawing into private lives, but they could also lead to aggression and a readiness to commit violent acts.

What can be the response to this challenge? Of course, our society cannot protect people from the unreasonable demands of a changing world. Export-oriented German companies are competing internationally and can only assert themselves at this level by means of innovative products and services, which make great demands on the knowledge and skills of the companies' employees. This requires good training, lifelong learning and sound language skills. The ability to adapt to changing circumstances and deal with these in a constructive manner represents a key skill without which a modern national economy and society cannot function.

However, there will always be different speeds of professional and social development within a society. There can be no objection to this as long as people are not left behind. Nevertheless, the crucial question is whether our schools and businesses, as well as the social environment are made in such a way that existing potential for learning and personal development can be exploited. Are they adapted to the needs and potential of young people and adults? It is important for experience to be shaped by encouragement and not failure.

We need an educational campaign, which works on and implements concepts suited to the needs and potential of these people. This presupposes, in particular, an appropriate ratio of teachers to pupils. In addition, we need social commitment to ensure that in factories, offices and social clubs, those who require time to adjust to new circumstances are not left behind. This demands a culture of living and working together.

Many general conditions can be changed in other ways to ensure everyone has a chance. We can serve understanding in politics, the media, advertising and in everyday language, if we express ourselves in a way that is understandable to everyone and refrain from using jargon that excludes people. There are also a lot of opportunities to overcome beginners' fears in using of information technology. For example, the Internet offers older people good opportunities to become informed and take part in social discussion. With its ten-step programme "*Internet für alle*" (Internet for Everyone) the German Federal Government has created conditions to facilitate Internet access for all German citizens and break down worries and fears about technological innovations.

IV. International responsibility

1. Acting nationally, bearing responsibility for the One World

Environment and development. That was the message of the Rio Conference in 1992. The linking of both aims is today recognised internationally as the foundation for a worldwide strategy for sustainable development. This makes sense, for example, as the availability of clean drinking water and fertile soil is the necessary basis of economic development for many developing countries in the south, while on the other hand, it is precisely in these countries that poverty and a lack of economic alternatives lead to over-use of the soil.

Despite notable successes since 1992, the trends that served as triggers for the Rio Conference continue to be a cause for concern:

- Poverty in the developing countries is still widespread. The gulf between poor developing countries and rich industrial countries has widened in recent years. For a large number of developing countries, integration into global trade has not yet advanced beyond modest beginnings.

- Global environmental trends, such as the emission of greenhouse gases (climate change) or the erosion of soil represent a long-term threat to the conditions necessary to sustain human life. In many countries already, people are not being provided with sufficient clean drinking water.

- Despite falling birth rates, the world’s population is continuing to grow, resulting a worsening of the developments mentioned.

The consequences of these global trends concern us all. They include storms and floods, droughts and the formation of deserts as a result of climate change,

the destruction of forests as a result of pollution and the clearing of forests, pollution and overfishing of the seas, the loss of plant and animal species, farmland and pastures. These developments are a threat to people's foundations of life, especially in the south. Like poverty, they often lead to people fleeing from their countries and to emigration and are the cause for conflicts and violence.

The examples clearly show that our development is inseparably linked to the rest of the world. This not only applies to global environmental protection. The German economy is now integrated in the world economy and dependent on exports to such a great extent that events in the world economy and a functioning world trade have a considerable influence on economic development and employment in our country. In addition, it is generally accepted that inhumane or unequal living conditions and opportunities in developing countries also have a negative effect on us.

Not one nation in the world can solve these problems alone. More than ever before in the history of our country, we are dependent on finding appropriate responses to the great challenges of our time in Europe and globally within the framework of the international community of states.

2. Opportunities and risks of globalisation

Some of the trends mentioned above are closely associated with globalisation of the world economy. Decisions about which investments are worth making in which locations are made within the framework of international competition. In addition to employees' qualifications and infrastructure, available capital, existing technology and other general conditions, different levels of salary and different environmental and social standards are important factors for these decisions. Concern about globalisation is growing particularly among people affected by economic structural change and the possibility of losing their job.

Many young people criticise that companies operating internationally, with their capital movements and investments, could have a massive influence on the economic and social development of a country. There is also resistance to the cultural dimension of globalisation: the one-sided alignment of life styles with the dominant “western” consumer model is often associated with the marginalisation of home cultures, languages and customs, but also with consequences for the home economy and great environmental problems.

From an international viewpoint, political development has not really kept pace with economic development. While international structures and decisions have a considerable influence on circumstances at home, the national state still determines the boundaries of a government’s democratic legitimation and the effectiveness of laws. The institutional structures for international trade (“global governance”) are not yet sufficiently developed to make binding decisions on globally important questions and guarantee their implementation. It is therefore essential to continue developing common trade at a supranational level, particularly within the framework of the United Nations and other international institutions and regional organisations, and integrate developing countries on the basis of equal rights.

As this concerns a difficult process, which only promises success in the long term, all we can do at this stage is draw up regulations through international agreements between states to achieve global sustainable development step by step. This applies to better integration of developing countries as well as to global environmental protection and international financial markets. There have certainly been successes in this field. Despite all the compromises, the UN Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol are an encouraging basis for global climate protection, which certainly needs to be developed further.

There are now generally accepted standards by which to detect suspicious financial transactions in the fight against terrorism, money laundering and drug dealing.

It will be more difficult to implement environmental and social standards as global minimum standards in the World Trade Organisation (WTO) and other institutions. As observing these standards can be associated with considerable difficulties for developing countries, from their point of view these standards signify obstacles to trade put in place to their disadvantage by industrial countries. However, success could be achieved, for instance, by linking international agreements on environmental protection or the introduction of such standards with financial or technical support or other incentives for developing countries. For this reason, the climate conference in Bonn resolved to provide assistance with which developing countries can use their energy sources more efficiently and implement renewable energy sources suited to their needs.

Existing international agreements and institutions are regarded by many developing countries as unfair. The opinion that the international order favours industrial countries is widespread. This needs to be taken up in constructive dialogue and negotiations, for example, on better access to the market and more effective participation by developing countries in processes of decision-making.

Globalisation also offers great opportunities. Globalisation is much more than simply economic involvement, it promises more prosperity and stability for everyone. It opens up new ways of communication and therefore allows a greater number of encounters between people, more exchange between cultures and more understanding between nations. Globalisation points the way to universality of human rights. It also opens up new possibilities for involvement and creativity in civil society and promotes a feeling of global responsibility.

As shown in particular by examples in South East Asia, functioning world trade also offers great opportunities for the economic development of developing countries. The prosperity of our country as an exporting nation is based essentially on liberalised world trade. Industrial and developing countries can benefit equally and in many ways from division of labour in international companies. It should not be underestimated that the stronger and better the integration of states in a globalised economy, the smaller the risk should be of occurrences of one-sided political or military campaigns.

There is certainly an unequal spread of the advantages of globalisation today. Our key challenge is therefore to make globalisation a positive development for everyone. Within the framework of the WTO, the German Federal Government is doing what it can to see that developing countries have an equal right to helping shape the general conditions of globalisation. In cooperation on development, its aim is to reinforce successfully the ability of developing countries to integrate themselves in the world economy.

The WTO Ministerial Conference in Doha in November 2001 gave the green light for a discussion on world trade, attaching particular importance to the interests of developing countries. At the same time, the WTO has opened up to new subjects of discussion. In future, as a result of German and European pressure in particular, the WTO will negotiate questions of environmental protection and deal with fundamental rights of employees. There have been demands for the discussion of these subjects for a long time. The agreements made at Doha are an important contribution to the active shaping of globalisation through politics.

On the whole, we should regard globalisation as a positive challenge despite negative incidental effects. Germany has excellent potential to survive in international competition and is also well positioned as an important partner for cooperation from the viewpoint of developing countries and transformation countries and as a member of multilateral organisations.

Against this backdrop, Germany's potential could be mobilised to develop new strategies, make use of existing room for manoeuvre and tackle issues with confidence. The creative task consists of shaping structural change aggressively to ensure that successful economic development, effective environmental protection and the strengthening of social cohesion go hand in hand. It therefore concerns the embodiment of a global, social, economic and ecological framework of order to ensure that globalisation promotes sustainable development. As shown by the Federal Government's initiative for debt relief for the poorest countries at the G7 Summit in Cologne in 1999 and by its programme to combat poverty, developing countries also profit from problems being tackled forcefully.

3. Strengthening Europe

European and national politics are moving ever closer together. A successful national Strategy for Sustainability is therefore dependent on a European policy geared towards the model of sustainable development. For example, reform of the agricultural policy can only be realised, if new directions are also set in Brussels. Great demands are placed on the leadership role of the European Union, especially in times of growing international responsibility. This applies to measures of foreign trade policy, environmental policy and development policy, as well as to common peace and stability policies.

For this reason, the EU needs a demanding and concrete strategy for sustainability. With this in mind, in July 2001 the European Council in Gothenburg adopted a Strategy for Sustainable Development, whose direction and key focal points are very similar to the strategy presented here. This new concept of shaping politics is based on the principle that the economic, social and ecological effects of all political decisions are reviewed and taken into account when adopting resolutions.

In the future, all policies will also be assessed to determine whether they contribute to sustainable development within and outside the EU. The European Council also resolved to set priorities in the areas of climate protection and energy, sustainable means of transport, public health (including the safety of foodstuffs) and responsible management of resources (including agricultural reform).

In the European Union, the principle embodied in Article 6 of the EC Treaty of integrating environmental interests in other areas of politics is important in promoting sustainable development. This principle calls for sustainable development to be taken into account consistently, also when enlarging the European Union.

The EU Strategy for Sustainable Development cannot, however, replace a national Strategy for Sustainability. Key responsibilities for sustainable development, for example, in areas of taxation, social security and education still lie with the member states. They are also responsible in all areas for translating the policy into concrete measures. National and European strategies for sustainability serve to complement and reinforce each other.

4. Acting internationally

The terrorist attacks in the U.S.A. on 11 September 2001 were drastic in the way they brought home to us the new threats confronting us today. Security and peace cannot be achieved limited to the boundaries of the nation state or restricted to individual conflicts or regions.

Peace is impossible in the long term without justice, stability and a reduction in global poverty. Poverty, hunger and conflicts of allocation, destruction of the environment, disregard of human rights, and failure and breakdown of the state are often structural causes of military conflicts. However, sustainable development requires peace.

Violent conflicts are a threat to developmental successes and create new poverty. Sustainable development is therefore aimed at long-term prevention of violent solutions to conflicts in that it contributes to alleviating the structural causes of conflict and reinforcing non-violent solutions to conflicts. In certain cases it is necessary to break the vicious circle of misery and violence through internationally approved campaigns before even pre-conditions for sustainable development can be achieved. On the basis of United Nations' resolutions of international law, units of the Federal Armed Forces therefore also participate in peace missions.

Respect for human rights and democratic principles as well as responsible government leadership are both aims and basic pre-conditions of sustainable development. They are fundamental conditions for stability and peace. Human development is not possible without the fulfilment of inalienable rights to freedom, self-determination, democratic participation, food, shelter, education and health.

The aims of sustainability need to be implemented and safeguarded internationally. They cannot be achieved through national efforts alone – global cooperation is essential. Even if the United Nations are still insufficiently equipped to carry out these tasks, there is still no alternative to this universal people's forum. Germany is prepared to assume greater responsibility within this framework and it will remain consistently committed to strengthening multilateral structures.

V. Management rules for sustainability

Basic rule

Each generation must solve its own problems and not burden the next generations with them. It must also make provisions for foreseeable future problems. This applies to the conservation of the natural foundations of life, to economic development, as well as to social cohesion and demographic change.

Participants

1. Together with the state, citizens, manufacturers and consumers, trade and industry and trades unions, science, churches and associations are all important participants in sustainable development. They should take part in public discussion on the model of sustainable development and be responsible in orienting their decisions and actions towards these aims.

2. Companies are responsible for their production and products. This includes providing consumer information on health-related and environment-related properties of the products as well as on sustainable methods of production. The consumer is responsible for choosing products and using them in a socially and ecologically sustainable manner.

Areas of action

3. Renewable natural goods (e.g. wood or fish populations) should only be used in long term within the bounds of their ability to regenerate.

Non-renewable natural goods (e.g. minerals or fossil energy sources) should only be used in the long term within the context of how their functions can be replaced by other materials or energy sources. The release of materials or energy should not exceed in the long term the adaptability of the eco-system – e.g. the climate, forests and oceans.

4. Dangers and unjustifiable risks to human health should be avoided.

5. Structural change triggered by technical developments and international competition should be shaped in a way that is economically successful as well as ecologically and socially sustainable. For this purpose, political fields should be integrated so that economic growth, high employment, social cohesion and environmental protection go hand in hand.

6. The association of consumption of energy and resources and transport services with economic growth needs to be broken. At the same time, we should aim for growth-related increases in demand for energy, resources and transport to be more than offset by efficiency gains.

7. Public authorities are also obliged to take into account intergeneration equity. Government, *Länder* and municipalities should present balanced budgets as soon as possible and then take the further step of continually reducing their debt position.

8. Sustainable agriculture needs to be compatible with nature and environment and take into account the demands of keeping animals in a way that is fair to the animals and providing consumer protection, particularly concerning health matters.

9. In order to strengthen social cohesion,

   - poverty and social exclusion should be prevented as far as possible,

   - opportunities for participating in economic development should be open to all sections of society

   - everyone should take part in social and political life.

10. General international conditions should be shaped in a manner, which ensures that people in all countries can lead a life worthy of a human being and according to their ideas and take part in economic developments. Environment and development form a unit. An integrated approach should link the fight against poverty with

   - regard for human rights,

   - economic development, environmental protection, and

   - responsible action by governments

The management concept of sustainability

The management concept of sustainable development includes the following three elements:

- Management rules
- Indicators and targets:
  The indicators show our position on the path to sustainable development. Targets clarify the needs for action and are important for efficiency reviews.
- Monitoring:
  There should be regular reports on progress already made and regular adjustments of indicators and targets to changing priorities.

C. Strategy as a Social Process

I. Jointly creating sustainability

It is clear to everyone that sustainable development cannot simply be enacted by the State. Only if all those participating in economy and society, if citizens make the subject their own affair, will we achieve success. Those who invest, produce and consume take the decisions on sustainability.

If this strategy is to address important social issues, such as the quality of life of present and future generations, it is clear that the State can only tackle these future issues by engaging in dialogue with citizens and those participating in economy and in society. The development of visions and concrete goals requires broad social communication and each individual to be responsible for their own actions.

For this reason public discussion and collaboration with and between the social participants are key elements of the German Federal Government's Strategy for Sustainability. This also corresponds to the requirements of Agenda 21, which was adopted in Rio and calls on all countries to develop their strategies for sustainable development on the basis of greatest possible participation of social groups.

In doing so, we can build on the achievements already made in society. The *Länder* and municipalities, unions, environmental groups and development organisations, agricultural and consumer groups, science, the church, and individual citizens have proven in the past how they are able, by means of concrete measures within their own spheres of influence, to contribute to increased environmental protection, quality of life, economic growth and social fairness. The following examples should serve as an encouragement and incentive for similar initiatives. They help with bringing the model of Sustainable Development to life

1. The Federal Government

The Federal Government intends to be the one providing the stimulus for the national process of sustainability.

a) How did the Federal Government organise the process?

Within the Federal Government the national Strategy for Sustainability was prepared by the State Secretaries' Committee for Sustainable Development under the chairmanship of Martin Bury, Minister of State at the Federal Chancellery. He represents the State Secretaries of the following Ministries: the Foreign Office, Finance, Economics, Consumer Protection and Agriculture, Labour, Interior, Transport, Environment, Education and Research, Health, Economic Cooperation, and Family, Senior Citizens, Women and Youth. He assumed responsibility for inter-departmental management of this process within the Federal Government and reports regularly to the Federal Cabinet.

For this task the State Secretaries' Committee was supported by the Sustainable Development Council, appointed by Chancellor Gerhard Schröder. The Council contributes decisively to the national strategy with innovative proposals, advises the Federal Government on the process of sustainability and creates a forum of dialogue for the numerous activities and ideas in society. Its members are from the fields of environment, trade and industry, transport, unions, *Länder* and municipalities, consumer protection/food/agriculture, churches, international affairs/development and science. Thus, it reflects not only the broad range of social participants and is able to formulate society's demands on politics concerning sustainable development, but also brings the developed goals and measures to society and to each individual's areas of responsibility.

The Council contributes considerably to the participation of social groups in the decision-making process and presents a new method of dialogue between the Federal Government and society.

The Federal Government's involvement in the process of achieving sustainability does not end upon presentation of this strategy. Rather, it seeks the active participation of all political and social actors and of each individual in implementing and developing this strategy. The Government will therefore continue with this process (cf. Chapter G).

b) How did the Federal Government arrange the dialogue?

The preparation of the strategy was accompanied by a broad dialogue in which all citizens as well as social groups were able to put forward their ideas and proposals. Two phases of discussion preceded the strategy's completion in April 2002.

The first phase of discussion took place even before the publication of the Federal Government's draft strategy in October and November 2001. Even at this early stage of preparing the strategy, citizens were given the opportunity to put forward their ideas and proposals for the sustainability strategy in writing or via the Internet in the course of the forum "*Dialog Nachhaltigkeit*" (Dialogue on Sustainability). Following the publication of the first draft of the Strategy for Sustainability in December 2001, the second phase of discussion was carried out in February 2002 during which citizens were once again able to comment on the draft by writing and via the Internet.

During both phases of discussion, there was also an opportunity to discuss aspects of sustainability by chatting online with the Minister of State Martin Bury, Chairman of the State Secretaries' Committee for Sustainable Development, Dr Volker Hauff, Chairman of the Sustainable Development Council as well as State Secretaries from various federal ministries.

Both phases of discussion were accompanied by direct rounds of consultations with municipalities, trade and industry and trades unions, environmental groups and development organisations, agricultural and consumer groups as well as science and churches. In addition to the talks, numerous associations and organisations also submitted extensive written comments, which were evaluated and taken into consideration during revision of the strategy.

Finally, following the continuous exchange of ideas with the Council for Sustainable Development, a number of important aspects were included in the revised version of the Strategy for Sustainability.

c) Most important results of the public dialogue and consultations

The early involvement of citizens and social groups in the preparation of the strategy was welcomed by all participants of the consultation and dialogue process. There was some criticism regarding the lack of time for some areas of discussion.

There was, however, consensus that the topic "Sustainable Development" must play a greater part in public life and that the process must not come to end with the publication of the strategy. "Implementation of the strategy is crucial", was a frequent message during discussions. The strategy must not be "symbolic politics", but rather a credible concept of action to be implemented with definite, quantified and realistic targets.

The Federal Government took the same view and included indicators and goals in the strategy (cf. Chapters D and E in particular).

During discussions it became clear that the success of the Strategy for Sustainability depended on the extent to which participants, and in particular citizens, can be fired with enthusiasm for the matters dealt with in the strategy. National and international sustainability can only be realised, if the actions of each individual acts are geared towards sustainability. “In my opinion, sustainability also means to assume concrete responsibility”, one participant wrote in the online forum.

The range of subjects discussed was enormous. In the online forum alone 78 subjects were discussed in the first phase of discussion. “Even during the forum it becomes clear that, in principle, each part of our life is subject of the whole issue of sustainability. Thus, it is even more important to set limits and to concentrate on core topics”, according to one comment made during the online forum. This reinforced the Federal Government’s actions while preparing the national Strategy for Sustainability.

There was controversial discussion about the coordinates - intergeneration equity, quality of life, social cohesion and international responsibility - set down by the State Secretaries’ Committee for Sustainable Development as forming the basis of the model of the strategy.
Some views favoured the established division of ecological, economic and social dimensions. Others, however, rejected these “three pillars”, as this would be in conflict with an integrated view and would only result in known positions remaining unchanged and isolated. All in all, there was clear support for the Federal Government’s chosen coordinates.

Interesting ideas to supplement the model were put forward by both the Sustainable Development Council, during consultations with social groups, as well as via the Internet. For example, it was suggested that cultural and ethical dimensions of sustainability should be made a subject of discussion. Both aspects are included in Chapter B as part of the definition of the model.

In addition, greater consideration was given to the frequently demanded debate on fairness among today's generations, i.e. the global distribution of wealth, in the revised version of the strategy. The demand not to exclude conflicting goals but rather to clarify them is also reflected in the strategy's revised version (cf. Chapters D and E in particular).

Furthermore, the following proposals are dealt with in particular in the strategy:

- Inclusion of the consumers as well as trade and industry as important participants in implementing the strategy,
- the necessity of changes in behaviour and consumer patterns,
- development of sustainable goods,
- the importance of protecting resources and reduction of land utilisation,
- greater involvement of expected population development,
- designing health and social security systems that are able to meet the challenges of the future and bridge gaps between all generations,
- emphasising interdisciplinary education for sustainable development,
- the importance of children and young people in the sustainability process,
- the necessity of a suitable campaign providing information on sustainability in order to increase the desire for "sustainable lifestyles" and to raise acceptance of and involvement in sustainable activities,
- alignment of foreign and development policy with the objective of sustainable development,
- linking national involvement with European and international activities and fair world trade in order to accept responsibility for the One World,
- effects of globalisation.

The key indicators were discussed intensively, and a large number of indicators was put forward by the Sustainable Development Council, the representatives of social groups and by the public during Internet chats. Here are some examples:

- indicators with short, medium and long-term goals in order to recognise at the early stages if the method chosen is a success,
- indicators for international responsibility,
- indicators for a more child and family-friendly society,
- indicator for the distribution of income and wealth,
- unemployment rate as an indicator for employment,
- indicator “violent crime” for crime rate,
- indicator for the field of waste and recycling,
- indicator for water and forests as a renewable resource,
- indicator for sustainable and economic development,
- indicators of democratic and voluntary involvement.

Despite the numerous proposals, the Federal Government, in agreement with the Sustainable Development Council, still says that the number of key indicators has to be reduced. “It can be argued whether to include this one or to leave out that one, but in the end there could be between 80 and 100 indicators and everybody will lose track”, according to one commentary made in the online forum, supporting the actions taken by the Federal Government.

Some indicators in the strategy’s draft were critically examined. For example, there was the demand for an extension of the indicator for the protection of species plus an agricultural indicator, which also covers conventional farming. The Federal Government took up these proposals. Other criticisms, on the other hand, could not, or only partially, be taken into account. The gross domestic product, for example, was rejected as a partial indicator of sustainable development. With regard to climate protection, quantified objectives for 2020 and 2050 were demanded while, at the same time, a precise deadline was called for the realisation of the 0.7% target of development aid. The latter was taken up with an interim target for 2006 (cf. Chapter F).

There was further criticism regarding the overall selection of indicators. The selected indicators gave the impression that an efficiency revolution would solve the problems. “Is there no need, apart from intensive convincing, for more effective intervention in the freedom of choice in consumption, production and action?”, one

online participant summarised this discussion. All in all, there was wide support for the efficiency-oriented approach of the Strategy for Sustainability, with some comments calling for an ambitious increase in efficiency (oriented towards the “Factor 4” or “Factor 10” vision).

Common views were also established by the participants of consultations and the public Internet debate with regard to the main points of sustainable development. The chosen priorities, such as an energy policy sustainable in the future, sustainable shaping of mobility and a healthy diet, found wide support in the processes of consultation and dialogue. A number of ideas were put forward. With regard to the “Energy” focus the orientation of the user should be given greater consideration (concrete measures to save energy). With regard to the “Mobility” focus there was a call for the utilisation of further opportunities, such as new transport systems as well as the promotion of cycling. With regard to the “Nutrition” focus the correlation between health and healthy diet as well as the role of agricultural administration are to become more a subject of discussion in producer and consumer dialogues. Other important subjects are increased decentralisation and regionalisation, improved animal rights and environmental-friendliness and the significance of “conventional as well as rural farming”. There was criticism that forestry was not given sufficient consideration in the first draft of the strategy.

Some representatives of the social groups as well as participants of the Internet debate considered three primary areas of action as inadequate, although the subjects for further priorities varied. Some of the subjects mentioned were, for example, the reorganisation of social security systems to make them able to meet the challenges of the future, reasons and consequences of a falling birth rate, the need for a qualified educational policy, as well as the fulfilment of global responsibility for sustainable development.

Consultation of social groups: some key focus points

The consulted **scientists** warned against providing insufficient disclosure of the target conflicts resulting from the formulation and implementation of an integrated strategy for sustainability. Particular notice should be taken of natural barriers as boundaries of economic and social development to avoid simplifying the harmonisation of the three dimensions (ecological, economic, social) of sustainability. Moreover, transparency improves the possibility of participating and thus supports democratic decision-making, with science and research providing the necessary knowledge on orientation. Beyond existing differences between foundations and applied research, science is organising itself globally towards a solution-oriented “science for sustainability“. This requires the expansion of public support according to research offensives and will advance the necessary efficiency revolution through the development of innovative technology. The national Strategy for Sustainability is to be expanded to include subjects such as city and construction of the future, avoidance of using natural resources, development of human and knowledge capital, employment able to meet the challenges of the future, biological diversity as well as dealing with risks.

The **churches** pointed out that ethical issues and values like fairness and solidarity play an important role in the implementation of sustainable actions. Just as scientists, the churches demanded that the strategy should deal with the goal conflicts and problems. The importance of the family during childhood in particular and the passing on of values should be emphasised. Together with the **development aid agencies**, the churches argued in favour of dealing at all times with the international effects even of purely national actions. Human rights and security aspects are also to be incorporated into the strategy. Churches, development agencies and environmental groups demanded that we should never lose sight of the aspects of the development collaboration and the fight against poverty. This also means to include an implementation concept for the target of spending 0.7% of the gross domestic product on development collaborations in the strategy.

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Apart from their overall positive assessment of the sustainability process, **environment and nature protection groups** also made it clear to the Federal Government that they demand clear statements on long-term targets of climate protection, the continuation of the eco-tax or a reduction of coal subsidies. As a result of an initiative of different groups, DNR, NABU, and BUND, formulated their central proposals for ecological goals and measures in a joint statement on the Federal Government's draft of the strategy. They warned against the lack of strategic approach with regard to a long-term policy of trend reversal for sustainable development, referred to the limit of natural resources and their function as a crash barrier to all economic and social actions and called for the continuation of the sustainability process beyond the "Johannesburg Summit".

Representatives from **trade and industry** stressed competitiveness as well as internationally balanced thinking and action. They also emphasised the importance of increasing efficiency and expressed desire for a process that initiates a competition according to the best solutions. Subjects such as "water quality" and drinking water should be included. **Trades Union representatives** gave their support to social fairness in particular, including central aspects like changes in employment and issues of codetermination. Against the background of around one million vacancies during times of high unemployment, emphasis was placed on the necessity of strengthening education and training. Defined goals and apparent pilot projects are also important to clarify goals so that people can picture sustainability.

From the view of **consumer protecors**, an active consumer policy is essential for the strategy's success. This will include, for example, honest labelling of foods. In addition, it is necessary to pay more attention to a tolerant and open society so that the consumer will play a more active role with the improvement of consumer protection. Reference to programmes such as "*Soziale Stadt*" (Social Town) and "*Aufbau Ost*" (Reconstruction of East Germany) should not be omitted. In the opinion of agricultural groups, genetic engineering, the importance of biomass in the energy debate, the future of quality-oriented conventional farming as well as recycling have to be taken into consideration. The using up of land should be reduced to zero. Emphasis was also placed on the status of forestry and its role within cli-

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mate protection and with the production and use of renewable raw materials.

Municipalities were concerned, among other things, with the broader depiction of the “Local Agenda 21”. Land use, construction and sustainable urban development were mentioned as additional subjects. On top of that, social issues are also very important, such as family and child poverty as well as the integration of the unemployed, foreigners and marginal groups. Another important aspect is sustainable public finance.

Key focus point of the Internet dialogue

The participants of the online-forum raised on many occasions the subject of concrete measures for a sustainable transport and energy policy. They particularly welcomed the introduction of the eco-tax. Furthermore, the Internet participants placed emphasis on renewable energy as well as energy-saving measures in private households. The reform of the agricultural policy, initiated by the Federal Government, was another important issue for many. The repayment of public debt started by the Federal Government was seen as a definite contribution to sustainability. Fairness that bridges the gap between all generations has to be a guiding principle for taxation and public charges. Occasionally, concrete and practical projects were also proposed. An interesting approach was, for example, the cooperation between schools and companies (pupils as “controllers” of a credible sustainability in companies).

With regard to social cohesion, the majority of online participants expressed concerns about what can be done to avoid society being divided into losers and winners. Here the support of the community spirit is crucial from the beginning of the learning process of any human being onwards, i.e. from kindergarten to school. In connection with this, there were calls for more day nursery places as well as all-day schools, plus a reduction of childcare costs. Like the municipalities, citizens also addressed issues such as better integration of foreigners, the exclusion of certain groups of persons and unemployment. After all, the security aspect and the importance of human rights was emphasised not least against the background of the terror attacks in the U.S.A. on 11 September 2001.

The notion that for the globalisation era there is not yet a positive ideal one can strive for was interesting. According to the view of participants in the debate, the model of sustainable development has by all means the potential if conveyed in a correct manner. Here it is crucial not to equate sustainable development with renunciation: “Would it not be possible to push ahead with public work and discussion at a national level, which deals with sustainable development not as a must

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but as something to be desired and won. Sustainable development does not necessarily mean the renunciation of quality of life but stands for improvement here and now," according to one citizen in the online forum.

If all proposals from the consultations with the social groups, the online forum, the Internet chats and other written comments had been included, the whole process would have gotten out of hand, particularly since some proposals contradicted each other. The comparison of the first draft with the revised version of the Strategy for Sustainability showed, however, that many suggestions were included in the strategy's revised version.

d) Events of the Sustainable Development Council, federal ministries and other social groups on the Strategy for Sustainability (selection):

- Sustainable Development Council's launch party "Sustainable Development: From Slogan to Political Strategy" on 28 September 2001.
- Debate forum "*Weltgipfel für nachhaltige Entwicklung, Johannesburg 2002"* (World Summit on Sustainable Development Johannesburg 2002) by the Federal Ministry for the Environment and the Ministry for Economic Cooperation and Development in cooperation with the Forum für Umwelt und Entwicklung (Forum for Environment and Development) on 13 and 14 November 2001, plus continuation of the consultation with the social groups and others on 25 February 2002.
- Event organised by the Heinrich Böll Foundation and the Friedrich Ebert Foundation "*Nachhaltigkeit als Modernisierungsstrategie"* (Sustainability as a Modernisation Strategy) on 12 December 2001.

- Event by the parliamentary group of Bündnis 90/ DIE GRÜNEN with the participation of *econsense,* Forum für nachhaltige Entwicklung der deutschen Wirtschaft (Forum for Sustainable Development of the German Trade and Industry) *,* on 28 January 2002.
- Forum "*Zivilgesellschaft und soziale Nachhaltigkeit"* (Civili society and social sustainability) organised by the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth on 12 February 2002.
- Workshop by the Federal Ministry for the Environment in cooperation with the environmental groups BUND, DNR and NABU on the ecological signposts of a Strategy for Sustainability on 7 and 8 March 2002 in Berlin.
- Sustainable Development Council event entitled "*10 Jahre nach Rio - 100 Tage vor Johannesburg"* (10 Years after Rio – 100 Days before Johannesburg) on 13 May 2002.
- Several events organised by *econsense,* e.g. in cooperation with the World Bank, BMZ and BDI "Sustainability Forum" on 22 and 23 May 2002 in Berlin, a conference with German companies participating in the Global Compact of the UN Secretary General in April 2002, as well as a congress on "Approaches to solutions for sustainable development in companies" in cooperation with *Entreprises pour l' Environnement* on 4 and 5 July 2002 in Paris.

e) What is the role of the Sustainable Development Council?

The Council actively supported the Federal Government in this process:
The Council sent out invitations for its first public event on 28 September 2001 in Berlin. Under the title "*Nachhaltige Entwicklung: vom Schlagwort zur Strategie"* (Sustainable Development: From Slogan to Strategy), the Council started the public debate on sustainable development. The Chairman emphasised to more than 300 participants the Council's willingness to take part in debate.

In mid-November 2001 the Council presented a paper containing targets and key focus points for sustainable development in Germany. With this paper the Council opened up a social discussion on a number of ambitious targets and positions regarding the three business areas energy, mobility and agriculture. With regard to the target of energy policy, the Council endorsed the recommendations made by the Enquete Commission “Protection of the Earth’s Atmosphere”, which called for a 40 % reduction of CO_2 emissions by 2020, compared to 1990. Furthermore, the Council also proposed a new efficiency offensive, resulting in a efficiency gain of 3 % annually. It also demanded an end to coal subsidies by 2010 and an increase in the proportion of renewable energy to 50 % by 2050, compared to 2000.

In terms of transport, the Council sees new opportunities for an environmentally-friendly mobility development with plans for CO_2 certification. Sustainable housing development is regarded as another key focus point of action. In this respect, the Council supports the Federal Government’s target of reducing daily land utilisation for housing and transport to 30 hectare per day by 2020. It also proposed to reduce this figure to zero by 2050. The Council attached particular importance to the correlation of globalisation and sustainable development and recommends the establishment of a World Commission on Sustainability and Globalisation by the United Nations. To support the social discussion on objectives of sustainable development, the Council set up a debate forum on the Internet, in which the proposed objectives were discussed from the end of November 2001 until the end of January 2002.

Apart from these contributions to a long-term oriented strategy, the Council worked out proposals for additional pilot projects in November 2001 within the framework of the Strategy for Sustainability. The Federal Government and the Sustainable Development Council coordinated their efforts by means of joint meetings between the State Secretaries’ Committee for Sustainable Development and the Council. The Federal Government included the conceptional contributions as well as the Council’s proposals for projects in the Strategy for Sustainability.

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In order to raise the status of young people as participants for sustainable development, the Council launched a project entitled "*Jugendliche schreiben das Buch der Nachhaltigkeit"* (Young People Write the Book on Sustainability). The first results will be presented at the Council event on 13 May 2002.

To bring the joint activities of the Federal Government and the Council under the one roof of the Strategy for Sustainability, the Council and Federal Government use a common logo. In this way, all initiatives in connection with the strategy and the practical pilot projects are publicly linked together, creating a common identity on issues regarding sustainability. With the shaping of the future process and the further development of the strategy, the Sustainable Development Council will continue to play an important role.

f) What is the role of the German Bundestag?

The German Bundestag has actively shaped and will continue to shape the sustainability process through a regular exchange between Parliament, Government and the Council. The Enquete Commission "Protection of Man and the Environment" of the 13th Bundestag provided decisive stimuli for the realisation of the model of sustainable development in its final report "*Konzept Nachhaltigkeit - vom Leitbild zur Umsetzung*" (Concept Sustainability – From Model to Implementation) in 1998. It called, among other things, for the setting up of a Sustainability Council and interdepartmental coordination. During this term of parliament, the German Bundestag discussed several times the whole project of a strategy for sustainability and both parliamentary parties set up their own independent working groups.

- The SPD's working group Sustainability extensively discussed Germany's future issues on its way to sustainable development at conferences held on 20 February 2001, 11 June 2001 and on 1 February 2002.

- The working group of the parliamentary group of Bündnis 90/ Die Grünen called for a parliamentary discussion of Germany's future strategy at events held on 4 December 2000 and 28 January 2002.
- Both parliamentary parties made their positions clear in a motion for resolution relating to the strategy of sustainability. Following extensive debates by the committees, the German Bundestag accepted this motion for resolution 14/4606 on 18 October 2001 and called upon the Federal Government to regularly submit a written report every two years to Parliament providing details on the development and implementation of the national Strategy for Sustainability.
- The Environmental Committee of the German Bundestag discussed the status of efforts made by the Federal Government as part of the national Strategy for Sustainability with Minister of State Martin Bury as Chairman of the State Secretaries' Committee for Sustainable Development on 10 October 2001 and 20 February 2002.

2. *Länder*

The German *Länder* have the responsibility in many areas for shaping and implementing their own policies. They are therefore able to actively reorientate themselves towards sustainable development in the fields of education, environment, supporting regional economies, urban and regional planning etc. In addition to this, almost all Länder have tackled the strategic plans for sustainable development, with the key focus points often still being the environment.

***Land* (Federal state)**	**Strategies for sustainable development**
Baden-Württemberg	Environmental plan for Baden-Württemberg was adopted by the Cabinet on 12 December 2000.
Free State of Bavaria	The Bavarian Agenda 21 was adopted as a regional agenda by the Cabinet on 16 December 1997 (printed version 1998). The "*Umweltpakt Bayern - Nachhaltiges Wirtschaften im 21. Jahrhundert*" (Environmental Pact

	Bavaria – Sustainable Economy in the 21st century) was signed by the Bavarian Government and Bavarian trade and industry on 23 October 2000.
Berlin	The Berlin Senate decided in October 2000 on the preparation of a regional agenda (completion in 2003). The Enquete Commission "Berlin – Able to Meet Future Challenges", appointed in February 1998, presented its final report in June 1999 resulting in the decision by the Senat on 23 September 1999 to approve the drawing up of the "Local Agenda Berlin 21". The commission, reappointed in July 2000, continued its efforts and presented an interim report in the summer of 2001.
Brandenburg	The state of Brandenburg entered into an environmental partnership with trade associations.
Hanseatic City of Bremen	Decision on the drawing up of a regional agenda is in preparation.
Hanseatic City of Hamburg	Hamburg's Umweltbehörde (Environment Office) presented in 2001 the "Timetable Environment – Hamburg's Objectives to be Able to Meet Future Challenges" as a departmental programme. 90 Hamburg-based action groups, clubs and association joined forces in the Zukunftsrat Hamburg (Coucil for the Future) for the promotion of the Local Agenda 21.
Hessen	The Land Ministry for the Environment intends to present its first environmental programme by the end of 2002. In May 2000 Hessen's trade and industry and the Land Government decided upon an agreement on a voluntary code of practice to protect the environment.
Mecklenburg-Western Pomerania	Working out of a regional agenda entitled "Steps Towards Sustainable Development in the Field of the Environment" in preparation. An "*Umweltallianz M*-V" (Environmental Alliance) was signed on 31 August 2001 by representatives of the Land Government and regional trade and industry.
Lower Saxony	Since 1996 interministerial working party and round table (joining together Land Government and social groups). The Cabinet adopted in January 1998 the regional programme "*Nachhaltige Entwicklung in Niedersachsen"* (Sustainable Development in Lower Saxony) and in 1999 the "*Bericht zur Umsetzung der Agenda 21 in Niedersachsen"* (Report on the implementation of Agenda 21 in Lower Saxony).
North Rhine-Westphalia	For the parliamentary term 2000-2005 it has been agreed by a coalition agreement to develop by 2003 the Agenda 21 North Rhine-Westphalia together with cooperation partners from trade and industry, politics, science, unions, environmental and consumer groups, churches and other social groups. A State Secretaries' Committee for Sustainable Development was set up in January 2001. In July 2001 the Zukunftsrat (Future Council) with 28 public figures from trade and industry, science, media and other areas was appointed. The public debate began in February 2002 with a series of six agenda conferences on different topics and a large number of participants.
Rhineland-Palatinate	Drawing up of an "Agenda 21 Programme" in preparation.

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Free State of Saxony	Regional agenda “Strategy for Sustainability for the Free State of Saxony” in preparation.
Saxony-Anhalt	Working out of a regional Agenda 21 decided upon. On 14 June 1999 an environmental alliance was entered into between the Land government and the Saxony-Anhalt economy.
The Saarland	The Cabinet approved the drawing up of a “Saarland Agenda 21” in July 1999. On 19 March 2002 the Land government and the Saarland economy signed the “*Umweltpakt Saar*.” (Environment Pact Saar).
Schleswig-Holstein	On 14 November 2000 the Land Government decided to draw up a regional strategy for sustainability named “*Zukunftsfähiges Schleswig-Holstein”* (Schleswig-Holstein prepared for future challenges).
Free State of Thuringia	On 15 February 2000 the Land Government adopted the “*10 Leitlinien zur Umsetzung der Agenda 21 in Thüringen”* (10 Guidelines for the Implementation of Agenda 21 in Thuringia).

It is a matter of course that both the Federal Government and the Länder maintain an exchange of information and experience regarding objectives and measures of sustainable development. One example of such an exchange took place when the national Conference of the Ministers for the Environment in May 2001 appointed a Federation/Länder working party “Sustainable Development”, under the chairmanship of the Hanseatic City of Hamburg. The draft of the Strategy for Sustainability was sent to the heads of all Land chancelleries in December 2001. Any subsequent comments have been included in the revised version.

3. Cities, administrative districts and municipalities – local and regional Agenda 21

Cities, administrative districts and municipalities in Germany have been remarkably successful on their way towards sustainable development. In the last few years, important measures to improve living and environmental conditions have been realised locally. Climate protection and energy, transport, land use as well as construction are key focus points.

Thus many municipalities and municipalities in Germany combining their projects to reduce energy requirement into local alliances on climate. Particular emphasis should be placed on the municipalities' efforts to promote environmentally-friendly transport and construction and housing methods that use space and resources sparingly. Models such as "*Städtebauliche Innenentwicklung*" (Internal Urban Development) or "*Stadt der kurzen Wege*" (Town of Short Roads) characterise this process.

These initiatives originate from Agenda 21, which asks all municipalities to engage in a dialogue with their citizens, local organisations and the private sector and to decide on a "Local Agenda 21". With the "Local Agenda 21" cities and municipalities will have the opportunity to place fresh emphasis on forward looking development. This will create a better balance between some political areas and involves all interested citizens and social groups. An increasing number of municipalities are making use of this opportunity. At present, Local Agenda work is being carried out in more than 2,300 German municipalities and in practically all major cities.

The Federal Government reached an agreement with the *Länder* about the setting up of a service unit "*Kommunen in der Einen* Welt" (Municipalities in the One World) which was opened in December 2001. Municipal umbrella organisations and non-governmental organisations for development aid are involved. Additionally, the Federal Government supports the numerous activities in Local Agenda 21 work, such as the agenda transfer unit in North Rhine-Westphalia, which in the future will also function as the national transfer unit. The Deutsche Bundesstiftung Umwelt (German Federal Foundation for the Environment) has been promoting an ongoing three-year competition since September 2001 as well as a campaign entitled "Municipalities – Able to Meet Future Challenges".

4. Trade and industry

Small, medium-sized as well as globally active companies are important participants and disseminators for a sustainable economy. They are responsible for ensuring that new products of the future, services and procedures are more closely linked with employment and quality of life. Sustainable company management will

therefore become increasingly a trade mark, as companies will profit economically and ecologically from increased energy and resource efficiency. With this method companies will be able to reduce costs, increase efficiency, improve their image and sales potential through ecological-friendly measures as well as contribute to sustainable consumption. An intensive debate is required to determine the goals of sustainability and umbrella associations from trade and industry have declared their willingness to take part. Particular attention should be given to the development of goal indicators for businesses so that they can decide for themselves how to achieve goals of sustainability.

Modern companies include social and ecological quality with economic efficiency in their corporate objectives. In order to measure this development and to set an example for other companies and organisations within trade and industry, the "Dow Jones Sustainability Group Index" was developed. This index demonstrates that companies taking responsibility for social and ecological issues will achieve a higher value on the stock market in the long-term, as opposed to companies that exclusively aim at quick profits. The index includes those 10 % of the world's 2,000 strongest public limited companies which were classified as market leaders according to economic, ecological and social criteria.

The increasing number of environmental management systems within companies shows the extent to which businesses are sustainability-oriented. The voluntary eco-audit shows German companies to be in the lead position in Europe. At the end of January 2002 around 2,600 locations were EMAS-certified, representing around two thirds of all locations certified in the EU. Another indicator that German businesses are taking their responsibility increasingly seriously is the number of around 120 environmental voluntary commitments. As part of an environmental initiative by the economy, around 500 members joined forces under the German Environmental Management Association (B.A.U.M.), the largest of its kind in Europe.

Nationally and internationally active German companies established the Forum for Sustainable Development, *econsense,* in order to discuss demands placed on companies' future services and to create a platform between trade and industry

and politics. Similarly, the economy joined forces at an international level by forming the “World Business Council”.

A number of internationally active German companies also participated in the “Global Compact” initiative set up by UN Secretary-General Kofi Annan. They declared their willingness to further progress important UN-targets in the field of sustainability through the orientation of their monetary policies and model initiatives between commerce, countries and social groups.

The Federal Government supports developing countries with the introduction of social and ecological quality marks, for greater incorporation of ecological standards in these countries. In connection with this, the Federal Government concentrates on activities within ecologically-friendly farming, the certification of timber products and fair trade by joining together public and private participants in developing countries and Germany to development a joint business approach, the so-called public private partnership.

5. Unions

Since the beginning of the 1970s, trades unions have also been active as experts, consultants and as providers of ideas within the area of environmental protection and sustainability. On a regional and national level, during the CSD process or with the International Labour Organisation (ILO), the unions have always operated a policy for sustainability that bridged gaps between generations and borders. According to the obligation stipulated in Chapter 29 of Agenda 21, unions call for the strengthening of the rights for information, participation and codetermination, with regard to environmental protection in companies for example, and are important allies for the enforcement of environmental measures that affect employment. The DGB and its member trades unions are not only committed to environmental and job protection issues, but also to employment, social, transport, structure and energy policies for sustainable development.

Future-oriented reform plans by the Federal Government were supported and designed jointly . Here only the comprehensive catalogue of proposals for ecological modernisation, introduced by the DGB to the dialogue on "*Arbeit und* Umwelt" (Labour and Environment) of the German "*Bündnis für* Arbeit" (Alliance for Labour) was mentioned, which was used as the basis for the realisation of the programme for energysaving building redevelopment. The German engineering workers' union IG-Metall is committed together with environmental groups and the parliamentary party of the SPD to energy supply which can meet future demands. With regard to the transport policy, IG-Metall is also committed to a sustainable mobility. The German construction workers' union IG-Bau regards the project with Greenpeace for climate protection and employment plus the education offensive together with the NaturFreunde "*Arbeitnehmerinteressen und* Nachhaltigkeit" (Employees' Interests and Sustainability) as examples of sustainable development. Also the Flower Labelling and FSC project are important for the sustainability process as they connect the ecological, economic and social viewpoints and were created through dialogue with DGB and other social participants.

Unions are also active at municipal level in much local Agenda 21 work. Numerous tariff and company agreements with regard to sustainable development, regional initiatives as well as sustainable transport, structure and energy policies originate from the trades unions, including for example the transport project in Freiburg "*Umweltfreundlich zum* Betrieb" (Eco-friendly Ways of Getting to Work) or the "*Kampagne Saubere* Kleidung" (Clean Clothes Campaign).

The DGB is in favour of social and ecological reforms within the context of sustainability. The German Institute for Economic Research (DIW), the Wuppertal Institute for Climate, Environment, Energy (WI) and the Social Science Research Center Berlin (WZB) analysed the feasibility and effects of sustainable economic strategies on behalf of the Hans Böckler Foundation as part of a joint project "*Arbeit und* Ökologie" (Employment and Ecology). The Rhineland Westphalia Institute for Economic Research (RWI) examined the sustainability concepts and their effects on employment. The results of both studies were presented in September 2000 and have been discussed publicly since.

An example of activities carried out by the DBG training organisation is the preparation for the conference for participants in the car industry in July 2002, in order to develop a programme of action entitled "*Berufsbildung für eine nachhaltige* Entwicklung" (Vocational Training for Sustainable Development) together with participants and decision makers involved in vocational training.

6. Environmental and nature conservation groups, agricultural and consumer groups, non-governmental organisations for development, foundations for environment and nature conservation

a) Environmental and nature conservation groups

Environmental protection and nature conservation are inconceivable without the efforts of numerous volunteers and in particular environmental and conservation groups. They make a concrete contribution particularly to practical pilot projects for the implementation of sustainable development, co-operate with governments, ministries, state authorities and trade associations, have qualified opinions on topical issues of environmental protection and conservation and engage in intensive debate with social groups, such as science, media, parties, churches and unions etc. They inform and make the public more aware, work out new political topics, organise campaigns and contribute to greater education and communication about environmental issues. Environmental groups are in a position to publicly convey important subjects in a credible manner as the public places a great deal of trust in them.

The German League for Nature Conservation and Environment Protection (DNR), the largest umbrella organisation, unites 97 member groups with around 5 million members. The DNR regards itself as an advocate for nature and environment and is active in important areas such as transport, leisure time, tourism, urban ecology, energy and economic policies locally, nationally and internationally. The DNR is committed to the protection of the environment and sustainable development within the framework of ad hoc working groups for the protection of the environment, for example, through organising and holding of public events, including the

German Nature Conservation Day, which takes place every two years, together with the Berufsverband Beruflicher Naturschutz (professional association of vocational conservation) and the Bundesamt für Naturschutz (Federal Nature Conservation Office) as well as the European Nature Conservation Year or through the provision of services, such as the monthly circular for Germany.

Friends of the Earth Germany (BUND) has been committed to sustainable development in Germany since the beginning of the 1990s. BUND together with MISEREOR published a study in 1995 entitled "*Zukunftsfähiges Deutschland*" (Germany – able to meet future challenges), resulting in a major public discussion with more than 1,000 regional events relating to sustainability. In particular the model "*Gut Leben statt viel haben*" (Live well rather than have lots) was met with a great response. Subsequently, BUND started numerous projects at regional and national level which included the concept of sustainability.

Examples of hundreds of these projects regarding the environment and environmental groups are as follows:

- In Heidelberg BUND and the local guilds developed hairdressing, painting, bakery and environment projects. As part of this interested workshops obtained concrete information on environmentally-friendly company management, which also saves money. Thanks to intensive public relations work the projects were initiated all over the country.
- The joint initiative of NABU and the German Association for Landcare (DVL) "Regionalmarketing" (Marketing in the Region), aiming to further increase and improve the potential of regional marketing for transparent and environmentally-friendly production methods.
- BUND Berlin developed a touring exhibition "*Zukunftsfähiges Deutschland*" (Germany – able to meet future challenges), which toured the whole of Germany
- .With its climate protection project "*Die Wette*" (The Bet), BUNDjugend demonstrated that within just seven months schools can reduce harmful CO_2 to the reduction target set by the Federal Government for the next seven years.

- The environmental groups DNR, BUND and NABU 1998 demonstrated their support for the ecological, economic and social advantages of the ecological tax reforms by forming a broad alliance with unions and companies.
- Together with other organisations, BUND supports the labelling of ecological products and services (Forest Stewardship Council, "*Grüner Strom*" label for eco-electricity, "*Neuland*" seal for keeping of animals in a way that is fair to the animals) so that consumers are able to recognise such products more easily and that suppliers become more successful.
- The NABU campaign "*Nachbar Natur - Ökologische Konzepte für Städe und Dörfer"* (Neighbour Nature – Ecological concepts for towns and villages) with initiatives for designing housing that improves people's quality of life.

b) Consumer and agricultural groups

Consumer groups form another pillar of support for the national Strategy for Sustainability. With the consumers' independent information and their representation in politics and commerce they promote the critical and responsible consumers who, through their conscious purchasing decisions, support and demand sustainable development. The nationwide advocate for consumers is the Federation of German Consumer Organisations (vsbv). In its role as the umbrella organisation of 16 consumer centers in Germany and another 19 consumer and social-oriented associations, it represents the consumers' interests in the political and social process and in trade associations. In addition, the vzbv looks after the legal representation of collective consumer interests, promotes consumer information, develops advisory standards and safeguards the professional qualification of consumer advice.

Consumer protection and reorientation within agriculture also represent challenges to farming associations. Associations for farming and food industries and the German Agricultural Society (DLG) support farming methods that are sustainable,

environmentally-friendly and harmonious with nature. They also develop new concepts for an ecologically as well as economically workable agricultural production.

c) Development associations

The close cooperation between politics and non-governmental organisations also exists at international level, particularly with preparation for the forthcoming World Summit on Sustainable Development in September 2002 in Johannesburg. The Forum for Environment and Development, which was set up following the World Conference on Environment and Development in Rio de Janeiro in 1992, will play an important role. It unites a number of non-governmental organisations and believes its role is to connect participants and their activities as well as to provide the public with information on sustainable development. The forum also decides on important environmental and developmental positions in the run-up to international conferences, particularly between the Federal Ministry for Economic Cooperation and Development (BMZ) and the Association of German Development NGOs (VENRO).

d) Environmental foundations

Sustainable development is the model for the support activities of the German Federal Foundation for the Environment (DBU). Since 1991 it has supported over 4,500 projects and granted more than EUR 880 million in the areas of environmental technology and research, environmental communication and education, as well as the maintenance of nature conservation and national cultural heritage.

The Federal Government also actively supports the work of around 700 German foundations for the environment and nature conservation.

7. Science and research

Practised sustainability requires solid scientific foundations and must be accompanied by new developments in technology. As there is no ready-made formula for sustainable development, and it can only be shaped through a constant process of searching, learning and experience, science and research are required to work out visions, propose aims, identify suitable measures and develop technical innovations.

Science and research bear the particular responsibility of recognising any future problems on the path to a more sustainable society at an early stage, demonstrating the interrelations between different subsections of society and making any undesired side-effects of individual measures accessible to action by society.

Within the model of “Sustainability”, old boundaries between basic research and applied research are being transformed and new integrative forms of science are being developed.

Political decisions require a workable scientific basis. The German Federal Government is therefore continuing to do all it can to clearly orientate research and technology promotion towards the model of sustainable development. Focal points include not only the traditional areas of resource efficiency and energy efficiency and environmental research, but increasingly also the areas of information technology, communications technology, production technology, biotechnology, material research and social science research. Without scientific and technical innovations, we will be unable to cope with the challenges of a process of social modernisation. Important contributions are made by the large German research support organisations and scientific organisations,

such as the Deutsche Forschungsgemeinschaft (DFG), the Max Planck Society for the Advancement of Science, the Fraunhofer-Gesellschaft (German partner for contract research), the Hermann von Helmholtz-Gemeinschaft Deutscher Forschungszentren (doing research in the field of medicine and natural sciences) and the Leibniz Association (WGL).

In addition, we need to activate and strengthen the research potential of research institutions with a trans-disciplinary outlook, including private sector charitable research on sustainability and trade and industry, to develop technical and social capacity to solve problems.

8. Churches

Churches have been contributing to the implementation of sustainable development for a long time and in various ways. They do all they can for social cohesion in society, safeguarding the theory of creation and combating poverty worldwide. They also participate in social and political discussion – for example, by joint declarations of the Council of the EKD and the Deutsche Bischofskonferenz (DBK) or by giving their view on current legislative plans.

The welfare and social and charitable service for people in desperate circumstances is once of the indispensable characteristics of the church. They maintain a large network of social and charitable institutions, including local welfare agencies, mobile emergency services, out-patient care services, advice centres, playschools, schools, old people's homes, hospitals, rehabilitation institutions, travellers' aid, institutions for the homeless, etc. There are a multitude of church-supported businesses, workshops, institutions for youth work, "*Neue Arbeit*" (New Labour) projects, groups participating in regional structural change, and meeting places for people of different generations.

By standing up for law and justice, churches also endeavour for fairer structures in the world. Through relief work in particular, churches' achievements in the area of development aid, predominantly combating poverty, have been exemplary. MISEREOR und BUND have also provided guiding stimulus early on with their proposals for a "*Zukunftsfähiges Deutschland*" (Germany – able to meet future challenges).

As regards environmental protection, the churches contribute to a deeper understanding of sustainable development on the basis of the Christian image of man and belief in creation. In principle, they regard ecological questions in close relation to questions of worldwide social justice, safeguarding of livelihoods, and peace. They often attempt to lead the way in matters of environmental protection within their own field. They make great efforts towards environmentally friendly construction, saving energy and introducing alternative energies. Agricultural land owned by the church is increasingly cultivated using methods that treat nature with care and are fair to the environment.

Communicating values, creating awareness, sharpening conscience and sensitisation for the Creation, are all particular interests of the church. A great deal of attention is given to issues of sustainable development and environmental protection, during preaching and teaching, but also at schools and in further and adult education.

Churches adopt an active role in the municipal work for Agenda 21. Due to their considerable contributions, representatives of the two major churches were appointed to the Sustainable Development Council by the German Federal Government.

9. Equal participation by men and women

For the Federal Government equality for men and women as well as active support of women are significant contributions to facilitating a better connection between family and job by means of concrete governmental measures. The main aim of the Act for the Implementation of Equality, which came into force on 5 December 2001, is the promotion of women in order to ensure the actual implementation of equality at government level. The Federal Government has promised to take into account all gender-specific aspects in all specific policies within the context of gender mainstreaming and to incorporate this undertaking into the Federal Government's general rules on internal procedures.

Agenda 21 gives women the opportunity to initiate changes in society through participation and consultation. Networks, such as "*Frauen und lokale Agenda*" (Women and the Local Agenda) or "*Frauen und Umwelt*" (Women and Environment) associated with LIFE e.V. are examples of existing initiatives for the involvement of women in achieving better equality and participation in the social process.

10. Children and young people

Children and young people embody the future of our country. They expect sustainability in the structuring of economy and society. In the light of challenges presented by processes of rapid social, economic and political transformation, it is a central task of policies for children and young people to develop future perspectives and create frameworks by which all children and young people can fully develop. A large number of initiatives and programmes were developed to improve the prospects of education and integration for disadvantaged young people in the long term.

Even in kindergarten and in school children are motivated by action-oriented learning to contribute to the realisation of sustainable development, as for example the active participation of children in creating kindergarten or school grounds in natural areas in which they will later explore relationships within nature. A great success is also the “Fifty-Fifty-Project”, in which many pupils are now taking part. Pupils, teachers and caretakers make an effort to reduce the consumption of water and energy. Half of the savings can be used by schools for example to redesign their school yards in an ecological manner. An example of the numerous initiatives by young people for sustainable development is also the network “*Jugendbündnis für Johannesburg”* (Youth for Johannesburg) under the coordination of Futur X – Gesellschaft für Generationengerechtigkeit e.V., giving priority to the needs of young people and future generations with their position paper “*Die junge Generation und die Agenda 21 - Deutschland auf dem Prüfstand*” (The Young Generation and Agenda 21 – Germany under the Microscope).

II. Developing partnerships

Partnerships and alliances are answers to the question of how to implement sustainability in practice and how to tackle the challenges of globalisation, increased competitive strength, creation of new jobs or the improved compatibility between family and work. To ensure success we require concerted action by many participants.

The following examples clarify further the many different cooperations that exist between government and trade and industry, between trade and industry, between trade and industry and society and other partners. These can be entered into through agreements, alliances and voluntary self-obligations, among other things.

Examples of partnerships	Achievements
Bündnis für Arbeit (Allicance for Labour) – Initiative of the German Government with employer associations and trades unions, established on 7 December 1998, includes dialogue on "Labour and Environment", working group "Employment through Innovation"	Creation of jobs and reinforcement of growth and competitive strength, also development of measures for energy saving; demonstration of innovative potential through combining the new and old economy
Agreement of 9 November 2000 between the German Government and German trade and industry on **provisions for climate**	Self-obligation of German trade and industry to reduce CO_2 by 28% by 2005 compared with 1990
Umweltpakt Bayern (Environment Pact Bavaria) - "Running Sustainable Economies in the 21st Century" – Agreement of 23 October 2000 between the State Government of Bavaria and Bavarian trade and industry	Agreements on common aims to improve all environmental and local conditions
Klimabündnis (Climate Alliance) of the European towns and cities	Germany is taking part in this, with 402 municipalities committed to halving CO_2 emissions by 2010 compared with 1987
Concerted action by the solar industry, the Zentralverband des Sanitär-, Heizungs und Klima Handwerks (Federal association for water, heat and air related craftmanship), the Bund Deutscher Architekten (Association of German Architects), DNR, coordinated by the Federal Working Group for the Environmentally Conscious Management for Solar Heating, "**Solar-na-klar**", established in 1999	Installation of an additional 2 million square metres of collector areas for solar-thermal equipment over the next 3 years; estimated market potential of approx. EUR 2 billion, creation of new jobs in small and medium-sized companies
3-year **partnership of dialogue** between NABU and the Volkswagen Group, 2000-2002	Discussion includes ecologically sustainable new businesses, alternative energies and ecological housing
Programme of **development partnerships** between BMZ and trade and industry to promote sustainable development in developing countries	Over 800 partnerships with companies have been set up. Companies contributed at least one German Mark for every German Mark of public funds invested.
Round Table on Codes of Conduct for reinforcement of social standards in developing countries as well as a process of dialogue on "Environment and Direct Investment from Abroad"	Trade and industry, trades unions, non-government organisations and the government derive from joint projects examples of good practice and recommendations for the introduction, monitoring and verification of voluntary codes of conduct in environmental and social areas

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Aktionsprogramm Umwelt und Gesundheit (Action Programme Environment and Health) of BMU and BMG with national authorities and in discussion with NGOs, includes focus on **"Children, Environment and Health"**	Improvement in social dialogue on the subject of environment and health, improvement in environment-related reporting on health, risk communication and subject-related research
Round Table on Health – Initiative of BMG with relevant participants from the health service (statutory health insurance companies, hospitals, doctors and health service employees, hospitals, chemists, the pharmaceuticals industry, representatives of patients)	Working programme "*Qualitätssicherung und Steuerung im Gesundheitswesen*" (Quality Assurance and Management in the Health Service), focusing on the future of providing medicine, remedies and aid, the future of care in hospitals, basic principles of rendering services, concepts on strengthening prevention, dental care and financing statutory care for the sick
Servicestelle Kommunen in der Einen Welt (Service Point Municipalities in the One World) - Federation and Land governments, municipal associations, NGO	Consultancy, concepts, training, projects, seminars on municipal cooperation on development and inclusion of subjects of development policy in Local Agenda work
Forum Bildung (Education Forum) – broad social dialogue on reforming the education system (Representatives of the national and regional governments, social partners, churches, apprentices, students), 1999-2001	The Forum Bildung presented recommendations for reforming the German education system at the end of 2001. Matters of priority for the Forum include early and individual support, fulfilment of lifelong learning, education promoting responsibility and reform of education and further education for students. The Federal Government and Länder will help implement these recommendations.
FUTUR Prozess – broad dialogue on research with 300 experts and the public to discuss future living worlds for the year 2020;	Resulting from the first phase of dialogue are 25 subject areas, of which "Mobility", "Nutrition Culture" and "Globally Responsible Agricultural Production" are of particular importance as the basis for developing visions of sustainability.

Wissenschaft im Dialog (Science in Dialogue) – In May 1999 the leading scientific organisations, the BMBF and the Stifterverband (Foundation Association) resolved to work actively together to maintain on a long-term basis and strengthen dialogue with all groups of society.	Improvement in dialogue and therefore understanding between science and society; information on methods and procedures of scientific research for the public and clarification of mutual interaction and dependency between science, trade and industry and society; maintaining contact with similar initiatives at European and international level
International Marketing of Germany as an Education and Research Location – concerted action of German national and Land governments, science, trade and industry, as well as other organisations. The common aim is to make Germany a leading place for those who want a career in education and research.	Guidelines for the internationalisation of appointments to universities and research institutions; other achievements are study courses with greater international orientation, new support opportunities for exporting study courses and gaining top scientists and new recruits for science from abroad.
As part of an **industrial dialogue** for textiles/clothing, dialogue on environment/sustainability between the textiles industry, BMWi and trades unions.	Preparation of recommendations for sustainable operations in the textiles/clothing industry
Campaign "*Fair kauft sich besser*" (Buying fair is better) - Initiatives concerning development policy by participants from trade and industry, consumer associations, schools and state authorities	Public relations work, partnerships with media, municipal action days, consumer information, school competitions, etc.
"*Ökoprofit*" in Hanover – Cooperation between the city administration and 12 companies	In one year, the initiative led to the saving of 900,000 kWh of electricity, 450,000 litres of water, 65,000 kilos of residual waste and therefore lead to 30% less CO_2 output.

D. Indicators and Objectives

For many years, economic growth, unemployment statistics and inflation rates have been accepted as key indicators for the measurement of economic growth. On the stock exchange, the DAX provides a picture of overall market development.

Indicators of this kind also need to be integrated into a sustainability strategy. In future the Federal Government aims to use its 21 key indicators for sustainable development to reveal at regular intervals where we are on the road to sustainable development, what progress has been made and where further action is needed. This makes the indicators a fundamental component of a management concept for the implementation and continuous refinement of the sustainability strategy. In particular, they are useful for monitoring success.

The number of key indicators was deliberately kept low. With a few indicators, it should be possible to make a rapid survey of important developments. The concern is to project a comprehensive rather than a detailed picture of sustainability. With this in mind, it is worth remembering that to assess the sustainability of a particular development under observation, singling out and studying one indicator in isolation is not enough.

This is because positive progress of indicators such as gross domestic product or investment can sometimes be caused by activities which run counter to sustainable development. However, attempts to develop appropriately modified indicators – referring to concepts such as ecological domestic product, qualitative growth and ethical investment – have not produced widely accepted results.

Even the more ecological indicators deliver only a limited amount of meaningful information when viewed in isolation. Major expansion in use of wind energy, for example, might have impacts on the profile of the landscape or on bird migration. It is therefore critical that any expansion in the use of wind power is compatible with nature. These examples show that the indicators must not be viewed in isolation. Instead it is a case of considering every indicator as one part of a system of indicators, which displays an overall picture of the progress we have made with regard to sustainable development.

Indicators must be linked to concrete and – where useful and feasible – with quantified goals. This makes them relevant for political action and enables communication between participants in government and society on which course should be steered and which measures are necessary. Concrete goals are also an absolute prerequisite, because they allow us to measure the success of sustainable development. The combination of indicators and goals produces an effective tool for managing sustainability.

As a general rule, pursuing several goals simultaneously tends to gives rise to conflicts over goals. This applies every bit as much to the goals associated with the following key indicators. So if government spending on childcare, research, or development cooperation rises without making corresponding savings in other areas, this will run counter to the goal of budget consolidation and debt reduction. While economic growth creates jobs and material prosperity, it also causes greenhouse gas emissions to rise.

Such conflicts over goals are inevitable. Indeed, were it not for them, we would have no need for a strategy. The sustainability strategy is specifically concerned with balancing out the goals and bringing them into harmony with one another as far as possible. This means that economic growth can be compatible with climate protection goals if it is accompanied by efficiency gains or structural changes.

In accordance with the model presented in Chapter B, the government cannot impose sustainable development unilaterally from above. All investors and consumers share in deciding the extent to which the goals are achieved. Along with participants in government, members of society are equally responsible. Only if the goals are accepted as a guideline for action by each person within their own sphere of responsibility, by political leaders on all governmental levels including *Länder* and municipalities, businesses and trades unions as well as private citizens, then together we can achieve sustainable development. On this principle, the goals mentioned below are to be treated as reference points by all governmental and social participants in sustainable development.

Therefore we need the broadest possible consultation on the goals for sustainable development. For this reason, the German Federal Government included two dialogue phases giving the citizens and associations concerned the opportunity to be involved in devising the national Strategy for Sustainability. In the second phase, an initial draft of the strategy, including indicators and goals, was put forward for discussion. The *Länder* and municipalities were given the opportunity to respond. Numerous suggestions from this dialogue flowed into the present strategy paper.

The reference figures cited in the strategy take into account current knowledge and expectations. The Federal Government intends to report regularly on the development of the indicators. In this context, it is also worth examining whether goals need to be adapted in response to new developments or new knowledge.

I. Intergeneration equity

Assuming responsibility even for future generations – this is the underlying principle of sustainable development. It draws attention to the fact that our present way of living impacts in diverse ways on the opportunities of future generations.

Do we, for example, endlessly consume scarce raw materials or do we conserve them by increasing our use of renewable resources? Does the state finance its expenditure from current income, or does it run up higher debts which narrow down the scope of action for future generations?

Investment plays a key role in keeping opportunities open for future generations. This applies to investment in infrastructure, in modern facilities and buildings, but also above all investment in research, development and education. Investment forms the foundation for innovation and modernisation. This makes it a precondition for safeguarding and increasing our prosperity, at the same time doing so in a more environmentally-sound way.

1. Conservation of resources

Making prudent and efficient use of scarce resources

The Earth's stocks of raw materials are limited. Raw materials that we consume today are no longer available for future generations. Prudent and efficient use of scarce resources is therefore a key to sustainable development. Energy consumption is a central focus in this respect.

Above all, the model of sustainable development challenges the industrialised countries to scale down their consumption of scarce and finite energy-producing raw materials as well as other resources. Germany can attest to two positive achievements in this respect: in the 1990s, its primary energy consumption fell in absolute and per capita terms by around 5%.

A crucial basis for reduction of absolute consumption is the increasingly efficient use of energy and other raw materials. This is expressed in the key indicators "energy productivity" and "resource productivity". Just as labour productivity measures economic output per hour worked, so energy productivity expresses the economic output achieved by using a particular quantity of energy. In past years it has been possible to raise this continuously. Raw material productivity has also shown positive development. Important progress has been achieved through the avoidance of waste and greater use of closed-loop management of raw materials.

This improvement in efficiency is something that should continue. By 2020, we should aim for an approximate doubling of energy- and raw materials productivity in relation to 1990 and 1994 respectively. This means that with the same quantity of energy, we will be able to produce around double the amount of output in the year 2020 as we did in 1990. In the long term, the improvements in energy and raw materials productivity should be guided by the "Factor 4" vision.

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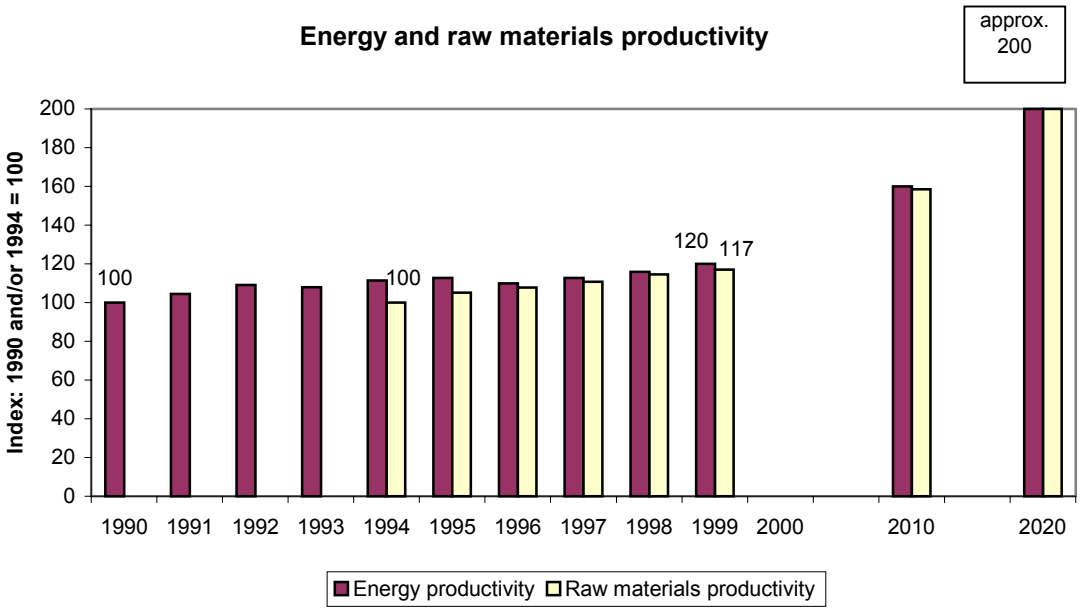

Source: Federal Statistical Office (raw materials productivity), Federal Environmental Agency (energy productivity)

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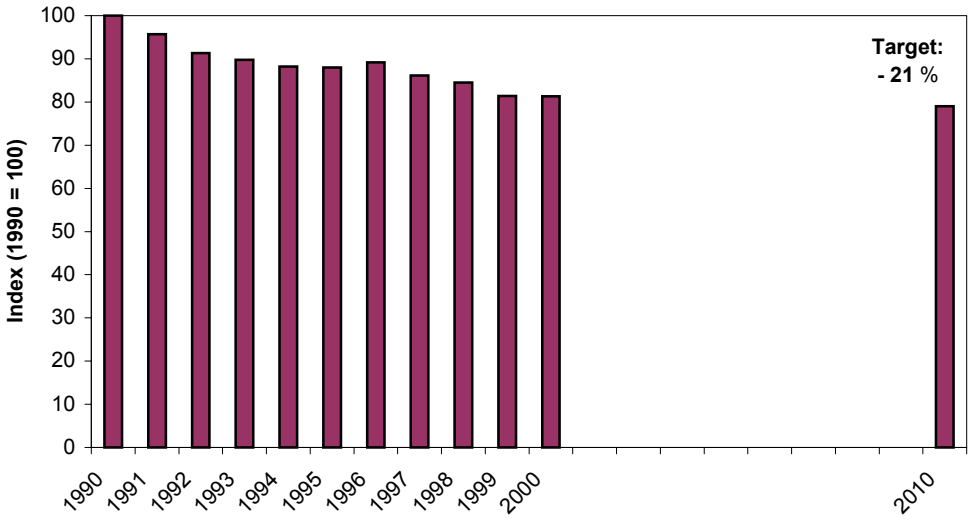
2. Climate protection

Reducing greenhouse gases

The threat of climate change poses an enormous challenge to humankind. Germany has undertaken that by the period 2008–2012 it will reduce its emissions of the six greenhouse gases named in the Kyoto Protocol by 21 % compared to 1990. By the year 2000, a reduction of 18.7 % had already been achieved. Beyond this, the Federal Government's climate protection policy includes the target of a 25% reduction in emissions of CO_2, the most important greenhouse gas, by 2005 as compared with emissions in 1990.

In the long term, global climate protection efforts are directed towards stabilising greenhouse gas emissions in the atmosphere at a level which prevents dangerous disturbance of the climate system. In the view of the overwhelming majority of climate researchers, this requires a drastic reduction in present emissions of greenhouse gases. The German Federal Government also takes the view that additional efforts are required over and above the measures already agreed to combat the greenhouse effect, both at national and international level. This is based on the Climate Enquête Commissions of the German Bundestag, which consider that the industrialised nations should make further quite substantial reductions in greenhouse gas emissions as a matter of necessity. Therefore the Federal Government will lobby for the European Union to take an ambitious proposed target to the forthcoming international negotiations on further development of the Kyoto targets for the period beyond 2012.

Emissions of the six greenhouse gases covered by Kyoto Protocol



Source: Report 2000 of the Federal Republic of Germany on a system for monitoring CO_2 and other greenhouse gases in accordance with European Council Decision 1999/296/EC

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3. Renewable energies
Extending sustainable systems of energy provision

Our most important sources of energy – oil, gas and coal – are finite. Their use is also associated with the emission of greenhouse gases. For both these reasons we have to make greater use of renewable energy sources which are compatible with nature and the environment.

In past years there has already been considerable progress, primarily in extending the use of wind energy. In no other country is the use of wind energy so advanced as in Germany. At the end of 2001, around 8,750 MW of energy on the grid came from wind power. This corresponds to around one-third of the output from installations worldwide. But solar energy is also experiencing a boom in Germany. In 2001 alone, the area of solar panels rose by 900,000 to a total of 4.2 million m^2. There is also great potential to increase the use of regenerating raw materials (particularly wood).

The goal of the Federal Government is to increase the proportion of renewable energy sources to 4.2% of primary energy consumption and 12.5% of electricity consumption between the years 2000 and 2010. These equate to about double the original figures. In this way Germany is making an important contribution to the EU target of raising the proportion of renewable energies in electricity consumption from 14% (1997) to 22% (2010). By the middle of the century, renewable energies should cover around half of energy consumption. This permits the projection of guideline figures for the period from 2010 to 2050. But in order to achieve such progress, it is not enough to extend the use of renewable energies. Instead, overall energy consumption needs to be reduced at the same time.

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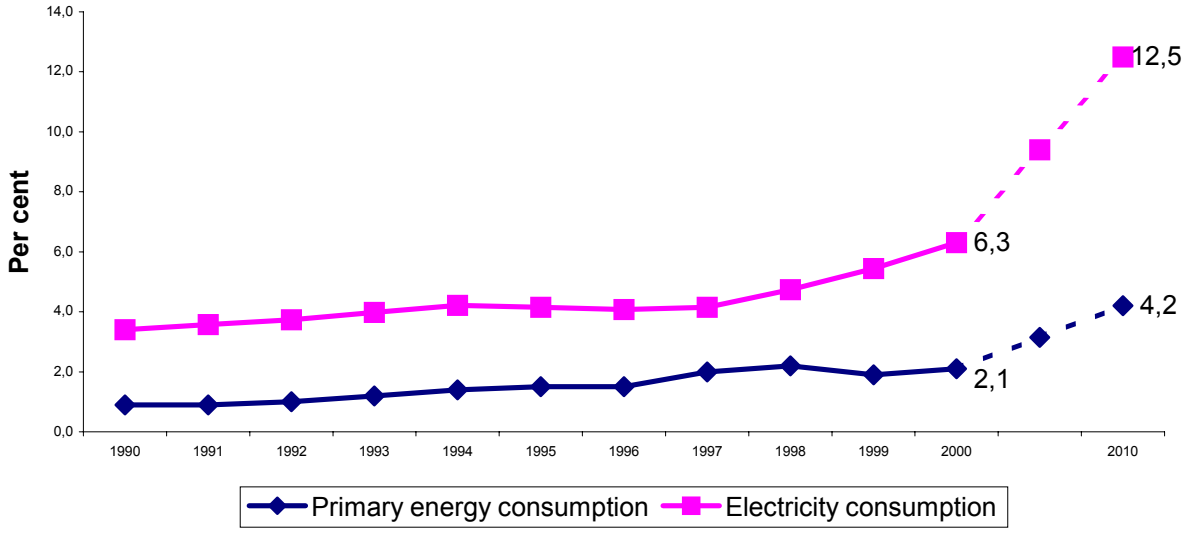
Proportions of energy consumption from renewable energy



Sources: AG Energiebilanzen, DIW 2001, Staiß, Jahrbuch Erneuerbare Energien 2001, VDEW 2001

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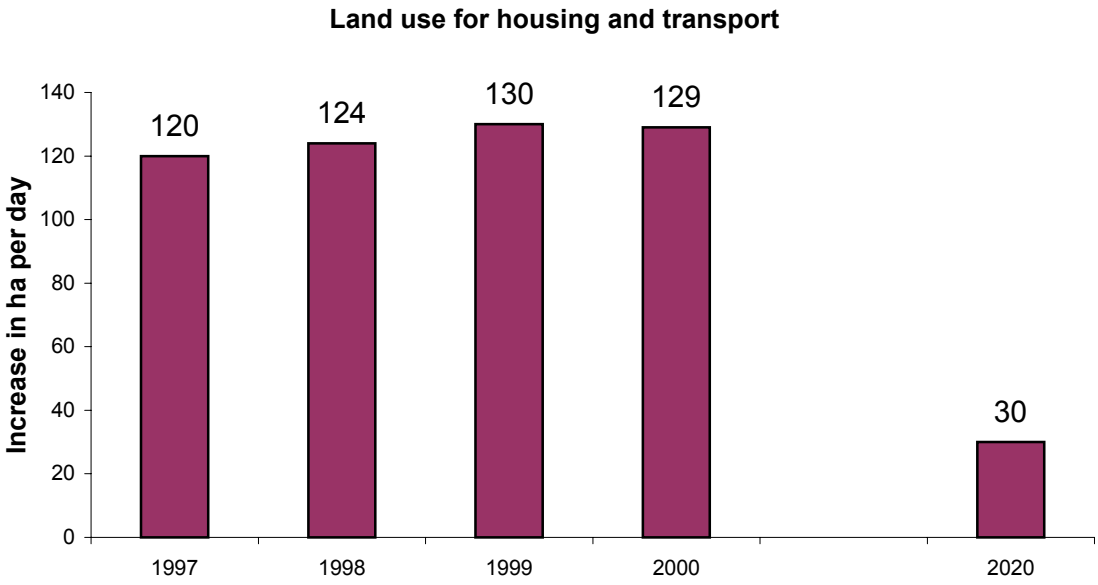
4. Land use

Conserving open spaces

Far too seldom do we consciously remember that even the unbuilt landscape is a limited resource. In Germany around 130 ha per day are designated as new areas for housing and transport-related development. Approximately 80% of the total is used for housing development and 20% for transport-related purposes. Of the land given over to such use, around half is built on or otherwise sealed. This corresponds to an area of around 100 football pitches. Not only that, but as transport routes bisect the landscape, animal and plant habitats also become increasingly fragmented. This fragmentation of the landscape is accepted as one of the essential causes of species loss in central Europe.

Land use and fragmentation of the landscape causes a decline in habitats for animals and plants and in recreational landscapes for humans, who then have to make longer and longer journeys at the weekend to reach the countryside.

In future we therefore want to scale down landscape consumption, for example by means of greater recycling of land. To this end, the rising trend of past years must initially be reversed, and then followed by a clear reduction. The goal is for new land use to account for a maximum of 30 ha per day in the year 2020. In this respect, those called upon to act are primarily the *Länder* and municipalities responsible for regional and urban development planning.



Source: Federal Office for Building and Regional Planning (BBR)

5. Biodiversity

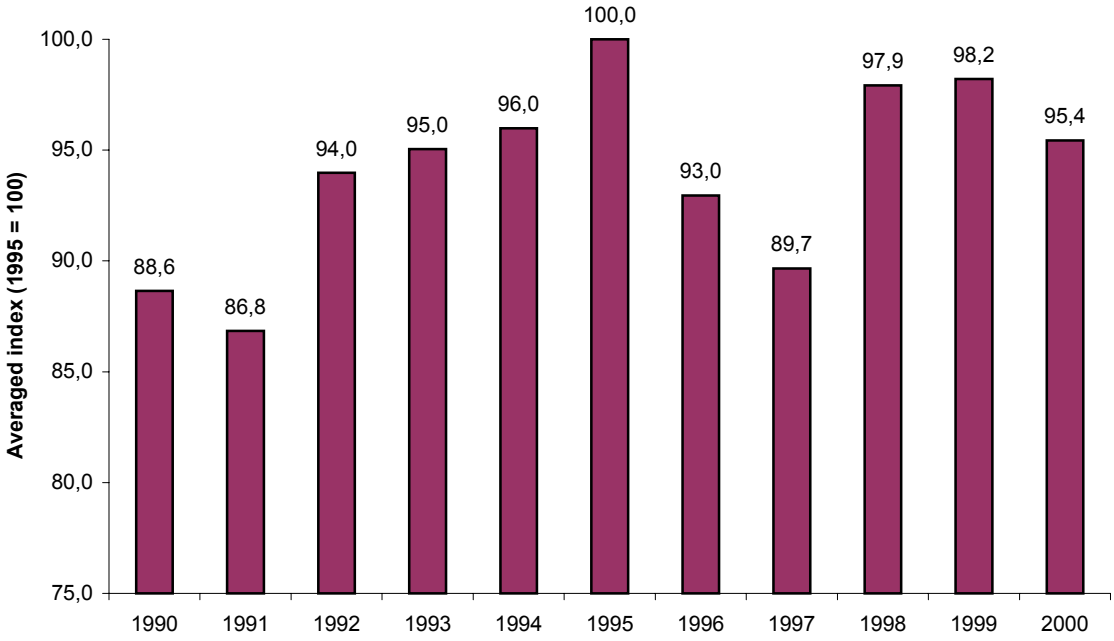
Conserving species – protecting habitats

There are some 28,000 species of plants and 45,000 animal species in Germany today. The diversity of plants, animals, micro-organisms and habitats (biodiversity) forms the resource base supporting human life and maintains the ecological balance. Although biodiversity is under threat, targeted measures in recent years have resulted in positive successes in saving some endangered species (the European Beaver, White Stork, Hawk and Sparrowhawk). This strategy will be pursued, and this will primarily mean improving habitat protection.

In order that successes and failures to make progress in safeguarding biodiversity can be documented within the scope of the sustainability strategy, an index has been developed which summarises the development of stocks of selected animal species. At the same time, these species are representative of typical habitats, and thus make it possible to comment on the condition of the natural environment and landscape. The species index currently contains 11 animal species representing a variety of habitats. The addition of further species is anticipated in order that a broader spectrum of habitats can be covered.

In the last few years the species index has exhibited fluctuating progress in comparison to 1995. This overall tendency masks very varied developments. Whereas stocks of seals, for example, have risen by around two-thirds in comparison to 1995, populations of Snowy Plover and Dunlin have dropped to around half their 1995 level. The goal is to bring about a stable situation at a high level for all species and the habitats that they represent.

Development of stocks of selected animal species[(1)]



(1) Mean population levels of White Stork, Black Stork, Red Kite, Snowy Plover, Dunlin, Whitefronted Goose, Bean Goose, White-tailed Eagle, Lesser Spotted Eagle, Little Tern and Seal.

Source: Federal Agency for Nature Conservation (BFN)

6. National debt

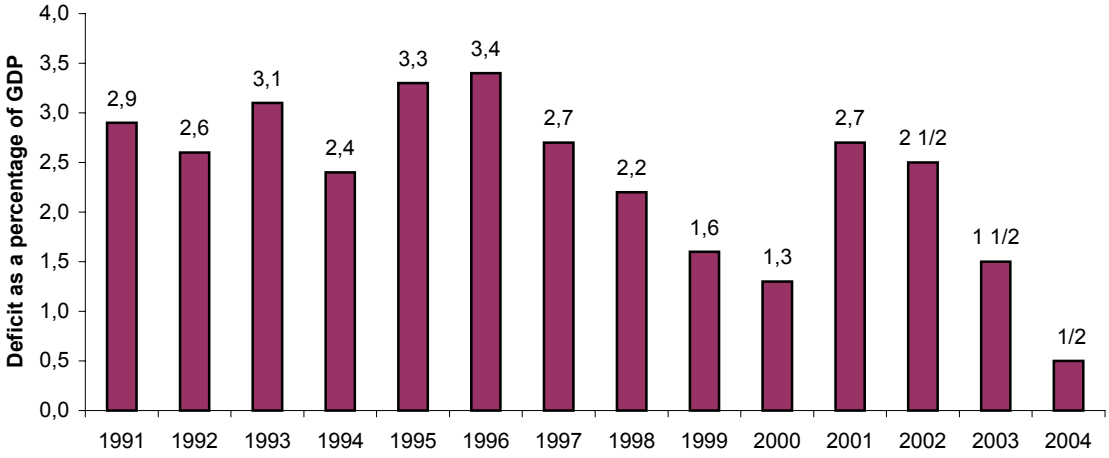
Reducing debt – creating new scope for action

A solid finance policy is among the core policy elements pursued by the German Federal Government. In parallel to the relief which private households and companies received as part of the major reform of taxation (around EUR 23 billion in the year 2001 alone and around EUR 48 billion in the medium term) the Federal Government has consistently reduced the nation's net borrowing requirement. This peaked at around EUR 40 billion in 1996. Following a reduction to just EUR 23 billion in the year 2001, continuous reduction should see it fall to EUR 5 billion in 2005. The goal is a balanced federal budget in the year 2006. From the year 2007 onwards, surpluses in the national budget are to be used for continual debt repayment.

This consolidation course was long overdue. For too long, government spending has been financed on the never-never. As a consequence, today interest payments tie up around 20% of national tax revenues. These sums are no longer available for important future expenditure such as education, research and development. In future we no longer wish to live at the expense of future generations.

Consolidation of state finances is a duty which falls to every level of government. The Federal Government, Länder, municipalities and social protection systems must – individually and jointly – make their contribution to safeguarding sustainable public finance. When state deficits rise due to economic conditions, as observed during the year 2001, they must not be allowed to ossify at a comparatively high level. Despite the unfavourable course of events in the past year, all levels of government are endeavouring to achieve an approximate balance of income and expenditure for the year 2004. In order to attain this goal, it is essential to place strict limits on increases in expenditure at all levels.

Public finance deficit
(State, *Länder*, municipalities, social insurance systems)



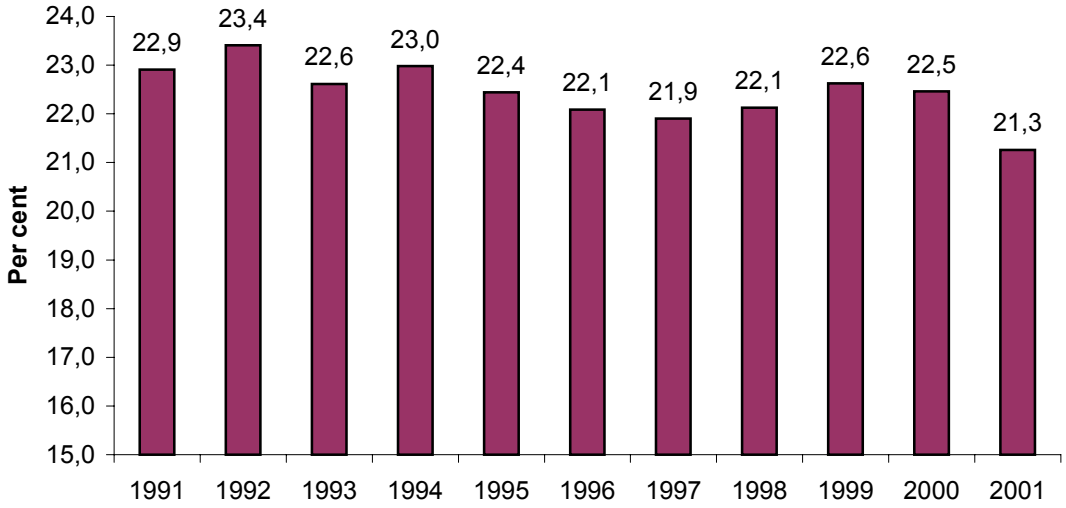
Source: Federal Ministry of Finance

7. Provision for future economic stability

Creating positive investment conditions – securing long-term prosperity

Long-term economic success depends upon investment. Only countries which create attractive framework conditions for investment will be able to maintain economic productivity, achieve a high level of employment and ensure a modern, innovative economic structure in future. In the past few years, the rate of investment has varied in a band between 21.3 and 23.4 % of GDP. For the future, the German Federal Government considers it essential to have a high rate of investment across the whole economy.

Gross capital formation in relation to GDP (1)



(1) Gross capital formation is investment in the form of equipment, buildings and other installations of companies and the state.

Source: Federal Statistical Office

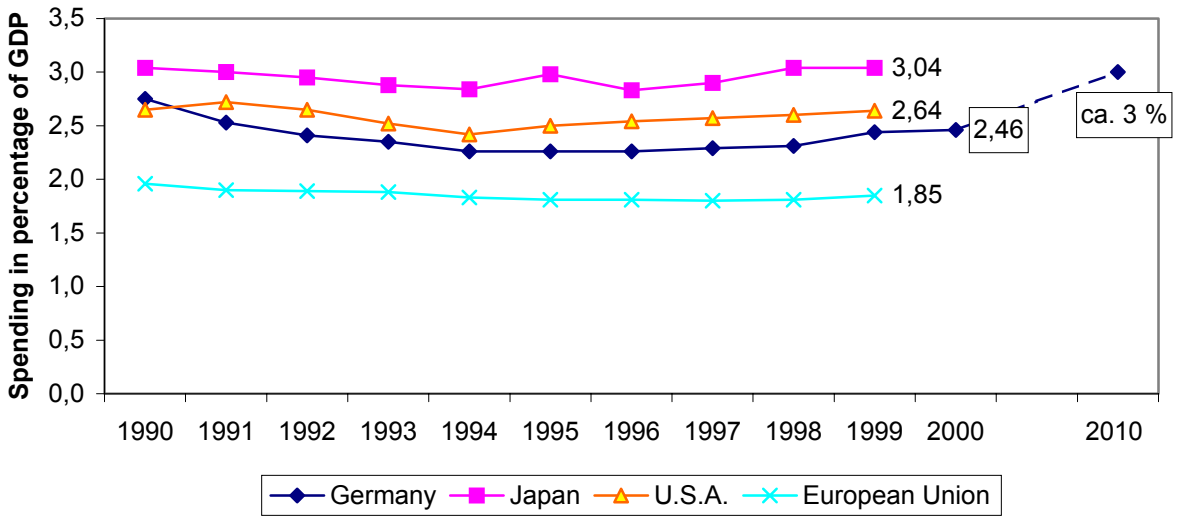
8. Innovation

Shaping the future with new solutions

Thirty years ago, the computer was of no economic or social importance – today our lives would be unthinkable without it. Innovations of this kind are the basis of rising prosperity, and at the same time the precondition for efficient, and hence environmentally sound, production and consumption. So expenditure on research and development of new, innovative technologies is a key factor ensuring the quality of life for future generations.

In Germany, spending on research and development has clearly risen in relation to GDP in recent years, after having declined in the first half of the 1990s. In the federal German budget alone, the total of EUR 8.4 billion spent in 2002 is 15.5 % higher than 1998 expenditure. However the proportion of total R&D spending (government and private spending) in relation to German GDP is lower than in the U.S.A. and Japan. Efforts are being made to increase it to around 3 % by 2010.

Private and public expenditure on research and development



Source: OECD, Main Science and Technology Indicators 2001/1. Some data estimated.

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9. Education and training

Continuously improving education and vocational qualification

Investments in the education of young people are investments for the future. This is especially true in a world that changes rapidly due to advances in technology. Catch-phrases such as “lifelong learning” and “knowledge-based society” are expressions of this. Knowledge and creative skills are also necessary pre-conditions for social participation.

It is an important political aim of the Federal Government to see as many young people as possible attaining school-leaving qualifications and going on to do an apprenticeship or further study. Since 1999 the Federal Government’s successful programme to reduce youth unemployment (JUMP) has offered around 350,000 young people opportunities in the form of work, training or qualifications.

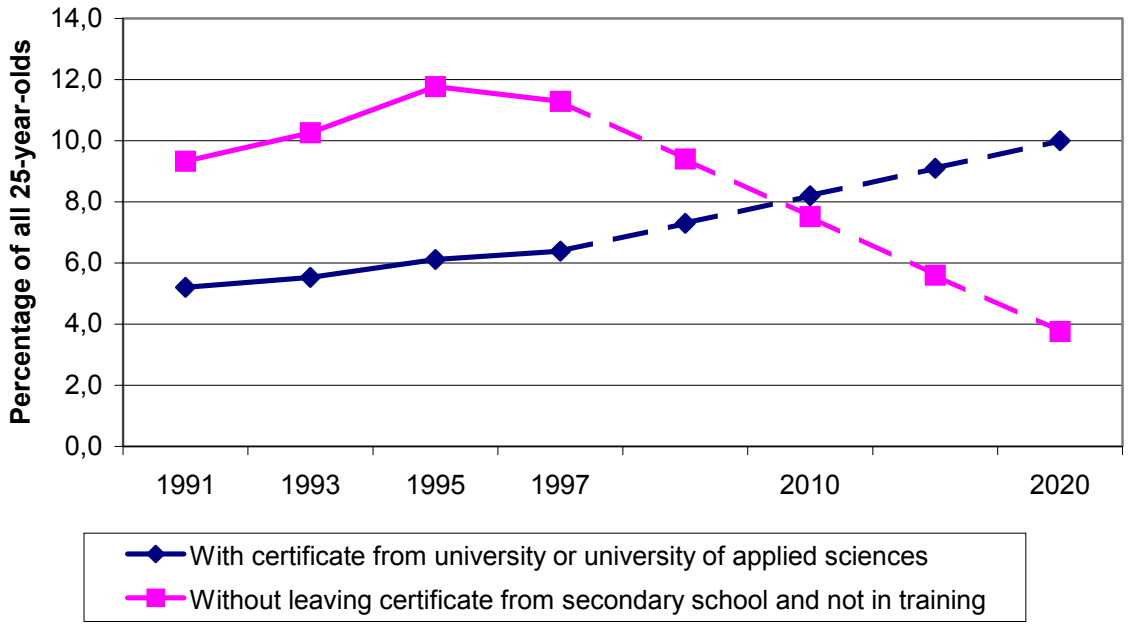
In the last few years, the ratio of 25 year-olds without university entrance qualifications or professional training was between 10% and 12%. Together with the *Länder*, the Federal Government is aiming to reduce this ratio by around a third by 2010 and by another third to 4% by 2020.

The statistic that 28.5% of the relevant year-group embarked on degree courses in Germany in the year 1999 is significantly below the OECD average (45%). This is not solely explained by the dual training system, which is peculiar to Germany, but also in the comparative reluctance nowadays of those with the entrance qualifications to take up a university place. Dynamic reforms are essential in order to exploit the existing potential to the full, which is in effect laying the foundation for future development. In the year 2000 the proportion of qualified young people taking up a university place in Germany was 30.2%. The goal is a rate of around 40% in the year 2010.

Furthermore endeavours are being made to achieve a significant increase in the proportion of those who have completed a degree course by the age of 25. This

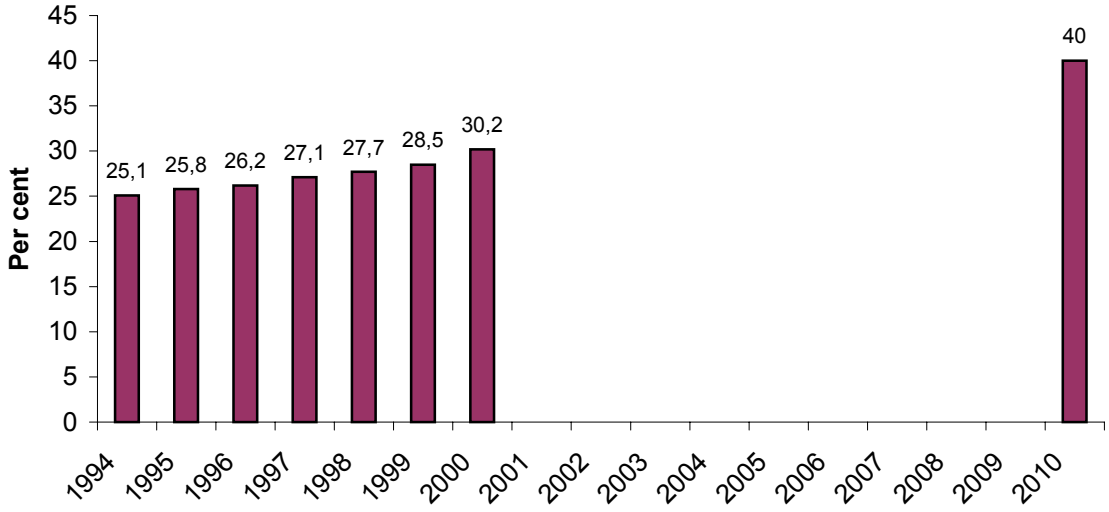
essentially means reducing the student drop-out rate and the number of students switching courses, while sensibly shortening the standard length of courses.
The objectives mentioned represent a challenge principally for schools and universities.

25-year-olds with completed education



Source: ZUMA Evaluation of Microcensus

University entrance rate



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II. Quality of life

Finding an equitable balance between the needs of the current generation and the life perspectives of future generations – this is the underlying principle of sustainable development. Sustainability is not in any way restricted to the well being of future generations. Better quality of life here and now – this is equally a leitmotif of sustainable development.

Thus economic prosperity ranks as a central goal of sustainable policy. But quality of life embraces far more than material prosperity. An intact environment is as much a part of it as good schools and personal security. Even the reorientation of agricultural policy introduced by the German Federal Government aims for better quality of life.

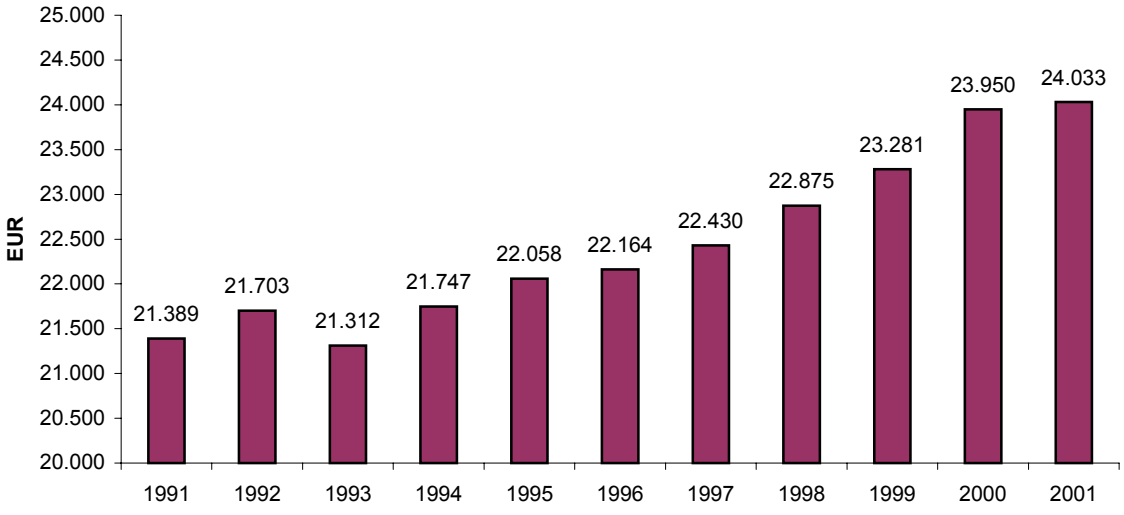
10. Economic prosperity

Raising economic output by environmentally and socially compatible means

Rising economic output is a key indicator of growing prosperity in society. At the same time, we are not forgetting that economic growth can also be linked with rising consumption of finite resources and increasing pollution of the environment. Hence it is important that growth in economic output takes place on environmentally sound and socially compatible principles.

With this in mind the Federal Government strives for continuous environmentally sound and socially compatible growth in per capita gross domestic product. With the economic and financial policy reforms of recent years, above all the tax reform, the framework conditions for this have been decisively improved. On this basis, after the global economic downturn of the year 2001, in the current year we can expect an economic recovery.

GDP per capita in 1995 prices



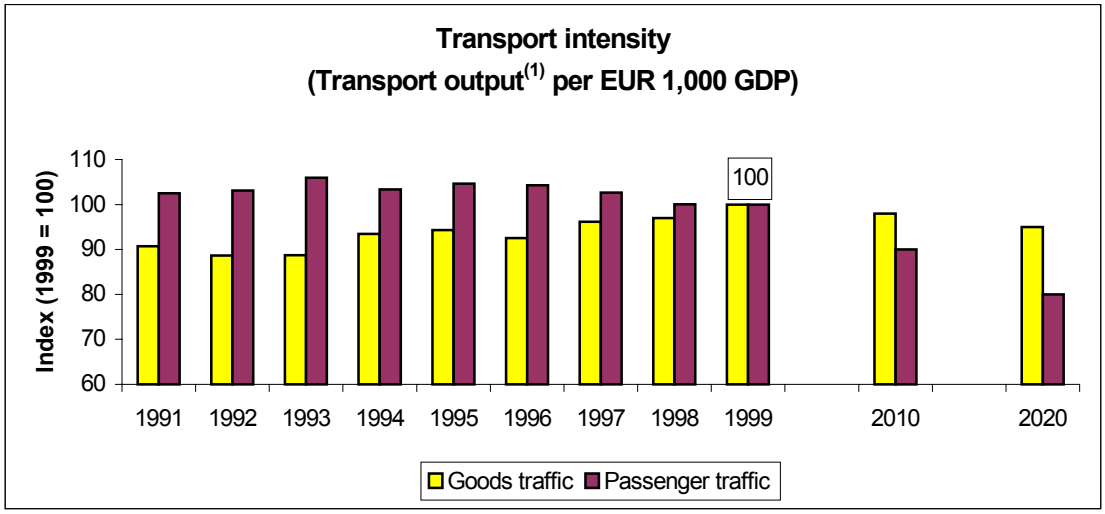
Source: Federal Statistical Office

11. Mobility

Designing environmentally friendly forms of mobility

Transport is a highly contentious issue. But we all want to be mobile, to get to work, to visit friends or do our shopping as quickly as possible. At the same time we get annoyed about traffic jams, traffic noise, exhaust emissions and the impact of roads on landscapes. In order to reconcile these points of view, we must shape mobility to be environmentally sound and – as in industry or energy production – improve efficiency. A goods vehicle travelling without a load, for instance, is of no benefit to anyone. By means of more efficient logistics systems, unladen journeys of this sort must be reduced. Overall we want to bring about a decoupling of economic output and transport output, comparable to the strategy which worked so successfully for energy consumption.

In the 1990s, however, a rise was noticed in transport intensity for freight transport, which of course affected absolute transport output. In passenger transport, transport intensity remained relatively constant. The goal is to bring about a development in transport similar to that which has already succeeded in the energy sector, i.e. to decouple economic output and transport output. On this principle, efforts are being made to reduce transport intensity by around 5% in freight transport and 20% in passenger transport by the year 2020, as compared with the 1999 figures.



Billions of tonne-kilometres or passenger-kilometres
Source: Federal Ministry for Transport, Construction and Housing

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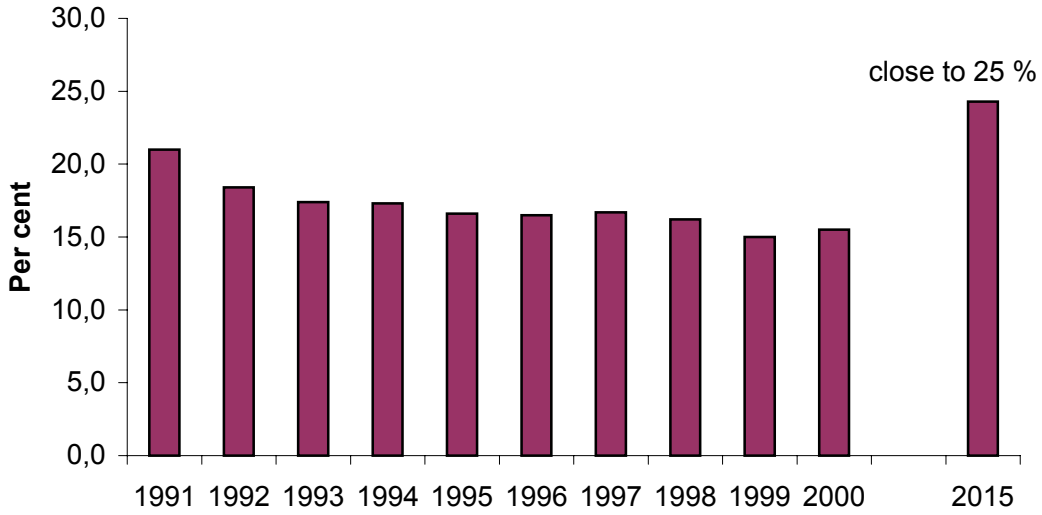
Along with the decoupling of economic and transport output, the concern is to manage transport pollution by increasing the proportions (modal split) of non-motorised transport and of environmentally-friendly forms of transport such as rail, public transport and the waterways. In the 1990s a negative development was observed in this respect affecting both goods and passenger transport. This trend should be reversed. The goal is that by 2015, freight transport by rail should be double the 1997 volume, which corresponds to a 24.3 % share. Transport output by inland shipping is set to grow by around 40 % in the same period, which corresponds to a 14.1 % share. Likewise the goal for public passenger transport (rail and road) is a rising share of overall transport output.

Proportion of freight transported by rail



Source: Federal Ministry of Transport, Building and Housing

12. Nutrition

Environmentally sound production of healthy food

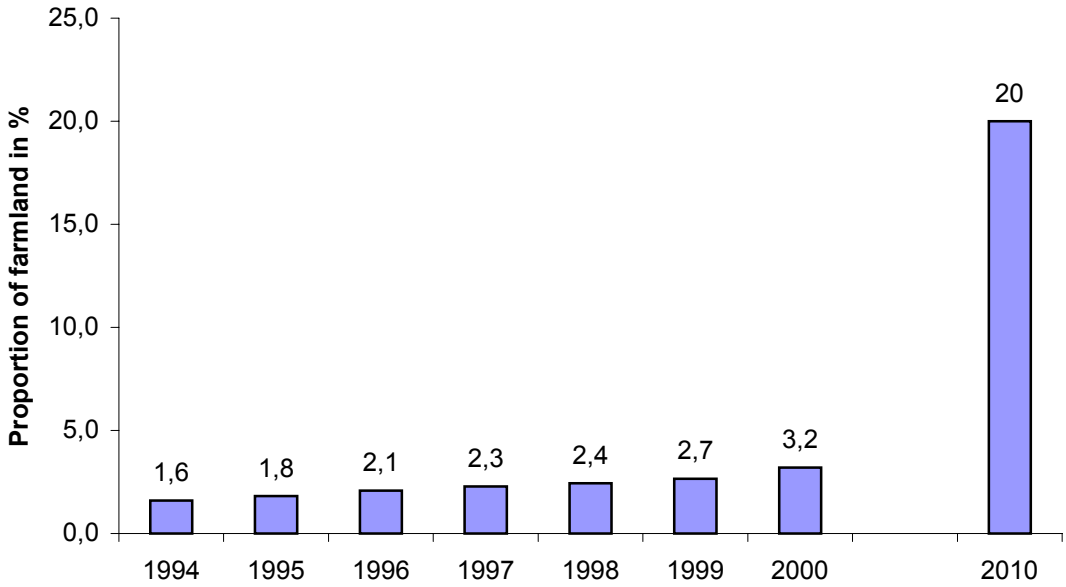
With its reorientation of agricultural policy, the German Federal Government has introduced another reform project for sustainable development. In doing so it is placing an emphasis on quality and focusing attention on consumer protection. More and more people are interested in where their food comes from, how it is produced and what it contains.

The central objectives of the reorientation of agricultural policy therefore include environmentally and ecologically sound methods of production and higher standards of animal welfare in livestock management. This is the way to strengthen confidence in the quality of the products and to safeguard the economic basis for agricultural businesses.

From the environmental policy point of view, the particular significance of sustainable agriculture is that it protects the soil, water and air while maintaining or even increasing soil fertility and biodiversity. Fertilisers and pesticides are to be deployed efficiently and only when needed. Environmental pollution, especially nitrate discharges into water and ammonia emissions, are to be avoided as far as possible.

Organic farming already meets the standards for sustainable agriculture to a considerable extent. The goal is to raise the proportion of agricultural land farmed organically to 20 % by 2010. The success of this depends most of all on consumers, whose demand will decide this issue.

Organic farming



Source: Federal Ministry of Consumer Protection, Food and Agriculture BMVEL

But sustainable agriculture must not be confined only to organic farming. Currently 97 % of farmland is managed conventionally. An important reference point for the sustainability of agriculture overall is the nitrogen surplus. Nitrogen is utilised in agriculture as a fertiliser and – where it is not absorbed by the crops – has far-reaching impacts on the ecological balance (including acidification, eutrophication, nitrate pollution of groundwater and surface waters and damage to biodiversity).

The goal is to reduce the nitrogen surplus for the whole of the agricultural sector, i.e. surpluses arising on farmland and in animal housing, passing into air, soil and water, to 80 kilograms/ha by 2010.

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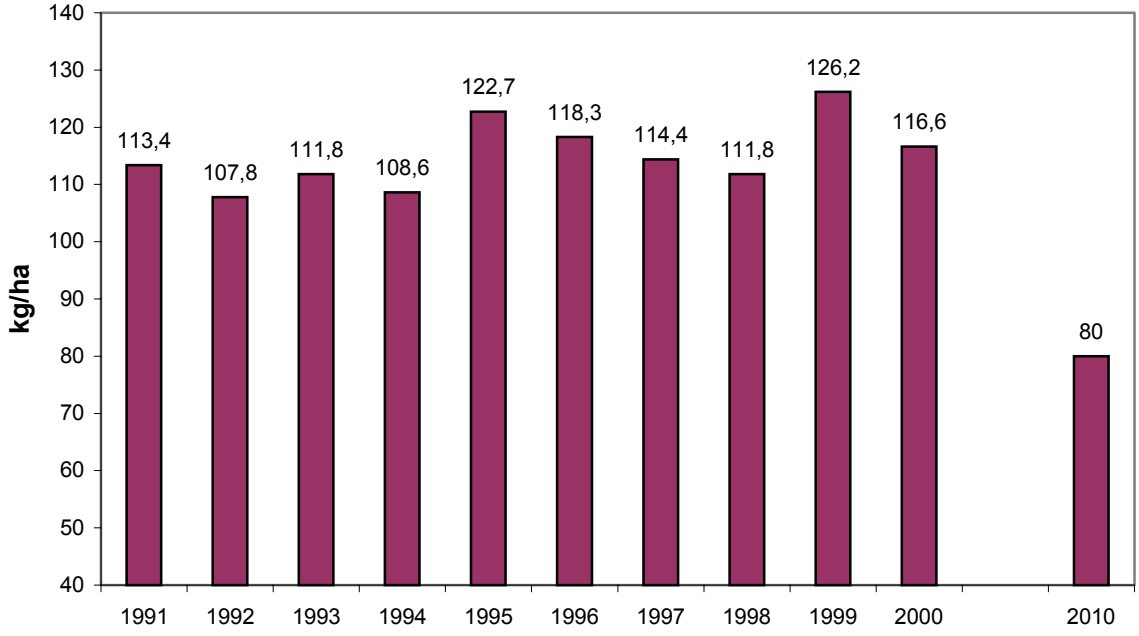
Nitrogen surplus (whole agricultural sector)

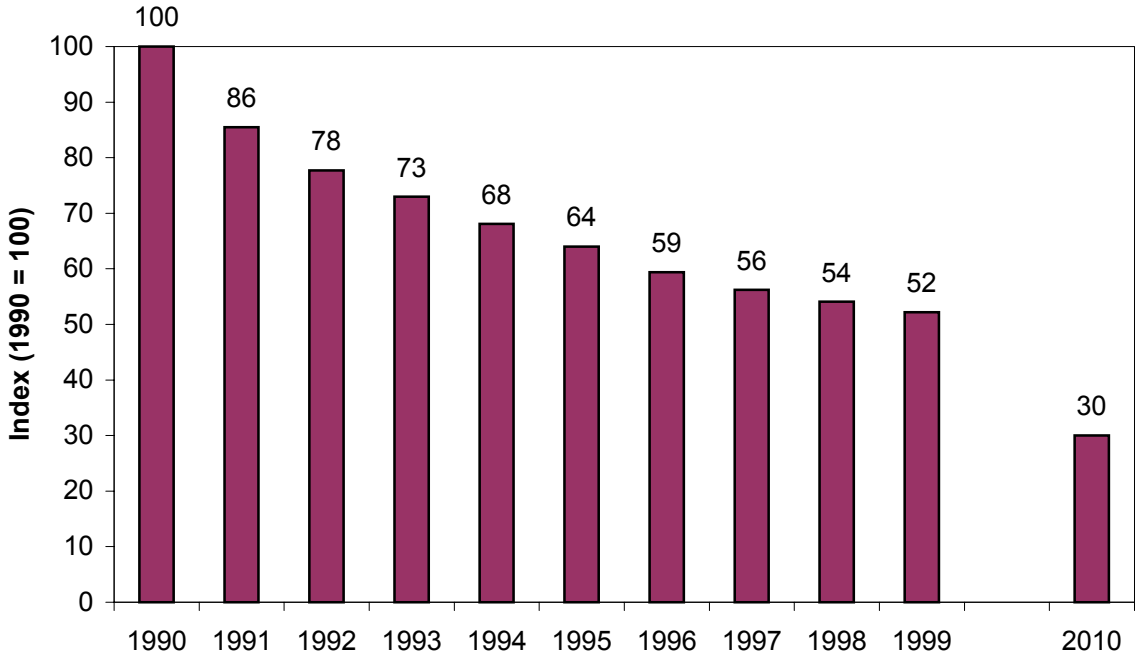


13. Air quality

Keeping the environment healthy

Since Willy Brandt called for "Blue sky over the Ruhr" in 1961, air-quality in Germany has substantially improved. Filters in power stations, catalytic converters in vehicles and efficient heating systems have helped. This development must be continued. By 2010, concentrations of the main air pollutants should be reduced on a scale of around 70% compared with 1990.

Concentration of air pollution



(1) The index comprises emissions of SO_2, NO_X, VOC and NH_3. It states the average level of falling emissions as a percentage of their 1990 level.

Source: Federal Environmental Agency

14. Health

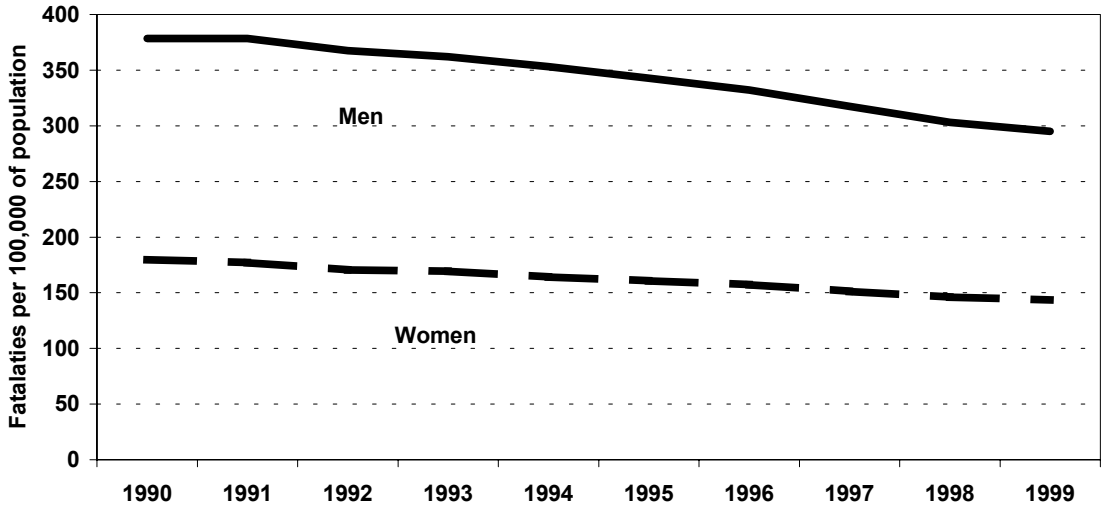
Healthy living

Little makes such a difference to quality of life as personal health. To maintain a good state of health, initially we can do a great deal ourselves. Dietary habits, consumption of tobacco and alcohol and physical exercise are important keywords in this respect. But environmental influences (for example air and water quality, noise) also have health implications.

Information on the state of our health and medical care is revealed by the premature mortality rate, meaning the proportion of people who die before the age of 65. Included in this indicator are deaths caused by cancer and traffic accidents. When this indicator falls, it reflects progress in medicine and improvements in treatment, the habits of the population (for example, tobacco use) and preventive measures. In a broader sense, aspects of sustainability also come into this indicator, for example better air quality resulting from the reduction of harmful emissions, or better food through quality-oriented production.

In recent years, premature mortality has declined continuously. This trend should be maintained in the future.

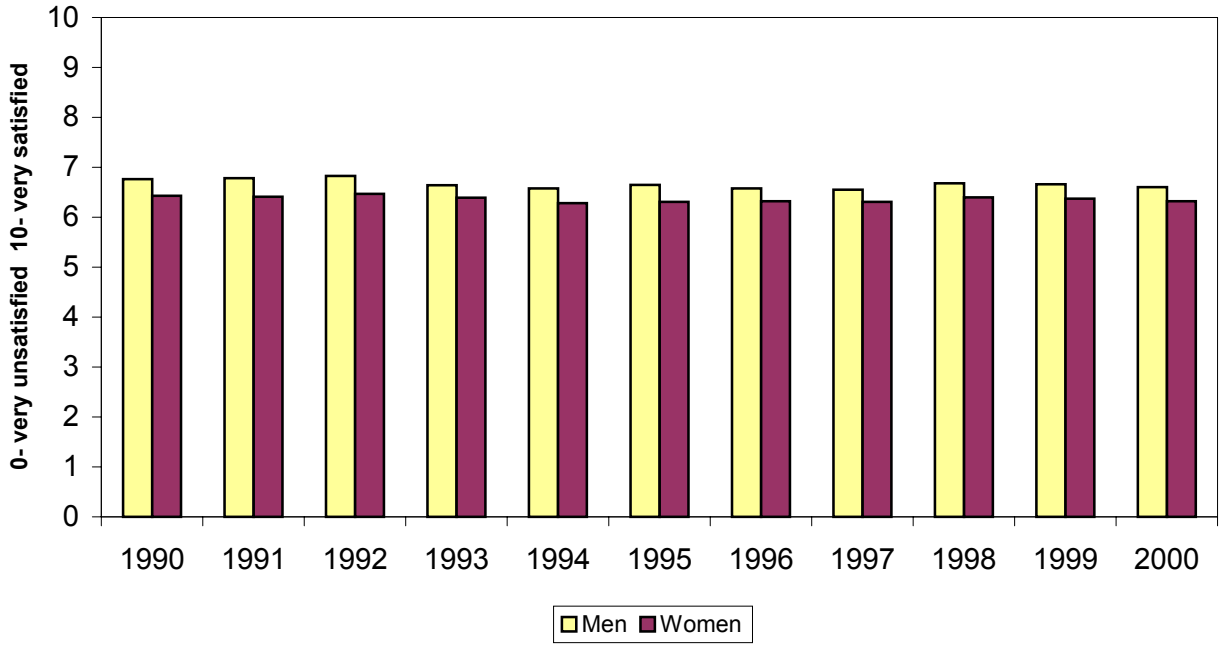
Premature mortaliy (below the age of 65)



Source: Federal Statistical Office

To arrive at comprehensive conclusions on the issue of health, however, it is not enough merely to analyse how many people die prematurely or become sick. An equally important question is how people subjectively perceive their own health. Particularly in times in which chronic illnesses play an increasingly major role, personal satisfaction with health is of central importance to our quality of life. Relevant statistics are now gathered regularly on an international basis. For Germany, these pan out at a relatively stable median value. Accordingly, the vast majority of citizens are satisfied with their state of health.

Satisfaction with health



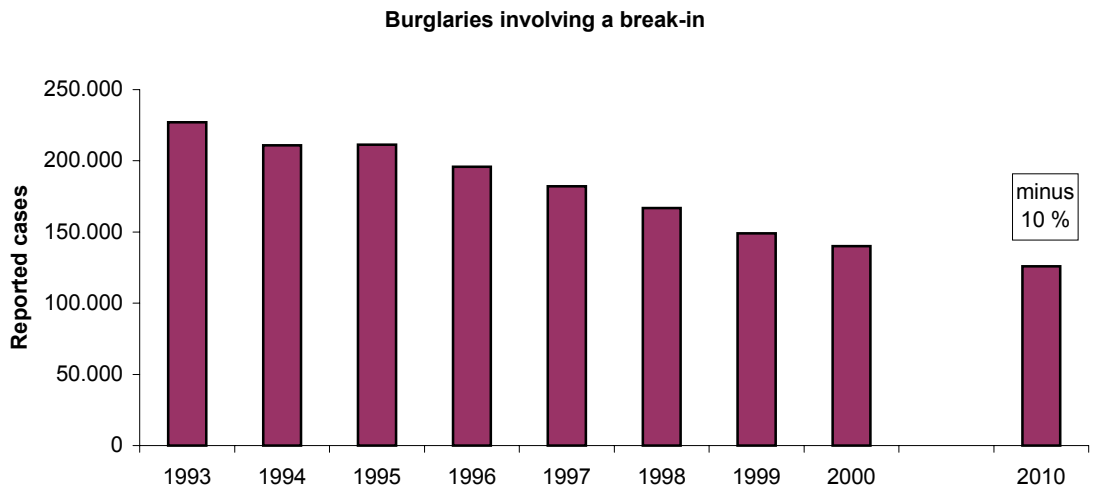
Source: German Institute for Economic Research

15. Crime

Further increasing personal security

To feel secure about our lives, our families and our property is a basic human need. Crime can lead to a climate of fear in society and also be detrimental to economic development. A continual reduction in criminal offences is therefore a key goal of sustainable development.

Burglaries in particular represent a threat to personal security. In the 1990s, a pleasing development was noted: the number of burglaries involving a break-in declined by over one-third. With a further 10% increase, this trend should be maintained. Besides stepping up existing preventive measures, other key influences countering the rise in crime involving this sort of offence are the commitment of citizens to securing their own property and their active cooperation in the detection of crime.



Source: Police Crime Statistics

III. Social cohesion

Most people think first and foremost of social security systems as representing the social dimension of sustainability. In Germany this social safety net is tightly woven. Insurance schemes – for pensions, healthcare, unemployment and care in old age – cover the most important risks. As a further safety net, welfare payments prevent material poverty. The German Federal Government has made particular use of pension reform to ensure that our world-leading social insurance system remains functional, even against a backdrop of demographic change.

Social cohesion within a society embraces more than its systems of social protection, however. Against the background of rapidly changing economic structures, the concern is to carry all people along and involve them in economic and technological development. We must prevent society from splitting into winners and losers, and integrate certain groups in the population rather than excluding them. These challenges are not only the responsibility of the state. Businesses and trades unions, churches and associations and civil society as a whole are called upon to make their contribution to solidarity within society.

16. Employment

Boosting employment levels

Work is the basis of human livelihoods and enables participation in the prosperity of society. It is a precondition of self-realisation.

In the 1990s, the unemployment rate in Germany was in the region of 8% to 10%. Such a level of unemployment is unacceptable. Unemployment is a central macro-economic problem, most seriously of all for those affected, and one that demands political action. It is accompanied by a loss of tax revenues, reduced contributions to social protection systems, and great difficulty – because the social protection systems are having to meet a substantial volume of claims – in reducing ancillary wage costs. Furthermore, unemployment is very inequitably distributed between regions, which undermines the goal of uniform standards of living – especially with regard to the new Länder of former East Germany – in a way which is unacceptable in the long term. Unemployment is a severe hardship, most of all for those affected and their families. This is why the fight against unemployment is right at the top of the political agenda.

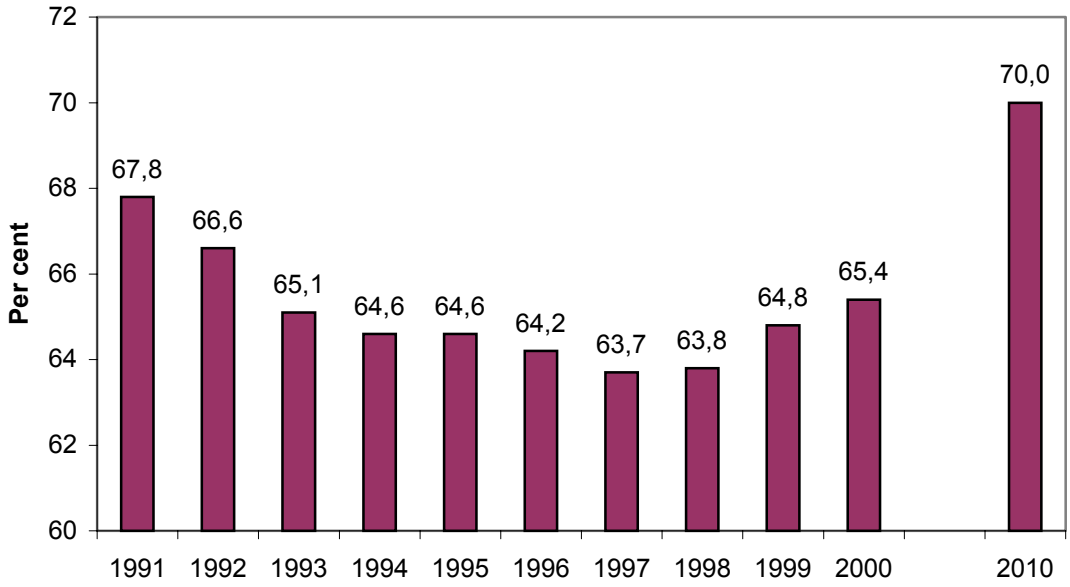
In recent years, clear successes were achieved in the labour market. Employment rose in 2001 to the record level of 38.8 million people in employment. Accordingly, the average level of unemployment in 2001 was 430,000 lower than in 1998. Admittedly this positive development was temporarily undone by the global economic downturn. With the expected economic recovery in the present year, unemployment should begin to fall once again. The German Federal Government will not place its confidence solely in the upturn. It is counting far more on the revitalising effects of its labour market policy. In this connection, the Federal Government has set the course for a structural reorganisation of the labour administration. The Federal Institute for Labour will be developed into a modern customer- and competition-oriented service provider with the goal of concentrating on core tasks, particularly recruitment and consulting.

Even if unemployment is currently one of our most pressing problems, labour market issues are likely to take a different turn in future. Even today, in some sectors and regions a shortage of staff has been noted. Due to demographic change (low birth rates and a rising proportion of older people in the population) this problem will only intensify.

Against this background, to bring about positive long-term economic development it is vital to utilise existing employment potential effectively. Thus for example the opportunities of mothers to be active members of the labour market could be improved through better provision of childcare. Older people, too, should be offered more opportunities to keep contributing their knowledge and experience. In the long term this will boost the employment rate.

From the sustainable development point of view, the employment rate matters a great deal. It reveals what proportion of the working-age population is actually in employment. The German Federal Government is striving to raise the employment rate to 70% by 2010.

Employment rate



Source: Federal Statistical Office, Microcensus

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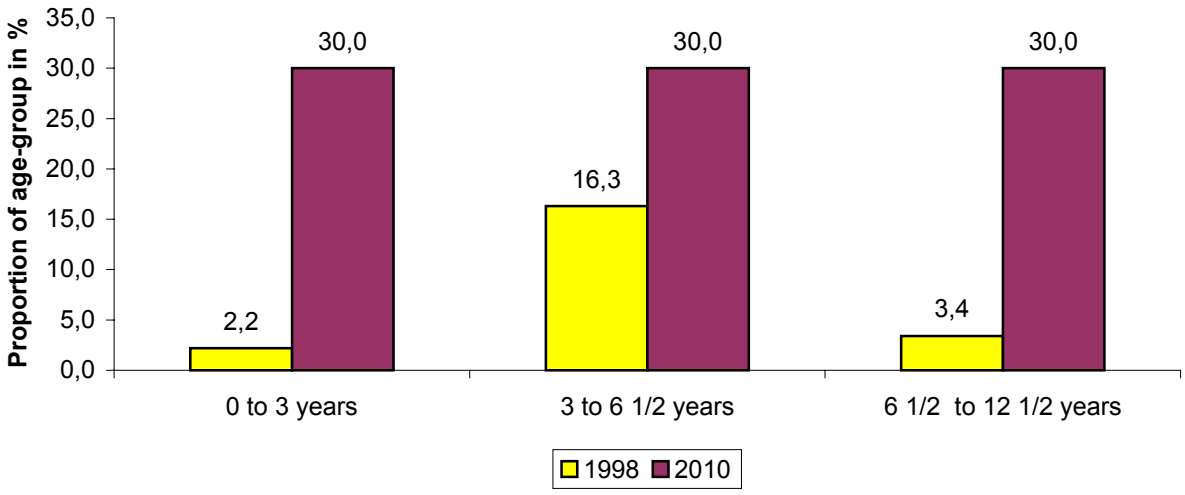
17. Perspectives for families

Improving the compatibility of work and family life

Many women who would like to work are prevented from doing so by a lack of day-care provision for their children. Whereas the new Länder of former East Germany offer sufficient provision of full-time day-care places for children up to the age of 12 to meet total demand, there are significant deficits in the West German *Länder*. For children over 12, the supply of all-day school places is inadequate in both the western and eastern *Länder*.

With due regard to foreseeable problems which will result from demographic development, improved day-care provision is essential in order to meet future workforce needs. Day-care not only makes it easier for mothers and fathers to combine a family and a career, but also contributes to equal opportunities and the socialisation of children, which is fostered as a natural part of the provision. In addition, better compatibility of family life and a career could help to boost Germany's excessively low birth rate. Hence it is essential to create a substantial number of additional day-care places (in the West German *Länder*) for all age groups. This is a task for *Länder* and municipalities but also for companies, for instance.

Full-time day-care facilities in the West German *Länder*[(1)]



(1) Without full-time day-care, without all-day schooling

Source: Federal Statistical Office and calculations of the Dortmund Project Office for Child and Youth Assistance Statistics at the University of Dortmund

18. Equal opportunities

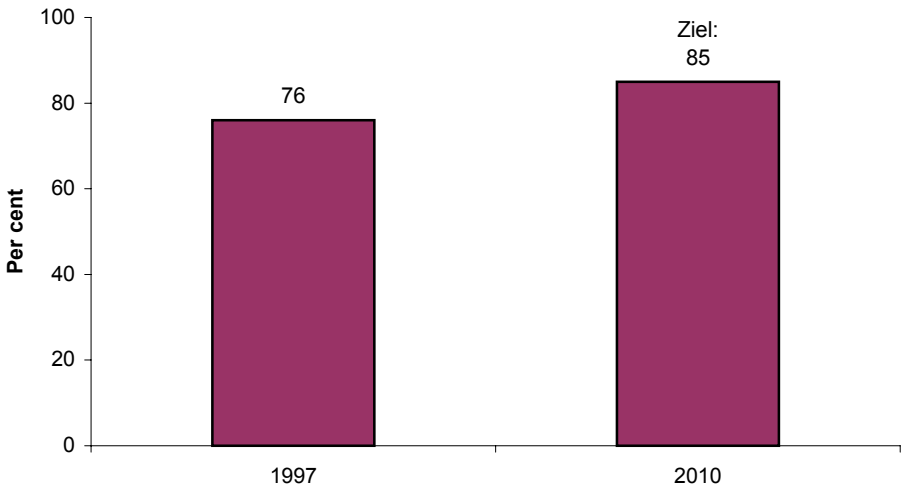
Promoting equal opportunities in society

In a sustainable society, women and men must have equal opportunities. This must also be reflected in income. To this end, the framework conditions must be altered so as to remove differentials in income between women and men. In the *Länder* of former East Germany, women's average earnings are already around 94% of male earnings, as opposed to only 75% in the Länder of former West Germany.

It is remarkable that at the beginning of a career, differentials in income are still low. Thus women between the ages of 20-24 earn 95% (West German *Länder*) and 99% (East German *Länder*) of the average salary earned by men of the same age. So, on entry to the world of work, equal opportunities exist to a high degree in Germany. Among middle-aged age groups, greater disparities arise in employment earnings. The principal reasons are breaks in employment for child rearing, part-time work and the different perspectives for career development which result from training decisions, all of which block women from keeping pace with male income at this stage. Women aged 35-39 years in full-time employment make only 76% (West German *Länder*) or 95% (East German *Länder*) of male income. Women over 60 in full-time employment earn as little as 66% (West German *Länder*) or 77% (East German *Länder*) of the income earned by their male contemporaries.

These differences in the development of earnings are based mainly on a range of structural factors (such as type of training and concentration in sectors and jobs with low pay). Other important reasons are the pertaining framework conditions (for example, a lack of day-care provision). It is important to improve the conditions of women's employment as a whole, in order to remove the income differentials between women and men.

Comparison of gross annual earnings from full-time employment
Women and men aged between 35 and 39 (West German *Länder*)



Source: Institute for Labour Market and Research of the Bundesanstalt für Arbeit (Federal Institute for Employment): Sample of people in employment 1997.

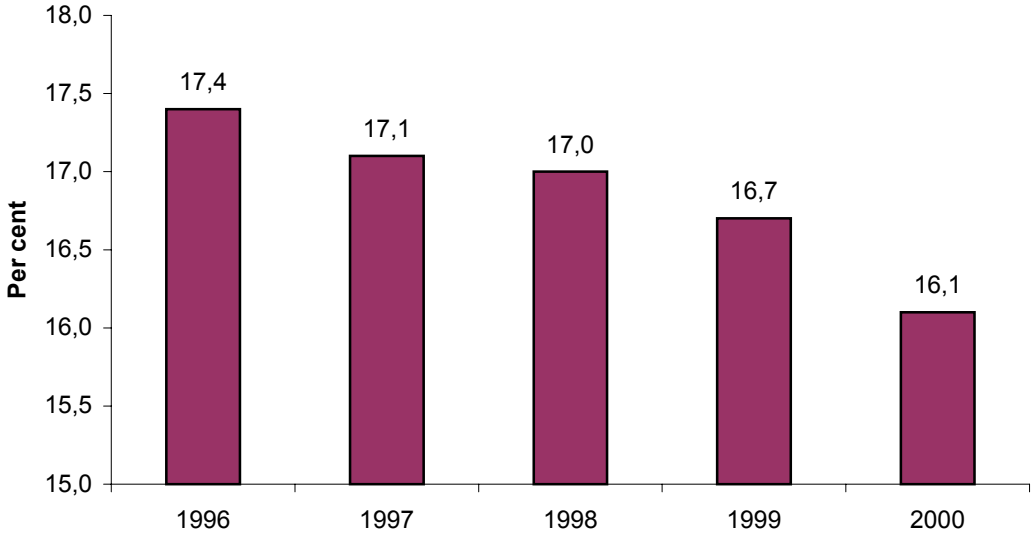
19. Integration of foreign citizens

Integration instead of exclusion

The integration of certain population groups is an important yardstick for the social cohesion of a society. This is especially applicable to the more than 7 million foreigners living in Germany. Their integration depends ultimately on the attitude of all citizens.

Foreign citizens themselves can and must play their part, for example by being prepared to learn the German language. Poor language skills and a lack of occupational qualifications are the main reasons for the higher rate of unemployment among foreigners in Germany. This is one area in which pleasing progress has been made in the past. Whereas in the early 1980s around 30 % of foreign youngsters left secondary school without qualifications, in 1999 this had dropped to only 16.7 %; among German school-leavers the rate was around 9%. This positive trend should be maintained. By 2020 the proportion of foreign school-leavers without secondary school-leaving qualifications should be brought closer to the corresponding rate for German school-leavers.

Foreign school leavers not gaining the first secondary school-leaving certificate (Hauptschule)



Source: Federal Statistical Office, calculations of the Federal Institute for Vocational Training

IV. International responsibility

We are an integral part of a world in which the separate nations and peoples are tightly interconnected. This applies to the economy – thinking of globalisation – and to ecology – thinking of climate protection.

This is why a strategy for sustainable development must look beyond national borders. Germany fulfils its responsibility for sustainable development on a global level through its ambitious climate protection programme, for example, and its efforts towards prudent and efficient management of scarce resources. Besides these measures located at national level, Germany also contributes to sustainable development by deploying peacekeeping forces.

But most importantly, global equity requires the economic opportunities of developing countries to be improved. The Rio Conference back in 1992 spelt out the close connection between environment and development, and defined global sustainable development as a central challenge.

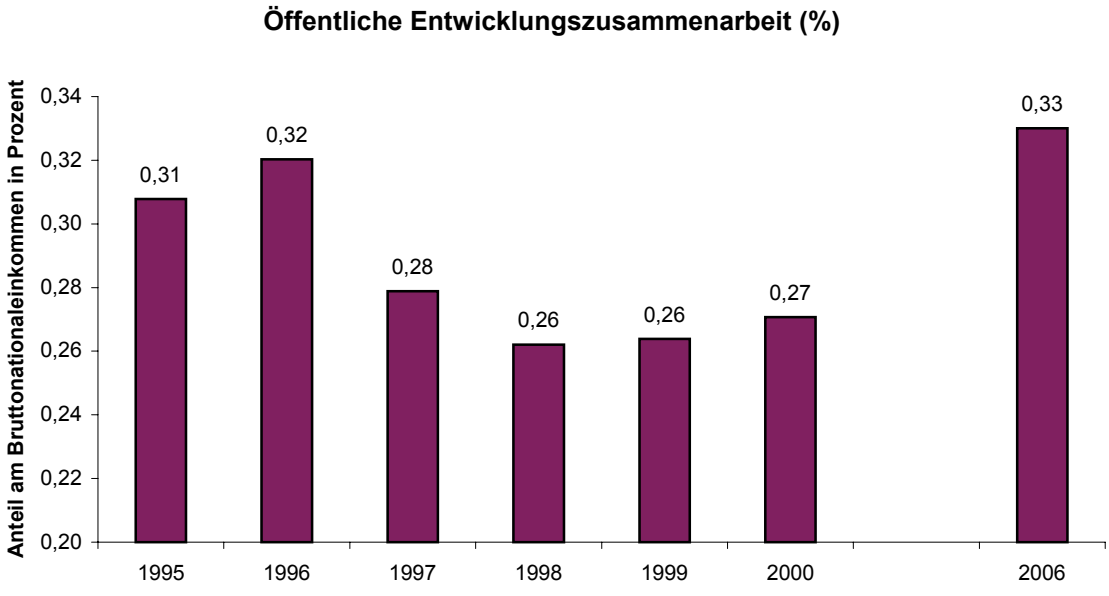
20. Development cooperation

Supporting sustainable development worldwide

Germany supports developing countries in numerous ways, for example through the German Federal Government's Action Programme to Combat Poverty. Due to the great drain on finances in the wake of German reunification, German development spending dropped during the 1990s. In the meantime, this declining trend has been halted.

Germany is still a long way from achieving the internationally defined goal, reaffirmed by the European Council on 15/16 June, 2001 in Gothenburg, of making 0.7% of gross national product available for public development cooperation. Nevertheless Germany was the third-largest donor in the world, giving a good US dollars 5 billion in the year 2000. In any case, in the course of budget allocations the German Federal Government will strive to achieve a volume of 0.33 % of gross domestic product for public development assistance by the year 2006

Aside from the publicly funded spending, the contributions of many organisations which donate private funding for development projects testify to a general willingness to engage in international solidarity. Private development spending has held up at a relatively constant level for some years (around 0.05 % of gross national product).



Source: Federal Ministry for Economic Cooperation and Development

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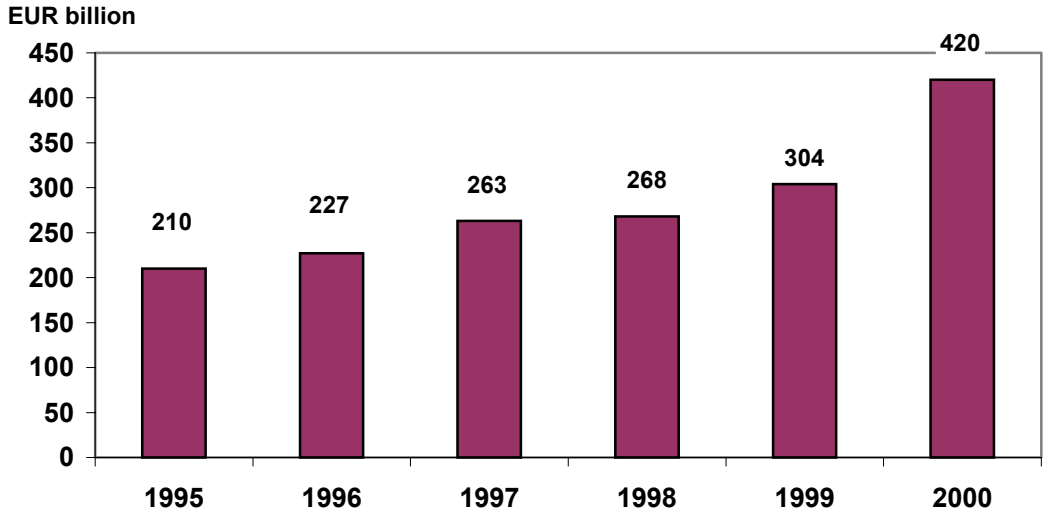
21. Opening markets

Improving trade opportunities for developing countries

Besides public development cooperation, too little attention is paid to other factors which promote the economic advancement of developing countries, although they are perhaps even more important. For example, the framework conditions for business relations are of crucial importance. Here the initial responsibility belongs to the developing countries themselves. Dependable political conditions and an economic policy geared towards stability and internal security are critical preconditions for private investment.

But the industrialised countries can also improve the framework conditions for business relations. For instance, developing countries need unrestricted access to markets in industrialised countries in order to be able to sell their products. The German Federal Government strives for an open, fair, accountable and non-discriminatory system of multilateral trade and finance, to which the developing countries have equal access so as to make the most of their export opportunities to industrialised countries. In recent years a rise has been noted in imports from developing countries, and this should continue.

EU imports from developing countries



Source: Eurostat

E. Key Focus Points for a Strategy for Sustainable Development

In Chapter B the model of a programme for sustainable development is outlined in detail. This chapter deals with the concrete conclusions we have drawn. As a first step, the Federal Government, in the following priority areas of action, considers the themes in connection with which adjustments are necessary for a programme of sustainable development in our country. In these key focus areas the fundamental principles of sustainable development are translated into concrete form and thus are made relevant to action which can be taken by the Federal Government and also by other agencies participating in a programme of sustainable development.

As a first step, the Federal Government has developed in detail an overall conception, goals and the measures to be taken for the first three of the priority areas for action. These involve a system of energy provision which can be sustained in the future, mobility which protects the environment, and reorientation in the areas of agriculture and consumer protection. These areas represent the key focus points in this legislative term for putting into practice the Strategy for Sustainability. In the other priority areas for action, the programme for the coming years is outlined without the necessary measures being specified in such concrete terms as they are with regard to the first three areas for action. This clearly shows that the political task of implementing a programme of sustainable development does not come to an end with the presentation of this strategy. This also applies to further areas for action which have still to be addressed.

I. Use energy efficiently – protect the climate effectively

Scenario for an energy policy sustainable in the future

1. Initial situation

The need to act on a worldwide scale

Energy provision represents an essential basis for prosperity and is thus a precondition for a high degree of quality of life. Whether it be in production processes, in the area of transport or in providing heating for buildings – energy is needed everywhere, but at the same time many problems are connected with current energy consumption:

- Worldwide energy consumption continues to rely on the fossil fuels oil, coal and gas. These will have to bear the main weight of energy consumption for the forseeable future – but there are not unlimited supplies of them. Using them will limit the the freedom of action of future generations. This has a direct bearing on the fundamental principle of the sustainable development model – the principle of intergeneration equity.

Extent of energy reserves

The energy reserves which, from the viewpoint of the present day, can be exploited economically and technically, have been estimated in comparison with current world annual energy consumption multiplied by a factor of 100. While, from a “static“ point of view, crude oil shows the lowest level of reserves – being expected to last only 42 years, natural gas was shown to be running out after some 65 years and the coal reserves after around 170 years. Even supplies of uranium will only last for some 50 years.

If other known and possible resources are brought into the calculation, the expected life of the reserves is higher, e.g. in the case of crude oil: over 200 years, uranium: over 200 years, and coal: more than 300 years.

Even viewed in this “dynamic“ way, it is certainly an unmistakable fact that mankind bases its prosperity on resource consumption on a massive scale. It required several thousand to several million years in the history of the earth to build up the quantity of energy which is at present consumed worldwide in only one year.

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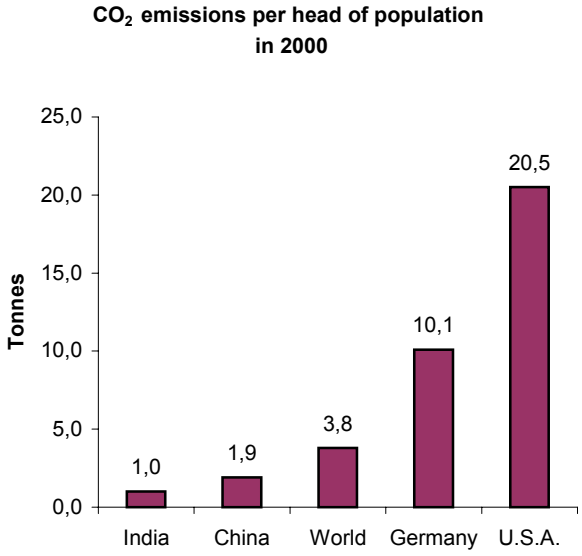
- Energy-related CO_2 emissions are responsible for more than 70% of the greenhouse effect caused by man (in Germany for as much as 87%). In this way also, our present-day levels of energy consumption place a burden on future generations, who are faced with the consequences of climate change.

- Even among the generations living today relative shares of energy consumption do not match the sustainable development model. Around 75% of worldwide energy consumption can be ascribed to industrial countries, while their share of the world population is only about 25%. At the same time, the industrial countries clearly contribute more to the greenhouse effect (see diagram).



Source: DIW

It is true that, considered in relation to efficiency (specific CO_2 emissions, i.e. emissions related to GDP), relativities change: the U.S.A. produce some 1.7 times, India 4-5 times and China around 8 times the level of specific CO_2 emissions in Germany. Against the background of the fact that the share of the developing and threshold countries in worldwide CO_2 emissions is continually increasing, it is clear that, in addition to the required reduction in CO_2 emissions in the industrial countries, a more efficient system of dealing with energy in the developing and threshold countries is also an indispensable precondition for global climate protection.

Like the prevailing use of the fossil fuels oil, gas and coal, the use of nuclear energy also contravenes the fundamental principle of fairness to succeeding generations. We are leaving highly problematic radioactive waste products

which will remain a problem for millennia. In addition, we cannot exclude the possibility of accidents with grave consequences occurring, either through technical failure or human error, in nuclear technology installations. The use of nuclear energy therefore also does not represent a solution to the climate problem.

The traditional system of energy provision causes massive environmental damage all over the planet which also has consequences for human health. The combustion of fossil fuels produces air pollutants such as sulphur dioxide and nitrogen oxides which contribute to the formation of acid rain. Carbon monoxide, unburnt hydrocarbons, soot and dust are also emitted. Finally, significant levels of water pollution are also associated with energy provision. Only in a few countries are modern environmental protection techniques being deployed across the board.

- Two billion people do not have access to commercial energy provision. Many are compelled to use, in an extremely inefficient way, sources of energy which pollute the air, destroy the forests and contribute to the formation of deserts.

The present day system of energy provision for the economy and for society thus does not correspond, on a worldwide scale, to the sustainable development model. The protection of the environment, the economical and efficient use of energy resources and climate protection are among the central challenges faced by sustainable climate protection and energy policies. At the same time a precondition for the development of economic productivity and quality of life, and also for the elimination of poverty in the world, is a safe and economic system of energy provision. Therefore it remains a continuing task to assign equal priority to meeting the goals of economy, protection of the environment and resources (including climate protection), and ensuring energy provision.

Comparative figures showing international ranking of the German energy market 1999

	PEC *in PJ*	Net dependency on imports in %.	PEC/head *in GJ*	PEC/GDP *in GJ/1000 US$*	CO_2 energy related in million tonnes	Kyoto gases: (CO_2-equivalent); targets for 2008/12 in brackets; figures in % as against 1990	CO_2/ PEC *in kg/GJ*	CO_2/ GDP *in kg/US$*	CO_2/ head *in tonnes*
Germany	**14,118**	**60.5**	**172.0**	**5.4**	**832.0**	**-18.6 (-21)**	**58.9**	**0.32**	**10.1**
Europ. Union	60,447	48.9	160.3	6.4	3.113.7	-4.0 (-8)	51.5	0.33	8.3
Denmark	840	-16.5	157.9	4.2	55.5	+4.0 (-21)	66.0	0.28	10.4
France	10,678	51.5	177.2	6.3	383.6	-0.2 (+0)	35.9	0.23	6.4
Italy	7,077	84.7	122.8	6.0	431.0	+4.4(-6.5)	60.9	0.37	7.5
Great Britain	9,643	-21.4	162.1	7.7	518.0	-14.0(-12.5)	53.7	0.41	8.7
Netherlands	3,101	35.1	196.1	6.5	172.1	+6.1 (-6)	55.5	0.36	10.9
Sweden	2,139	33.4	241.4	8.0	52.0	+1.5 (+4)	24.3	0.19	5.9
PR China	45,567	2.0	36.3	47.3	2.523.5	+21.1 (--)	55.4	2.62	2.0
Japan	21,581	80.2	170.3	4.0	1.158.6	+9.7 (-6)	53.7	0.22	9.1
Canada	10,123	-52.5	332.0	15.3	479.0	+13.2 (-6)	47.3	0.72	15.7
Russia	25,244	-56.0	172.7	78.1	1.442.5	-35.4 (--)	57.1	4.46	9.9
U.S.A.	95,040	25.2	348.1	11.1	5.509.2	+11.7 (-7)	58.0	0.64	20.2

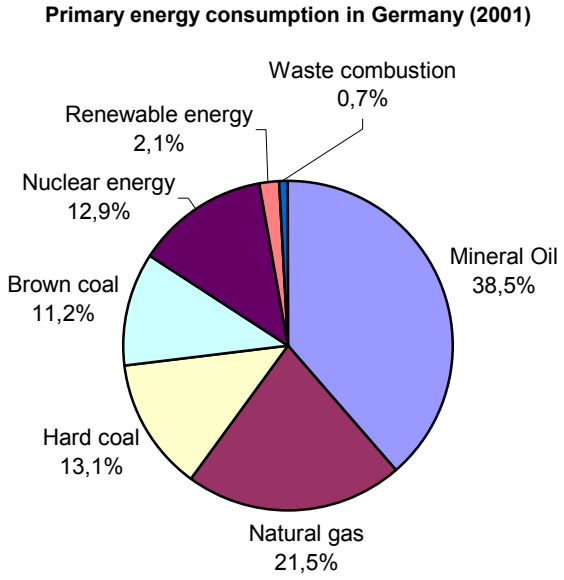
Values for CO_2 emissions and figures derived from them refer to energy-related CO_2 emissions

Sources: IEA, DIW, BMWi, BMU, UBA

The structure of energy provision in Germany

a) **Primary energy consumption: component sources**

Energy provision in Germany today relies on more than 97% of fossil and nuclear fuels (see diagram). With a primary energy consumption totalling around 14,500 PJ, the consumption per head in Germany in 2001 was some 176 GJ (this corresponds to around 6 tonnes of hard coal per year), consumption being related to the gross domestic product of 7.3 GJ/EUR 1,000.



Source: Arbeitsgemeinschaft Energiebilanzen (Energy Audit Working Group)

Within the foreseeable future the market shares of the individual fuels will shift. On the basis of the programme for ending the use of nuclear energy, agreed with the energy industry and established in law, the significance of nuclear energy will gradually decrease. Among that which will profit from this will be natural gas which will have to be transported in increasing amounts from outside the EU and over great distances. In terms of climate protection policy, a positive factor in this is the fact that natural gas, because of its relatively low carbon content, causes lower CO_2 emissions than crude oil or coal. However, within the framework of an appraisal which will be applied to all fuels, the costs of transport, delivery and processing must be taken into account in the evaluation from the point of view of emissions, and this can affect the relative advantages of natural gas in connection with climate policy. Added to this is the fact that a growing market share of natural gas will also increase dependency on imports.

b) The structure of energy usage

During the Nineties, energy consumption developed in very different ways in the different consumption sectors. While consumption in the energy sector of the economy and in industry continued to decrease as a result of continuing increases in efficiency and structural changes ranging from energy-intensive products to services, the market shares of private households and transport until recently clearly increased. In the area of transport this was due both to increasing numbers of vehicles and also to increasing numbers of transport services.

It is true that recently all sectors indicated trends which ran counter to this. While energy consumption in industry rose in the year 2000 as against 1999, in the area of transport and private households it declined. In the area of industry this could be attributed to the fact that in 2000 a relatively high level of economic growth was achieved. On the other hand, the transport sector shows a change in trend towards regressive energy consumption. Thus sales of fuel in the first half of 2001 decreased by about 5% in comparison to the first half of 1999. One decisive contributing factor to this was the ecological tax reform.

Energy consumption indicators	**1991**	**2000*)**
Primary energy consumption per head of population (GJ)	183	173
Gross electricity consumption per head of population (kWh)	6,736	6,758
Primary energy consumption per EUR 1,000 gross domestic product (MJ)	8,540	7,253
Gross electricity consumption per EUR 1,000 gross domestic product (kWh)	315	283
Energy consumption in industry per EUR 1,000 gross added value (MJ)	5,902	5,363
Electricity consumption in industry per EUR 1,000 gross added value (kWh)	509	529**)
Average consumption for private motor car (per100 km)	9.4	8.5

Sources: German Federal Statistical Office, AG Energiebilanzen, BMWi

*) in part, provisional data **) indication for 1999

c) Dependency on imports

Germany is dependent upon imports for around 60% of its energy, whereas the average figure in the European Union is only 49%. The import figures show very strong variations between the individual fuels. Thus in Germany nearly 100% of crude oil and about 80% of natural gas are imported. In the case of hard coal the figure at present is a good 42%, while lignite and also renewable forms of energy are virtually all produced domestically.

In terms of usage, this means that:

- Transport, which claims some 30% of overall energy consumption, is dependent on imported mineral oil for 98% of its energy.

- The heating market, which comprises a third of overall energy consumption, has 80% of its needs met by natural gas and crude oil and is thus similarly largely dependent on imports.

- Only in the electricity market with its diversified mix of fuels has the proportion of imported primary energy until now been lower, at 20%.

All available forecasts make the basic assumption that the import dependency of Germany and the EU will continue to increase significantly. The EU Commission expects in the next 20 to 30 years an increase in the EU import quota from 50% to 70%.

This development also leads to an increase in the risks resulting from variations in prices on the world energy markets. It is true that the German economy is today less vulnerable to variations in energy prices than it was in the Seventies and early Eighties. This is primarily due to the fact that its unilateral dependency on crude oil was reduced. A particular contributory factor to this was the use of domestically produced coal in electricity generation. Also the very greatly increased use of renewable forms of energy, together with the constant improve-

ment of energy efficiency in recent years, reduced dependency on imports and the risks associated with this.

In the light of these risks, a policy of maintaining a diversified mix of fuels in electricity generation and of spreading risk by means of a sufficient number of producer countries will also have an important role to play in the future.

d) Level of energy prices

Within the EU the German electricity and gas providers and their prices are a little above the average, although comparison largely depends upon which specific figures are used as a basis. Particularly for the businesses in the producing industry, the reductions in prices in the area of electricity of 30% and more which have occurred during the course of liberalisation, have meant a noticeable decrease in costs and have strengthened competitiveness.

The significance of energy costs for German industry clearly decreased during the past two decades. If, during the Eighties, energy costs represented on average 3% of production costs, today this proportion is about 1.7%. In the energy-intensive industries of primary chemicals, iron and steel and also non-ferrous metals, energy costs nevertheless remain an important factor.

e) Liberalisation

Germany has fully opened its electricity and gas markets to competition. This has led to efficiency-improving measures on the part of energy providers and to a decrease in electricity prices, particularly for industry. At the same time new energy products have been developed (e.g. "green electricity") together with market-orientated trade models such as electricity exchanges or retail groups.

On the other hand, most of the other EU states have only partially opened their markets, which has led to unequal conditions for competition within the EU. How-

ever, integrated framework conditions are the precondition for structures for energy provision within the EU which are efficient, safe, and environmentally friendly. This will also apply in the future to the countries applying for membership of the EU. It is therefore necessary for efforts to be made to further harmonise the process of opening markets, for energy related to taxation, for climate protection and also for environmental, safety, employment and social standards.

Opening of the gas and electricity market in the EU – 2000

	Electricity	**Natural Gas**
Germany	100%	100%
Great Britain	100%	100%
Finland	100%	90%
Sweden	100%	47%
Denmark	90%	30%
Spain	54%	72%
Luxemburg	40%	51%
Italy	35%	96%
Belgium	35%	59%
Netherlands	33%	45%
Austria	32%	49%
Ireland	30%	75%
France	30%	20%
Greece	30%	0%
Portugal	30%	0%
Minimum level according to directive	**30%**	**20%**
EU average	**66%**	**79%**

Source: Report of the European Commission to the European Council and the European Parliament, Completion of the Internal Market, 7 May 2001

Climate Protection in Germany

a) **Climate protection targets and progress achieved to date**

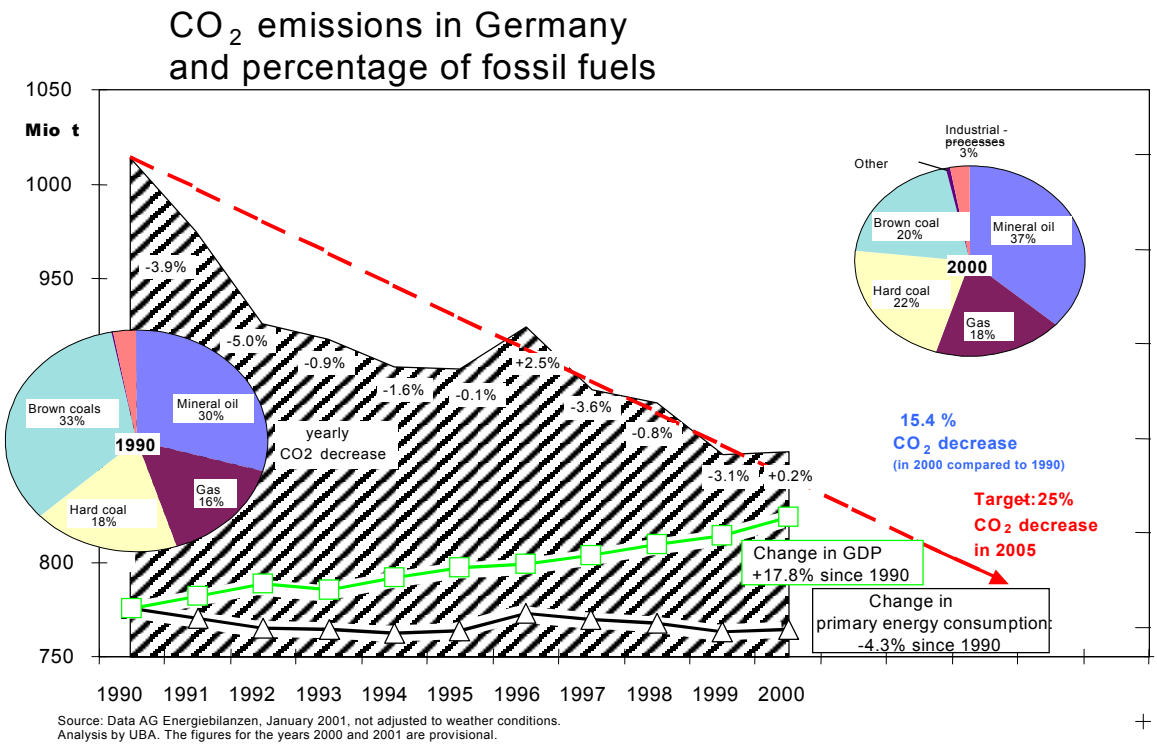
Germany is well on the way to meeting its obligation to reduce the greenhouse gases specified in the Kyoto Protocol (CO_2, CH_4, N_2O, PFCs, CFCs und SF_6) by 21% (for levels during the period 2008 to 2012 as against levels in 1990). By 2000 a reduction of over 18% had already been achieved.

Even with regard to the very ambitious national target for climate protection (reduction of CO_2 emissions by 2005 to a level of 25% of 1990 levels) considerable progress has already been achieved (minus 15.4% by 2000). Per head of population, CO_2 emissions fell by about 18% – by 28% related to GDP.

In the case of the other greenhouse gases, Germany – in contrast to most of the other Western industrial nations – has made progress. In particular, methane emissions were reduced by 36.2% between 1990 and 1998.

With the measures introduced during recent years and with its climate protection programme announced in October 2002, the Federal Government has created the foundation for this development and has set a course to continue the successes which have been achieved to date.

Within the EU, which in Kyoto pledged to reduce the six Kyoto greenhouse gases by 8%, emissions of greenhouse gases reduced by 4% by 2002. Certainly, without the contribution made by Germany to this process, they would have risen by 1.3%. It was also agreed that within the framework for the allocation of responsibilities within the EU, some member-states were allowed to increase their emissions. By contrast, within this framework, Germany took responsibility for a reduction to 154 million tonnes of CO_2 equivalents, which represents 76% of the total obligation of 336 million tonnes assumed by the EU in Kyoto.



Source: Federal Environment Agency

b) Structure of CO_2 emissions

Carbon dioxide at present represents 87% of German greenhouse gas emissions. More than 97% of the carbon dioxide emissions result from energy use including the conversion chain. The starting point for successful climate protection is therefore the creation of future-oriented structures for energy provision.

Consideration of the development with regard to CO_2 emissions since 1990 indicates that success in reducing levels of CO_2 can be largely attributed to the changes in the relative proportions of the different primary energy fuels within overall energy usage (see diagram). But the significant increase in energy efficiency and the resultant decoupling of economic growth from primary energy consumption have also made a decisive contribution.

With regard to the energy consuming sectors of industry, energy, transport, private households and businesses, commerce, and services, the CO_2 emissions have developed in very different ways. While in industry and the energy sector of the

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economy the emissions clearly decreased during the Nineties, within the sectors of households and transport they at first increased. However, recently there was a development in the opposite direction. Thus in 2000 emissions from industry and the energy sector of the economy increased by about 2%, whereas transport for the first time indicated a reduction. Meanwhile, the household sector belongs to those sectors which have significantly reduced their emissions as compared to emissions in 1990.

Overall CO_2 emissions categorised by emitter group

Sectors	Proportion of overall CO_2 emissions in 2000 in %	Sector change 1990-2000 in %	Sector change 1999-2000 in %
Energy	42.2	-17.7	2.4
Industry [1)]	16.8	-26.8	1.8
Transport	20.8	12.8	-1.9
Private House-holds	13.2	-11.5	-4.9
Business, Commerce, Services [2)]	7.0	-33.8	-3.7

[1)] including industrial processes

[2)] including military services

Source: Federal Environmental Agency, AG Energiebilanzen, Calculations by DIW

It is the aim of the national climate protection policy to maintain the reduction in emissions which has already been achieved and to continue with this trend. To achieve this it is particularly necessary for the change in direction of the trend within the area of transport to be continued. In addition, it is necessary to address issues on the demand side in connection with households and small consumers. However, the still considerable potential for reductions in industry and in the energy sector must also continue to be fully exploited.

c) **Climate protection and nuclear energy**

The use of nuclear energy represents no solution to the problems associated with climate. Its unjustifiable long-term risks and the highly-problematic waste products which remain for millenia cannot be reconciled with a sustainable energy policy, particularly with the fundamental principle of fairness to future generations.

Against this background, the Federal Government and electricity providers agreed on 14 June 2000 on a phased programme for bringing electricity generation by nuclear energy to an end. Existing nuclear power stations are to be shut down when they have generated the quantity of electricity which is specified for each individual installation (cut-off current calculated from 1 January 2000). Within this programme it is possible for quantities of cut-off current to be transferred to other installations. The operation of the installations is subject to the high safety standards required by law. Safety inspections for the nuclear power stations are to be carried out at specified dates and to be repeated every 10 years.

The phased programme for ending the use of nuclear energy presents climate protection and energy policies with new challenges; but at the same time it offers the chance for a review of energy policy and for entering into a system of energy provision which is sustainable in the future and which takes its orientation from the sustainability model, meeting the criteria of safety in provision, economy, and environmental compatibility (including aspects of resource protection and a preventative policy of environmental protection).

By 2005 nuclear power stations with a generation capacity of some 8 billion kWh/a will be replaced. Depending upon which type of power station replaces them – gas and steam turbine plants powered by natural gas, hard coal or lignite power stations – an additional 3-7 million tonnes of CO_2 will be emitted. From 2006 to 2010, nuclear power stations with an electricity generation capacity of about 19 billion kWh/a are to be replaced (resulting in an additional 7-17 million tonnes CO_2 emissions) and from 2011 to 2020 further nuclear power stations with an electricity generation capacity of around 87 billion kWh/a (involving additional emissions of 33-74 million tonnes CO_2).

Important building blocks in the programme for overcoming these challenges are clear increases in efficiency in energy conversion – e.g. by developing CHP plants, highly-efficient gas and steam turbine power stations and the most modern coal-fired power stations – and also in the use of energy, an economical approach to energy in all areas, and development of renewable forms of energy. With its climate protection programme of 18 October 2000, the Federal Government has set the course in this direction.

2. A concrete vision

In the areas of climate protection and energy policies too a programme of sustainable development requires orientation towards the goals of intergeneration equity, quality of life, social cohesion and international responsibility. Linking to this, climate protection and energy policies in Germany assign equal importance to achieving

- economic efficiency for energy generators and consumers,
- conservation of the environment and resources, and in particular also climate protection,
- safety in the provision of energy.

Resource conservation and climate protection

Current world energy consumption is not in line with the principles of a system of sustainable development. Principally because of the rapid exploitation of scarce supplies of fossil energy and the emission of greenhouse gases associated with their use, the freedom of action of future generations is being restricted and the fundamental principle of intergeneration equity is being infringed. The potential consequences of present day greenhouse gas emissions must be borne by future generations.

Moreover, the industrial countries as a whole, with their large share in worldwide energy consumption, are not fulfilling their international responsibility. An energy policy directed towards sustainabilty must therefore make efforts to reduce the consumption of fossil fuels, especially in the industrial countries. Only in this way can leeway be created for the required raising of the standard of living in the developing countries without placing too great a strain on the environment in the long term.

Overall it is a matter of stabilising the concentration of greenhouse gases in the atmosphere at a level which will prevent a dangerous disruption of the climate system. In the opinion of the great majority of climate researchers, to do this a drastic reduction of current emissions is necessary.

To achieve this, worldwide energy provision should not rely almost exclusively on fossil fuels. Rather, in accordance with the basic principle of intergeneration equity, a system must be developed and put into practice which in the long term only takes from the environment such resources as can be renewed, and which does not overburden the ecological capacity of the earth.

Putting this goal into practice is a long-term task. By 2012 Germany, within the framework of the EU allocation of responsibilities under the Kyoto Protocol, has pledged to reduce its greenhouse gas emissions by 21%. However national and international climate protection policy should not end in 2012. To provide all those involved with a longer-term perspective and thus reliable framework conditions in the context of which investment decisions can be made, clear, long-term perspectives are required. This is especially the case for the energy sector of the economy which is characterised by long investment cycles.

Climate protection and energy policy targets

Reduction of the “Kyoto gases“ (CO_2, CH_4, N_2O, HCFCs, CFCs, and SF_6) in the period 2008 – 2012 by 21% (base year 1990).

Reduction of CO_2 emissions by 2005 by 25% compared to 1990.

Doubling, to 4.2%, the proportion of renewable forms of energy in overall primary energy consumption, and also, to 12.5%, their share in overall electricity consumption, by 2010 (base year 2000).

Doubling, by 2010, the level of energy productivity as compared to 1990.

Maintaining, modernising and developing the heat-power cogeneration cycle with the aim of further reducing CO_2 emissions by an amount in the order of 10 million tonnes by 2005 and 23 million tonnes by 2010 (base year 1998), but at least by 20 million tonnes.

Energy saving and increased energy efficiency in households, transport, industry and the energy sector in accordance with the catalogue of measures set out in the National Climate Protection Programme of 18 October 2000.

International alignment of the framework conditions for climate protection and energy provision, particularly within the EU.

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In the opinion of the Federal Government, additional national and also international efforts are required, over and above the measures which have already been decided, for preventative action on a global scale to protect the climate. Corresponding conclusions were also drawn by the climate inquiry commissions of the German Bundestag.

In this connection, the Federal Government emphasises its intention to continue to live up to its role as a leader in the field in developing and putting into practice an ambitious policy of climate protection. However in view of the global dimension of the climate problem, the Federal Government is conscious that it cannot be solved by individual nations acting alone. What is required is an EU-wide and, as far as possible internationally agreed, strategy which will allow states whose contributions today are insufficient to join the other states leading the field. A programme of climate protection which has better international agreement is also a precondition for the broad social acceptance which is required. Because the instruments of climate protection policy, whether they be legal requirements, duties, or certification and trading systems relating to environmental law, can have significant effects on all those involved in the energy market.

The ratification of the Kyoto Protocol is a first decisive step towards a worldwide strategy for climate protection. Even if the negotiations concerning targets to be aimed for and the framework conditions which need to be set to achieve them appear to be extremely difficult and are proceeding only slowly, there is no alternative to this procedure. The Federal Government will therefore also in the future emphatically become involved in the international negotiations concerning climate protection.

In the opinion of the Federal Government the obligations contained in the Kyoto Protocol for the first period from 2008 to 2012 need to be considerably tightened up in the subsequent periods. At the same time it is necessary to involve the U.S.A. in the Kyoto process and also to agree a limitation on their emissions for the developing countries.

Within this framework the Federal Government will similarly continue to further develop the obligations which it has taken upon itself to date, and discuss with the relevant groups the longer-term goals. The Federal Government expects that other industrial states will pledge themselves to similarly ambitious targets, so that the German economy does not suffer any disadvantages in international competition.

Security and economic effectiveness of energy provision

A secure system of energy provision is a central component of modern societies. The ability of the society to function and the quality of life achieved in Germany presuppose sufficient provision of energy services (heating, cooling, light, power, communication, mobility). Therefore one of the core goals of a sustainable energy policy is a high degree of security in energy provision.

Security of provision above all requires that unilateral instances of dependency on certain fuels or provider countries are avoided. A contribution towards this end can be made, on the one hand, by a rational and economical system of dealing with energy. On the other hand the structure of our system of energy provision plays the decisive role. Thus it would be a problem for Germany if provision within the electricity industry was restricted to a few imported fuels, as it has been in the heating market and in transport.

Therefore energy policy in Germany will be directed towards a balanced energy mix of mineral oil, natural gas, hard coal and lignite, together with renewable forms of energy. By means of such an energy mix, including domestically produced coal, additional risks to provision and prices can be limited.

However, this does not in any way mean that the current shares of individual fuels in overall energy provision should be fixed long-term. On the one hand, the mix of fuels is influenced by political goals – e.g. by climate protection goals. On the other hand, in a decentrally organised society it is subject to constant change, independent of political goals.

External conditions, such as the development of the world energy markets, actual or politically-determined limitations of resources and requirements at European level (e.g. liberalisation of previously monopolised markets) form in this connection the framework for the action of participants in the market and also for political action.

Besides security of energy provision, economic efficiency also plays an important role here. A system of energy provision at the most economic price possible represents, both from an economic and from a social point of view, one of the goals of a sustainable energy policy. Thus energy prices represent an important competitive factor, at least for energy-intensive industries which are in international competition. For heating, hot water and mobility, all classes of the population are dependent upon the provision of energy at affordable prices. This social dimension of energy provision must also be taken into account by a sustainable energy policy.

Integrating energy and climate protection policy goals

The climate protection and energy policy of the Federal Government is directed towards a system of energy provision which is environmentally compatible, conserves resources and the environment, and is also secure and economically efficient. For corresponding investments in power station capacity and the infrastructure in the energy sector of the economy, the position of Germany must also remain attractive in the future so that jobs can be guaranteed long term and the existing technical know-how can be applied and further developed. On the demand side it is a question of supporting environmentally conscious and energy saving behaviour (e.g. by improved information and advice to consumers as well as by corresponding incentives).

a) Conflicting goals

The pursuit of several goals generally implies that goals will conflict. For example, on the one hand, viewed from the standpoint of climate protection, energy prices should provide the greatest possible incentive for economy in the use of energy. On the other hand, both from an economic and a social point of view, energy provision at the most economic prices possible is one of the goals of a sustainable energy policy.

A second example: From the standpoint of climate protection it would be desirable to make priority use of fuels which showed no or only low CO_2 and other greenhouse gas emissions. But such a restructuring of energy provision is limited by other energy policy goals:

- Thus the use of nuclear energy would indeed serve the purposes of climate protection, but in view of its risks would not contribute to a system of energy provision which was sustainable in the future.

- Renewable forms of energy are indeed CO_2-neutral, but their use is partly dependent upon natural fluctuations (wind, sun).

- By replacing domestically produced coal, for example by imported natural gas, CO_2 emissions could indeed be reduced. But at the same time dependency upon energy imports would increase. In addition, massive economic problems would be caused in the affected regions.

A sustainable climate protection and energy policy must be aware of these conflicts between different goals, carefully balance them and as far as possible integrate them. Above all it is a matter of identifying and consistently using “win-win“ options which serve several purposes at the same time.

The most important building blocks of such a strategy are

- on the one hand, increased energy efficiency

  both on the generation side (e.g. electricity production)

  and also in the use of energy,

- and on the other hand, the development of renewable forms of energy.

b) Energy efficiency

The improvement of energy efficiency holds a key role within the framework of a modernisation strategy for sustainable development. On the one hand it serves the purpose of protecting the climate and the environment and also of conserving finite energy resources, and thus serves the purpose of intergeneration equity.

On the other hand, even from the point of view of economic and energy policy, it is the key to development which will be sustainable in the future. Improvements in energy efficiency lessen dependency on energy imports and the risks to prices associated with them. They both lower the burden of energy costs on businesses and at the same time by this means strengthen competitiveness. Moreover, the consumers pay more and more attention to energy consumption. Products which require a comparatively small amount of energy to use are increasingly in demand. The "sustainable basket of commodities" (cf. Chapter E III) with regard to energy-consuming products is already taking shape for quite a while.

Today Germany already leads the industrial states in energy efficiency. While improvements in energy efficiency between 1991 and 1998 were within the EU some 1.1% per annum, in Germany they were around 1.9% per annum (1991-2000). Between 1990 and 2000, energy productivity in Germany rose by almost a quarter, i.e. the same energy input produced almost a quarter higher economic performance. Success was thus achieved in decoupling energy consumption from economic growth, and this process must be continued further. Efforts are being made to double, by 2020, energy productivity as against levels in 1990.

In this, an important role is played by electricity generation, in connection with which quite considerable progress has been achieved in recent years. Whereas for example a modern lignite power station, such as the *Schwarze Pumpe* power station, indicates a level of effectiveness of 41%, older lignite power stations are under 35%. Great potential is also offered by modern gas and steam turbine plants powered by natural gas, which reached levels of effectiveness of around 57%.

A particularly efficient use of fuels is made by CHP plants with levels of effectiveness of over 90%. The German economy has pledged, over and above the existing successful agreement on climate, to make safer, to modernise and to extend CHP plants. By 2010 up to 23 million tonnes of CO_2 will be saved. This pledge is supported by a law, which came into force on 1 April 2002, for the modernisation and development of combined heat and power cycle plants (KWK Act).

A highly efficient future technology is represented by the fuel-cell, which similarly benefits from the KWK Act. In the future it will play an increasingly important role within the framework of an efficient system of energy provision and use and is therefore being promoted in a targeted way through a concrete project within the framework of the national Strategy for Sustainability (see below).

But with energy use also there still remains considerable potential for increasing efficiency.

The average car today already consumes a third less fuel than it did 20 years ago. But with this the end of the road has not yet been reached. Low sulphur petrol makes it possible to install new engines whose petrol consumption is a further 10% lower than present day consumption. Smooth-running oils and smooth-running tyres further reduce consumption.

Another example is provided by household equipment. Since regulations specifying classes of energy efficiency and a corresponding system of classification were laid down, purchases of equipment in efficiency classes A and B rapidly increased. By contrast, equipment in the lower classes of efficiency largely disappeared from the market. The differences in energy consumption which still exist indicate that the available potential is not yet exhausted. A present-day study indicates that, for example, by means of a (very cost-effective) optimisation of the electric motors in household equipment, 8 billion kilowatt hours of electricity per annum could be saved.

A particularly wide field of potential for a more efficient use of energy presents itself within the area of buildings. As a result of energy saving regulations the consumption of energy in a new buildings should in the future significantly decrease. Nil-energy and passive housing are, it is true, at the moment still exceptions, but they indicate what possibilities do exist. However quite decisive progress is being achieved with building stock. Optimised forms of insulation and modernised heating can in this area lead to a drastic reduction in energy consumption. In many instances the cost of such measures is repaid within a short period of time by savings in energy costs.

c) Renewable forms of energy

A second cornerstone of a sustainable system of energy provision is the development of renewable forms of energy which are compatible with the environment and are of the natural world. This cornerstone too serves the purposes both of climate protection and of reducing dependency on energy imports. As with energy efficiency, the development of renewable forms of energy can also build on the development of recent years.

Thus, in the case of wind power alone, it was possible to approximately treble capacity since 1998. In the future the greatest potential for developing wind energy is in the offshore area. Here, within a period of some 30 years it is possible that there will be wind parks with a capacity of some 20,000 to 25,000 megawatts. It is true that a precondition for this is that wind energy should attain a level of economic effectiveness by means of increases in efficiency and reductions in costs.

The demand for solar cells continues to be high. At the end of 2001 already 4.2 million square metres of solar cells, of which 900,000 square metres were added in 2001 alone, were contributing towards the provision of hot water and in part also to heating buildings. Electricity generation by photovoltaic processes also experienced a boom in recent years.

Considerable potential is offered by renewable raw materials. With the Renewable Energies Act (EEG), the biomass regulations which came into force on 28 June 2001, and the improved incentive conditions within the framework of the market incentive programme for renewable forms of energy, the Federal Government has cleared the way for the greater the use of renewable raw materials for energy generation. But the use of renewable raw materials for energy is not the only thing which contributes to climate protection. Thus forests and also long-lived timber products store a great amount of carbon and thus relieve pressure on the atmosphere.

In the directives concerning the production of electricity from renewable energy sources within the internal electricity market, the member-states pledge themselves to ambitious development targets for the future share of regenerative electricity within overall electricity production. The target of increasing the share of renewable forms of energy within overall electricity consumption from 14% (base year 1997) to 22% by 2010 matches the target to which the Federal Government aspires, to double by 2010 the share of renewable sources of energy both in primary energy consumption and also in electricity consumption, measured against the figure in 2000. By the middle of the century renewable forms of energy should meet about half of the total energy consumption requirements.

To provide a practical incentive for this in concrete form, a comprehensive pilot project was initiated within the framework of the national Strategy for Sustainability. This has the goal, among others, of increasing use of wind energy in the offshore area.

Pilot Project:

Renewable Forms of Energy

and

Efficient Use of Energy in Fuel Cells

(*Erneuerbare Energien und effizente Energienutzung in Brennstoffzellen)*

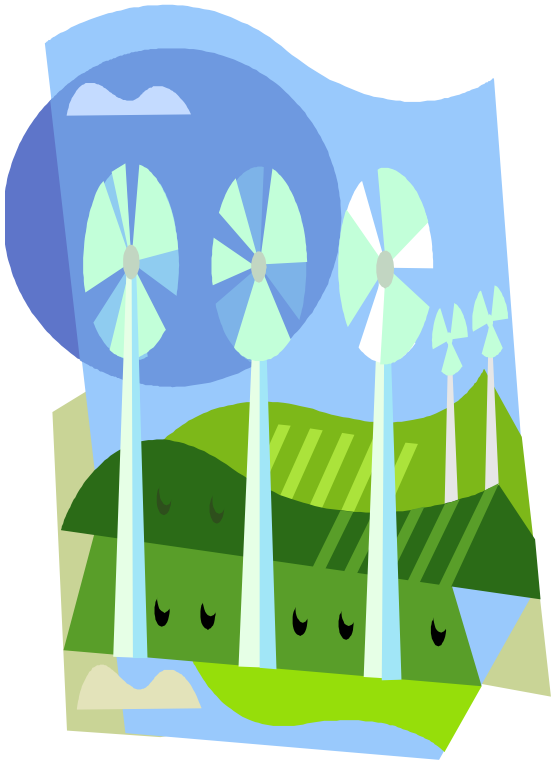
In the energy sector, a pilot project coordinated by the German Energy Agency (dena) is to support progress in creating, in parallel with the phased programme for ending the use of nuclear energy, structures for energy generation and use which will be sustainable in the future. The project consists of a sub-project to improve the framework conditions for offshore wind parks and another sub-project to promote “fuel cell“ future technology.

Sub-Project Renewable Forms of Energy: Exploiting Offshore Potential

(*Erneuerbare Energien: Offshore Potenziale nutzen)*

The vision

The construction of offshore wind parks in the North Sea and the Baltic should contribute significantly towards placing the system of energy provision of the Federal Republic of Germany on a sustainable basis. It should reduce dependency on energy imports and further improve the environmental compatibility of energy generation, particularly from the point of view of climate protection. In this, the Federal Government makes the assumption that the renewable forms of energy will, in the medium to long term, be competitive without the need for subsidies.



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The Federal Government estimates that, under present conditions, in the areas of the North Sea and the Baltic which are currently expected to be available in the initial phase, by 2006 a total of at least 500 megawatt capacity could be achieved for sea-based wind energy use, and in the medium term, by 2010, a capacity of 2,000 to 3,000 megawatts. In the long term, i.e. by 2025 or 2030, once economic effectiveness has been achieved the possibility exists for some 20,000 to 30,000 megawatts of installed capacity and a level of electricity production of 70-85 TWh. On a rough calculation, this corresponds to the electricity production of eight nuclear power stations.

The measures

Under the overall control of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, and within the framework of the Sustainability Strategy, a "*Strategie der Bundesregierung zur Windenergienutzung auf See"* (Federal Government Strategy for the Use of Sea-Based Wind Energy) was developed.

The strategy demonstrates ways in which the existing obstacles to developing wind energy in the offshore area can be overcome. In the foreground is the question as to which areas can be considered as being suitable for wind parks, taking into account already existing uses (e. g. shipping, fisheries, gravel extraction, military training areas) and considerations relating to environmental and nature conservation. In addition, in the course of amending the Federal Nature Conservation Act and, also linked with this, of changing the regulations relating to marine assets, the conditions were created to secure the legal and planning position by identifying on the one hand particular areas suitable for offshore wind parks, and on the other protected areas.

...

Potentially suitable areas in the North Sea and the Baltic, together with areas which it was expected would be suitable, were identified. On the basis of current data, they are aligned with the competing user and conservation interests – shipping, fisheries, defence, mineral extraction, environmental and nature conservation. The Federal Government will in due course carry out an appraisal of these areas as particularly suitable locations for offshore wind parks with a view to clearing the areas as quickly as possible.

In addition to this, the development of offshore wind parks will, over a longer period, be accompanied by research. Within the framework of the Federal Government's Future Investment Programme (ZIP), particular emphasis was placed upon the use of offshore wind energy. This, for example, involves the question as to how offshore wind parks will affect migratory birds, fish and marine mammals. To investigate this, among other things, several survey platforms are to be set up.

During the course of further developing the strategy, priority is to be given to clarifying questions concerning the networking of the offshore wind parks and the concentration effect of the necessary licences.

The complete text of the strategy can be accessed **at www.bmu.de/erneuerbare-energien.de** and **www.deutsche-energie-agentur.de.**

Sub-Project Efficient Use of Energy in Fuel Cells

(*Effiziente Energienutzung in Brennstoffzellen*)

The vision

In the future the fuel cell could change the system of energy provision in a sustainable way. Fuel cells generate electricity and heat from hydrogen, natural gas or methanol with high degrees of effectiveness and minimal emission of pollutants. In a few years they could gradually come to replace the conventional heating boilers in our cellars. But processed heat for industrial purposes can also be generated in fuel cells at the same time as electricity.

The fuel cell tends to lead to a decentralisation of electricity generation. At the same time fuel cells can be networked together and controlled by intelligent technology in such a way that together they produce the effect of a power station. Just as in information technology, we have come from calculators through medium range data technology to networked PCs and mobile applications, with fuel cells we could create an Internet of decentralised energy producers, a "virtual power station".

However the fuel cell is not only to be used in households, industry and public institutions. In conjunction with hydrogen, natural gas or methanol it can also be put to use in the area of transport. The first fuel cell vehicles already exist. They are characterised by extremely low emissions of pollutants (“zero emission car”). If hydrogen in the necessary quantities could be produced from regenerative forms of energy, then mobility would not be dependent upon oil and gas, which are in a limited supply worldwide and which Germany has to import.

...

The measures

In the concept of a virtual power station the Federal Government sees an important step towards integrating fuel cell technology into electricity production. Therefore within the framework of the pilot project, important contributions will be made to the further development of stationery fuel cells and their accelerated introduction into the market, and practical trials will be carried out of the various options for application. In addition, with resources from the Future Investment Programme (ZIP), concrete projects will be expedited to test the use of fuel cells in the areas of buildings and also production.

In the area of transport, demonstrations will promote the application of fuel cells and hydrogen. Within the framework of the ZIP, delivery and trials of 10 local service buses in four cities (Berlin, Barth, Stuttgart and Hamburg) including the necessary measures relating to the infrastructure, will be expedited. With the Barth pilot project a regional cycle from the regenerative generation of hydrogen to the fuelling of local hydrogen-powered buses will be set up for permanent operation. Within this scheme, an electrically driven fuel-cell bus will be put into operation, which produces only steam as "exhaust gas".

Further information at: www.deutsche-energie-agentur.de.

3. Participants, measures, and instruments

Important climate protection measures 1998- 2002

- Ecological taxation reform.
- Climate protection agreement with industry together with agreement relating to safety, modernisation and development of heat-power cogeneration.
- Act for the maintenance, modernisation and development of heat-power cogeneration.
- Renewable Energies Act.
- Market introduction programme for renewable forms of energy.
- 100,000-roof programme for photovoltaics.
- Energy Saving Regulation.
- Programme to promote CO_2-reducing measures in housing stock.
- From 2003: tax for lorries using autobahns, based on mileage and emissions.
- Setting up of the German Energy Agency (dena).

With its climate protection programme of 18 October 2000, the Federal Government set the course towards a sustainable climate protection and energy policy. The programme contains many measures by means of which, in the coming years, energy consumption and the emission of greenhouse gases will be reduced and energy efficiency increased.[3]

a) Participants

One of the core statements of the national Strategy for Sustainability is that sustainable development is not only the task of the state but also a task for society as a whole. This also applies directly to the process of setting goals for reducing energy consumption and the emission of greenhouse gases. Without the active engagement of industry, commerce and consumers these goals cannot be achieved.

The German economy, within the framework of its agreement with the Federal Government, is making a contribution towards climate protection which can serve as an example internationally. Many businesses have long realised that climate protection largely pays for itself. This is true on the one hand for measures relating to production, such as, for example, investments in energy saving installations and machinery, but also, on the other hand, for energy saving products. Whereas, for example, in 1997 the German automobile industry only offered 65 motor cars with consumption below 6.5 litres/100 km, in 2000 there were already 187 models.

[3] The main climate protection measures in the area of transport are dealt with in the chapter “Ensuring mobility – protecting the environment“.

However an improved range of vehicles on offer does not lead to reductions in CO_2 alone. The consumer must make his own contribution too. Thus there is little point for vehicles with more and more efficient engines to be made available if this gain in efficiency is outweighed by the increasing demand for higher performance vehicles and greater road performance.

Campaign "*Effiziente Stromnutzung in privaten Haushalten"*
(Efficient Use of Electricity in Private Households)

The German Energy Agency (dena), working in conjunction with groups from the electricity sector of the economy and the German Federal Foundation for the Environment (DBU), is preparing a countrywide information and incentive campaign "*Effiziente Stromnutzung in privaten Haushalten*" (Efficient Use of Electricity in Private Households). Further participants will be added as co-operative partners. It will also be of central importance to involve the retail trade. The start of the campaign is planned for autumn 2002.

The aim of the campaign is to reduce electricity consumption and hence CO_2 emissions in private households. To this end, the consumers will be informed of ways of using electricity more efficiently which can easily be put into practice. They are to be motivated to increase their demand for energy-efficient equipment and to alter the ways in which they use it. In detail, this will involve

- the standby operation of electronic equipment used for entertainment and also of information and communications technology,
- so-called "white goods" (washing machines, refrigerators etc.) and
- lighting.

The potential reductions in CO_2 are estimated at over two million tonnes of CO_2 per annum, in which the greatest potential reduction is related to the way the standby operation is used.

...

The way that responsibilities are shared between manufacturers and consumers is also indicated in other areas. The fact that the use of the standby function on TV and other equipment itself alone requires the electricity production of two nuclear power stations can be addressed in the medium term by technical measures taken by the manufacturers. But far quicker success can be achieved if consumers adjust their behaviour accordingly.

To exploit the potential of a change in behaviour is just as important as the technical improvement of installations and products. Informing the consumer (e. g. by means of energy labels) and statutory instruments directed at the market (such as, for example, the eco-tax) are therefore important elements of the Federal Government's climate protection and energy policies.

b) Developing renewable forms of energy

In recent years, the development of renewable forms of energy in Germany represented a success story without parallel. This success story is based upon a comprehensive strategy with a range of measures:

- Through the Renewable Energies Act, a system of minimum allowances has been established for electricity generation from renewable forms of energy. Particular impetus has been given on this basis to the development of wind energy and a greater use of the biomass.

- The 100,000-roof programme provides investment aid for photovoltaic installations, and thus, in this area, complements the Renewable Energies Act.

- The market incentive programme for renewable forms of energy provides investment aid principally for solar cells, small biogas installations and the combustion of solid biomass (particularly wood).

One result of this strategy is a rapid growth principally in electricity production from renewable forms of energy and also in the use of solar cells. At the same time, the batch production which this development makes possible can release the potential for considerable reductions in costs. This creates the conditions for achieving economic effectiveness within the medium to long term.

In the future too the renewable forms of energy in Germany and the EU will be further developed. The existing statutory instruments provide the basis for this. They are being further developed within the framework of EU law and the available financial resources (e.g. strengthening the market incentive programme for renewable forms of energy, further development of the Renewable Energies Act in the light of the progress report to be submitted by the Federal Government).

c) Reducing energy consumption in the area of buildings

About a third of the total energy consumption in Germany is for heating buildings and providing hot water. Progress in this area is therefore a key to successful climate protection, and at the same time helps to lessen dependency on energy imports.

By means of the Energy Saving Regulation, which came into force on 1 February 2002, and the incentive programme for CO_2 reduction measures in housing stock, the Federal Government has made important changes. By means of the Energy Saving Regulation the energy requirement of new residential buildings is reduced by about 30% as against the standard to date. Within the framework of the incentive programme for CO_2 reduction measures in housing stock, by the end of 2001 almost 10,000 loans, totalling more than EUR 500 million, have been granted for measures to reduce CO_2 in about 32,000 dwellings.

In the coming years too, energy saving in the area of buildings will form a key focus point of the Federal Government's climate protection policy. The demands on energy consumption in buildings will be further developed in accordance with advances in technology and as far as is economically justifiable. Similarly the promotion of effective CO_2 reduction measures in housing stock will be continued within the framework of available resources (e.g. an incentive programme for "nil energy housing"), in which a greater use is to be made of new financial services (e.g. contracting). It is important to make the owners of buildings increasingly aware of the existing potential for energy savings, for example by means of a climate protection campaign targeted at the area of buildings.

Project proposals from the Sustainable Development Council

In order to open up the considerable potential for energy savings, particularly in old buildings, the Sustainable Development Council has proposed two pilot projects – for redevelopment of old buildings and also for contracting – which have been adopted by the Federal Government in the course of further implementing the National Strategy for Sustainability. For example, in existing measures for renovation in Federal Government property the economically-exploitable concrete potential of contracting will be systematically used. In this, the German Energy Agency (dena) will play a co-ordinating role.

Demonstration of redevelopment of old buildings using low-energy building methods in all *Länder*

With the project “Redevelopment of old buildings using low-energy building methods“, a project for redeveloping old buildings will be initiated in every *Land* within the Federal Republic with the aim of reducing the heating requirement of these buildings to at least the level of that of a low-energy house. These redevelopment projects are to serve as models to be copied as much as possible elsewhere.

<u>The project proposal is based upon the following considerations of the Council:</u>

The possibilities for energy saving in building stock have to date not been fully exploited in renovations of facades and buildings. As the redevelopment of a large residential area in Ludwigshafen indicates, with present day new heat insulation materials and heat-conserving window systems, it is possible to achieve a reduction of the specific heating requirement from the current average of 180 kWh per square metre per year in the housing stock to 40 kWh per square metre per year. Viewed from the longer-term economic perspective of the housing sector (increase in building value, avoidance of standing vacant, better rating with the banks with interest rate reductions), it could be regarded in the future as being economically viable.

Since the re-investment periods in the case of residential building facades are about 40 to 50 years and the industrial countries, in the opinion of many climate

researchers, will by the middle of this century have had to reduce the level of their energy-related greenhouse gases by some 80%, in Germany redevelopment schemes which reduce the heating requirement of old buildings to a level of about 40kWh per square metre per year are needed in great quantity as soon as possible. Moreover, the most recent analyses indicate that the costs of the new heat insulation technologies would fall by 10% to 15% each time their level of use was doubled; at the same time the energy sector of the economy is expecting considerable increases in prices in the world energy markets from 2020.

The **aim of the proposed project** is to demonstrate the economic potential of this type of buildings redevelopment scheme. At the same time it is to show what possibilities there are for revitalising residential areas and to develop practical models.

In **putting into practice this demonstration scheme** which is to be implemented in one scheme in each *Land*, the Council's project proposal envisages that the German Energy Agency (dena) will play a co-ordinating role. The Agency is to approach the responsible authorities in the *Land*, identify and bring together those participants in the construction and housing sectors of the economy who are prepared to co-operate in this way in a demonstration project. The Council's Energy and Climate Protection Working Group offers to provide details, as required, of its own contacts with organisations which could be suitable as project partners.

The Council proposes to form a „Project Group for Housing, Energy and Climate Protection" with representatives from State authorities and those in the *Länder*, together with businesses from the construction and housing sectors of the economy. This group would exchange information concerning efficient identification of projects in the *Länder* and accompanying scientific research.

A scientific support system will allow innovative ideas to be documented and experiences to be exchanged between the individual projects so that the concepts applied can be quickly introduced into construction practice and cost reductions realised. In doing so, information on aspects relating to energy, economic matters, construction and housing and social concern in the experience of users of buildings and inhabitants of residential areas will be collected.

Energy efficiency contracting in Federal Government property

In the project proposal “Energy Efficiency Contracting in Federal Government Property“ the Sustainable Development Council is concerned with taking greater advantage of the possibilities of contracting to reduce energy consumption in Federal Government buildings.

Forming the background to this proposal are the following considerations of the Council:

The Federal Government decided in October 2000, within the framework of the climate protection programme, and to set an example for the businesses, local corporate bodies and citizens of this country, to reduce the CO_2 emissions in their own property by 25% by 2005 and 30% by 2010, measured against the levels in 1990. Because of the narrow margin for financial manoeuvre the Council currently sees a large backlog in capital expenditure for renovation of household technology and facades of the properties which belong to the Federal Government. The capital expenditure backlog is likely, in the opinion of the Council, to become more acute in the coming years and to call into question the achievement of the goals which have been set.

Contracting has been an entrepreneurial innovation since the end of the Eighties: specialised businesses take over planning, construction, financing, operation and maintenance of energy technology plants in buildings, and also increasingly take over capital investment in heating installation in public buildings. They finance these projects by the energy savings which are made. By means of contracting, public authorities can clear backlogs in capital investment and contribute towards the reduction of energy related CO_2 emissions. The *Land* of Baden-Württemberg today, with a contracting programme which has been underway since 1993, is making annual savings of EUR 2.5 million and CO_2 emission reductions of about

12,000 tonnes per year. These successes continue annually by means of further invitations to tender for work in the property of the *Land*.

The aim of the project proposal made by the Council is to support the Federal Government's voluntary pledge to put to tender for energy contracting all possible Federal Government properties which are due for renovation within this decade. In this way the Federal Government's property stock would be equipped with state-of-the-art engineering technology and heating insulation within the framework of the re-investment cycle.

This procedure would also give a signal to the other local corporate bodies and also businesses of the service sector, and give them an incentive to copy it. This would create for the entire construction sector of the economy, for plant manufacturers as well as for planners and installation businesses, a long-term impetus in demand which would contribute towards achieving the targets for reductions in emissions despite current budget deficits.

d) Strengthening the market economy framework

(1) Liberalising the European energy markets

Whereas a few years ago the markets for the supply-line energies of electricity and gas were largely sealed off from internal and foreign competition, today they are increasingly characterised by competition. In this area above all, liberalisation has led to clear reductions in prices and has thus reinforced competitiveness. Wages in the electricity sector have also profited from reductions in prices.

The Federal Government welcomes this development and will press within the EU to push liberalisation further. In the European internal market, this must result in integrative regulations, which have long been in existence in other areas, also becoming a reality in the case of supply-line forms of energy, so that the advantages of the market can fully come into effect. Moreover, for Europe as a whole, ensuring stability in the energy-exporting regions of the world plays a decisive role in guaranteeing permanent energy provision. Thus, energy policy also has an important foreign policy dimension.

What is involved, at national level, is for the Federal Government to make use of the room for manoeuvre remaining within the framework of a liberalised market to maintain and develop for energy provision attractive framework conditions which will ensure that Germany continues to be an interesting field for investment in the energy sector of the economy. At the same time, this is a precondition for securing and developing employment in this area.

(2) **Agreements with industry**

Individual responsibility is of prime importance when the aim is to achieve, as efficiently as possible, environmental, energy and economic policy goals. Agreements with the economy mobilise the creativity and commitment of businesses and open up room for new solutions. Where market results are not in line with the environmental, energy and economic policy goals, or independent action is not leading to the agreed results, State action is required.

Federal Government Climate Protection Agreement with Industry

Groups involved

- BDI
- Bundesverband Steine und Erden with the following subsections:
  Cement, Brick, Lime industry, Refractory industry,
  Ceramic tiles and plates industry
- Bundesverband Glasfaserindustrie und Mineralfaserindustrie e.V.
- Kaliverein e.V.
- German Pulp and Paper Association
- German Chemical Industry Association
- German Metals Association Metalle
- German Steel Federation
- Verein der Zuckerindustrie e.V.
- Gesamttextil
- Association of the German Petroleum Industry
- Association of the German Gas and Water industry
- German Electricity Association
- Verband der Industriellen Energie und Kraftwirtschaft e.V.
- Verband kommunaler Unternehmen e.V.

Negotiations with other groups who also wish to subscribe to the Climate Protection Agreement are currently under way.

The Climate Protection Agreement reached with the German economy on 9 November 2000 underlines the readiness of the Federal Government to rely on independent action. The results to date confirm the rightness of this course. In many areas the goals set out for 2005 in the climate protection declaration by the economy in 1995 were already achieved in the year 2000. Therefore, with the November 2000 agreement further goals were established and at the same time the target date was extended to 2012 and also to cover all greenhouse gases specified in the Kyoto Protocol.

For 2005 the overall target is now to reduce specific CO_2 emissions by 28% as against 1990 (earlier agreement: 20%). By 2012 the specific emissions of the Kyoto Protocol greenhouse gases should be reduced by 35% as against 1990.

These overall targets are complemented by concrete pledges on behalf of the individual trades, some of which also contain absolute reduction targets. An important element of the agreement is that progress achieved will be regularly monitored by an independent institute.

A further agreement was reached with the economy for the maintenance, modernisation and the development of heat-power cogeneration. The target of this agreement is the additional reduction of CO_2 emissions in the order of 10 million tonnes by 2005 and 23 million tonnes by 2010 (base year 1998), but at least by 20 million tonnes. Together with the 9 November 2000 Climate Protection Agreement, this produces by 2012 a CO_2 reduction target of about 45 million tonnes as against 1998.

The agreement relating to heat-power cogeneration is flanked by the Act for the Maintenance, Modernisation and Development of Heat-Power Cogeneration, which came into force on 1 April 2002. This principally involves incentives to modernise older, less efficient installations and represents a concrete example of implementation of the modernisation recommendations contained in the National Strategy for Sustainability.

An important contribution towards restricting CO_2 emissions in the area of transport is made by the pledge of the German Automobile Manufacturers' Association (VDA) to reduce average consumption of motor cars manufactured by the German automobile industry and sold in Germany by 25% by 2005 as against 1990. Another important contribution was the pledge by the European Automobile Manufacturers' Association (ACEA) to reduce the average CO_2 emissions of new vehicles to 140 g/km by 2008 (a reduction of 25% as against 1995).

(3) **Ecological taxation reform**

With the ecological taxation reform, the Federal Government has given clear and calculable signals for the necessity of greater awareness in dealing with energy.

Increases in mineral oil tax since 1989	
01/01/1989	9 / 12 Pf (lead-free / leaded)
01/01/1991	3 / 2 Pf (lead-free / leaded)
01/07/1991	22 / 25 Pf (lead-free / leaded)
01/01/1994	16 Pf
01/01/1999	6 Pf
01/01/2000	6 Pf
01/01/2001	6 Pf
01/01/2002	6 Pf
6 Pf	(3.07 EUR Cent)

In contrast to earlier increases in the tax on mineral oil, which were motivated by purely fiscal considerations and were not directed towards changing behaviour, the tax on mineral oil was raised in measured stages every year from 1999 to 2002. This method of proceeding gives the consumer sufficient time to adjust to higher energy costs. Studies indicate that the ecological taxation reform has made a significant contribution towards the fall in fuel consumption in the last two years.

At the same time, by applying the revenue from the ecological taxation reform, contributions to pensions insurance could be significantly decreased. This means a higher net income for those in work and more economical labour costs for businesses. In this way the ecological taxation reform brings together ecological, economic and social aims and is thus a model for a sustainable energy policy.

(4) **Emission trading**

In October 2001 the EU Commission presented a proposed directive to introduce trading in emission rights for greenhouse gases throughout the EU.

Such a statutory instrument, if properly drafted, can be an ecologically effective and economically efficient instrument for climate protection and can con-

tribute towards the climate protection goals of the EU and its member states being achieved cost-effectively and in a way which is compatible with economic growth.

At the same time consideration should be given to the fact that emissions trading with greenhouse gases can, depending on how the legislation is drafted, have far-reaching economic effects. In particular, distortions can result in competition between trades and member states and also in comparison to non-EU states. Also to be taken into account is the fact that to date no one has experience of emissions trading with greenhouse gases. In bringing such a system into law, difficult questions must be clarified (particularly with regard to how certificates are to be initially allocated in a way which is fair, constitutional, and in line with the principles of cooperation).

Careful discussion of the proposed directive and caution in proceeding are therefore indispensable. In the opinion of the Federal Government, the system of emissions trading should be at first be introduced in a way which is not binding, but should be initially tested within the framework of a voluntary pilot phase.

To accompany the discussions of the proposed directives, the Federal Government, with the involvement of the economy and other interested groups, has formed the working group "*Emissionshandel zur Bekämpfung des Treibhauseffektes*" (Emissions Trading to Combat the Greenhouse Effect) under the overall control of the Federal Environment Ministry. Discussions within this working group have indicated, among other things, that emissions trading must be compatible with other statutory instruments. It is also important to take the fullest account of efforts which have already been made since 1990 in the field of climate protection. Finally, the flexible instruments of the Kyoto Protocol should be linked to the emissions trading system. The Federal Government will continue to take an active part in the discussions of the Commission's proposed directive.

(e) Promoting innovation

A series of new technologies in industry, trade and private households (e.g. the "smart house", "nil energy building", renewable forms of energy, fuel cells, gas and steam turbines, clean coal technology) could emphatically support an efficient use of energy resources.

The aim of the Federal Government's energy policy is to support promising forms of technology at the research stage and at the market introduction stage in order to help achieve potential reductions in cost. Directed towards this goal, for example, is the pilot project, initiated within the framework of the National Strategy for Sustainability, to promote the use of fuel cells and also offshore sector technology in wind energy.

In the future too the Federal Government, within the framework of existing EU law and available financial resources, will support innovations for climate conservation and a sustainable system of energy provision (e.g. creation of a new market incentive programme for efficient and economical application of energy; the promotion of "nil energy buildings").

II. Guaranteeing mobility – protecting the environment

Timetable for new routes

1. Initial situation

The mobility of persons and goods is a precondition for the economic and social development of a country. Mobility gives access to space: living space, working space and economic space. Mobility allows access to schools, hospitals and leisure activities. It creates the link to markets and thereby opens up possibilities for employment and sales in town and country. Here, we understand mobility to mean the ability for people and goods to be transported from place to place, independent of the means of transport and the distance covered. By contrast, transport is the actual process of moving people and goods from one place to another.

Technical, economical and social developments have, in recent decades, led to a high degree of mobility in our society. But this has been linked with a series of undesirable consequences, such as, for example, accidents with people being injured and killed, consumption of a large amount of space, together with damaging effects on environment and health caused by emissions of CO_2, pollutants and noise.

Motorised road traffic and air traffic have shown constant growth in recent years and are continuing to grow. By contrast, transport performance by public transport and non-motorised transport continues to stagnate. Transport development within the fields of passenger and goods transport is characterised by further growth – even if this growth is very different in the two areas. In this, the yield – measured in persons or tonnes transported – is growing considerably more slowly than transport performance, which also takes account of distances transported and is measured in persons or tonnes per kilometre. The dynamic character of transport development is principally the result of continually increasing transport distances.

By 2015 passenger transport performance will increase by a total of 20% compared to 1997; within this figure, motorised private transport will increase by 16%, rail transport by 33% and public road transport by 4%. The highest rates of growth are expected in air transport. Here it is expected that by 2015 performance will have doubled as against 1997 to about 73 billion person- kilometres.

Transport performance for goods will, by 2015, increase by 64% on 1997, within which figure growth in long distance goods transport by road shows the greatest increase at 71%, compared with 59% on the railway and 42% on inland waterways. Certainly, with the removal of existing or forecast bottlenecks in capacity by 2015 and increasing competition, the railways can double their performance.

In absolute figures this means, in 2015, a performance of about 1,130 billion person-kilometres in passenger transport and about 608 billion tonne-kilometres in goods transport. These developments present our country with a great challenge.

The causes for the strong growth in transport are the continuing growth of the economy, the globalisation of markets, the integration of Europe, the extension of trade to Eastern Europe, but also changes in production and consumption structures. In addition to these are the interactions between transport development and residential structures: the growth of suburbs, an increasing dependency on the motor car, the spatial separation of living areas and also changes in private lifestyles are leading to increasing streams of traffic. Meanwhile the proportion of leisure transport within the figures for motorised private transport is about 48%.

At the same time it must be said that transport growth does not necessarily mean more mobility. On the contrary: the traffic jams caused by this traffic are onerous for its citizens and for the economy and cause considerable socio-economic costs.

In view of this development, success has for some time been achieved towards the goal of reducing the negative consequences of traffic for people and the environment. Already it has been possible to achieve significant success in reducing traffic-related emissions of pollutants such as carbon monoxide (CO), non-methane volatile organic compounds (NMVOCs) and nitrogen oxides (NO_X). Despite the growth in traffic, CO emissions have been reduced by 60%, NMVOC emissions by 75% and NO_X emissions by 32% as against *1990 (Federal Environmental Agency: "Environmental Data 2000").* A further significant fall in these emissions is to be expected by 2010 and going beyond that to 2020.

Energy consumption related to transport continues to represent a challenge. The share of transport in overall energy consumption has increased from 1991-1998 by 1.9% as a result of the strong increase in road traffic. CO_2 emissions by transport, which contribute to global warming, rose from 1990 to 2000 by 12.8%. In this the share of CO_2 emissions caused by transport within the overall national CO_2 emission figures increased during this period from 17% to over 21%.

A positive development to note is that, according to figures from the Mineral Oil Trade Association, transport fuel consumption fell in 2000 by 2.2% as against the previous year; in 2001 it fell again by 1.8%. This development was principally the result of petrol sales, which decreased by 4.9% in 2000 and by 2.8% in 2001 (1999: -0.1%). Diesel showed a slight increase, but as against the rise in 1999 (+6.2%) in the past two years this rise was considerably weaker (+0.5% and -0.5%). Linked to this is also a corresponding reduction in CO_2 emissions from road transport. This was possible because of the optimisation of propulsion systems and vehicle technology, e.g. by reducing weight by using new materials, with an increase in passive vehicle safety. In addition, within 4 years the number of newly approved vehicles with a normal fuel consumption of a maximum of 6.5 litres/100 km has risen from 13.5% to nearly 40%.

In view of the traffic growth which can be expected in the future certainly further efforts are necessary, especially in reducing CO_2 emissions.

Although, thanks to technical measures, the noise emissions from transport have clearly decreased in recent years, the noise pollution caused by road, rail and air traffic continues to be high. Targeted improvements are cancelled out by the continually increasing volume of traffic. Almost two-thirds of Germans feel themselves to be disturbed by road traffic noise, about a quarter by rail traffic noise, and a third by air-traffic (*Federal Environmental Agency: Annual Report 2000*). The noise can lead to physical reactions of stress and in the long-term to damaged health.

People's quality of life in cities is above all considerably influenced and often adversely affected by inner city traffic. Indeed in cities with more than 500,000 inhabitants, the share of public means of transport in all routes covered stands at the moment at 21%: 35% of all routes are even covered on foot or by cycle. But it is precisely in smaller and medium-sized cities that there is still considerable potential to increase the relative shares of local public transport, cycle transport and pedestrian routes, and thus noticeably relieve inner cities of the burden of road traffic.

In Germany in 1997 – as part of an increasing trend – the relative share in overall land-use by land used for residential and transport purposes was about 11.8% and that of land used for transport purposes about 4.7%. The construction of traffic routes can have an additional negative effect on nature and biological diversity as a result of splitting up areas of land. It is thus all the more important to take into account when planning housing and transport of the many legally supported goals for nature and soil conservation and for economic use of land .

The number of accidents involving personal injury in road transport decreased in the period from 1991 to 2001 from 385,000 to 374,842 and the number of fatalities from 11,300 to 6,949.

In view of the considerable increase in traffic in this period this is a good result for the Federal Government's work on traffic safety, vehicle technology and the emergency services. Nevertheless the numbers of accidents, particularly on the roads, are too high. To reduce them further remains a central task for transport policy.

In its aim of shaping the development of transport in a sustainable way and thereby taking equal account of economic, ecological and social concerns, transport policy as a whole is faced with three great challenges:

- To maintain a high degree of mobility and at the same time to reduce the intensity of economic and social traffic in order to slow down the dynamic traffic growth,

- to manage remaining traffic growth in an efficient and environmentally-compatible way, and also

- to continue to reduce the adverse effects caused by traffic on the environment and nature, human health and quality of life.

2. Concrete vision

For many areas of our life mobility has become increasingly important, whether it be in getting to work, in professional life or in leisure time. Consumers, the economy, trade and industry all rely on goods transport functioning reliably and as smoothly as possible. Sustainable services for mobility improve social cohesion in society and are equally the basis for participation in social and political life. They bring employment and make possible measured structural change within sectors and regions. The functionality of the transport system – characterised by an efficient transport infrastructure and transport enterprises which are in competition – is a precondition for this.

The aim of development towards sustainable mobility is to achieve a high level of mobility with the most efficient use of transport and to reduce the present day adverse effects caused by transport.

Sustainable mobility must be directed towards meeting economic, ecological and social requirements:

- The freedom of movement of goods and persons, at costs which are affordable and fair, must be guaranteed.
- Pollution caused by harmful substances, climate pollution, noise pollution, nature pollution, land blight and also consumption of resources are to be avoided or reduced.
- Equal account must be taken of the needs of all population groups – both with regard to means of access and communication and also with regard to health, quality of life, safety and security.

Sustainability requires low traffic residential structures which are characterised by concentration, mixed use and polycentrality.

Modern organisation and logistics increase the efficiency of the transport infrastructure and facilitate transitions between systems. All the vehicles used in a sustainable transport system are highly efficient, largely free of exhaust emissions and noise. People take a responsible attitude in choosing means of transport and in the way they use transport, model their mobility in a comfortable and environmentally compatible way and avoid unnecessarily risks to themselves and to others.

A transport policy in Germany directed towards a sustainable transport system which increasingly meets the requirements of people and the environment, makes a contribution towards global sustainability which is not limited to Germany alone. These models, concepts and technologies can also become examples of "good practice".

3. Conceptual basis and goals

In a transport system directed towards sustainability, account has to be taken of the complex interrelationships between economic, finance and taxation, transport, regional planning, health, environment, social and tourism policies. In conjunction with other areas of policy, transport policy must also pick up and support social innovations, including changes in behaviour, styles of consumption and environmental consciousness.

At the centre of a transport system designed in this way to be sustainable in the future is the necessity to implement the following four basic strategies:

1. Exploiting the potential for reducing pollution by directing residential development and increasing the efficiency of the transport system (traffic avoidance).

2. Increasing the share of environmentally friendly carriers (traffic adjustment).

3. Exploiting the effects of synergy; improving and networking planning systems (integration).

4. Increased application of innovative technologies to reduce at source transport-related environmental pollution (technology).

An increase in environmental consciousness in business and in the population, and also a situation where this consciousness increasingly influences choice of means of transport, will support this process of re-orientation.

The Federal Government is basing its policy for implementing these strategies on a broadly based range of measures which involves all areas of transport policy, all transport carriers and infrastructure, and which will continue to be developed in intensive public dialogue. A significant example in this connection is the completed regionalisation of local passenger tramway traffic, completed within the framework of railway reform. Since this has been done, financial and operational responsibility for the whole of public local passenger transport lies with the *Länder* and thus clearly closer to citizens.

The range of measures comprises measures relating to investment and technical issues, directions for research policy and also education and information measures. In organising them, attention will be given to the need of all transport carriers for conditions which will ensure fair competition among themselves and with their competitors in the European market, because in the future the transport sector of the economy and services connected with it must be able to make their own important contribution towards growth and employment.

The goal is an integrated transport concept which renounces the old idea of a free-for-all among carriers. Central to it is the idea of carriers networked and co-operating together, but without impairing that competition which stimulates innovation. The concept is based on the following seven areas for action, the joint effect of which should contribute towards solving current problems and shaping mobility in a sustainable way:

1. Promotion of traffic-reducing planning and residential structures and support for production structures involving more efficient transport use (traffic avoidance).

2. Increasing the relative share in overall traffic volume of local public passenger transport (ÖPNV), railways and inland waterways, and also non-motorised transport (traffic adjustment).

3. Provision of an efficient transport infrastructure for all transport carriers, particularly at the points of interface between carriers, as the precondition for successful adjustment and traffic-avoiding efficiency increases in the transport system (capital investments).

4. Extensively integrating and networking transport systems within the overall system (integration).

5. Reducing environmental pollution and improving transport safety (environmental protection, safety).

6. Promoting innovative technologies and supporting research related to mobility (technology).

7. Strengthening transport policy within the European and international framework – also having regard to the enlargement of the EU – with the aim of developing a pan-European integrated transport system and European and international equivalence of framework and competition conditions (integration).

In carrying out this policy, the Federal Government will increasingly take account – in the national and in the European context – of the precautionary principle and the principle that the party which is responsible must pay for the damages. Thus the Federal Government views fair prices achieved by charges on infrastructure and external costs as a means of correcting imbalances in the competition between the transport carriers, and of shifting shares of overall transport volume on to the railways and waterways. Fair prices support the goal of encouraging those involved in the transport system to change their behaviour and to deal more economically with natural resources. Certainly, competent methods must the developed for this, so that a system of voluntary charging does not develop.

One way in which these areas for action work together towards a solution to the problem is indicated by the example of the Federal Government's ideas for organising in a sustainable way goods traffic which crosses national borders. Since the

political and economic opening up of Central and Eastern Europe, reunification, and also as a result of the imminent expansion of the EU, Germany has moved, and will continue to move, more strongly than ever into the centre of Europe, and goods traffic from west to east and in the opposite direction is increasing to an unexpected extent. Of course, as a transit country, it is our aim for the greatest possible amount of this long-distance transport to be by rail. Therefore, it is a matter for creating the right framework conditions and incentive structures on both sides of the border.

The basic precondition is an efficient infrastructure. For this reason we are investing every year considerable sums in extending and developing the rail corridors from east to west – in Germany, among other things, with the transport projects "*Deutsche Einheit Schiene"* (German Unity Rail). Within the framework of developing the Trans-European Transport Network and the pan-European corridors, gradually an efficient infrastructure will be developed in the Central and Eastern European states.

The introduction of the distance-related autobahn toll for heavy lorries, which is to be paid by internal and also by foreign goods traffic and serves to provide a fairer weighting of distance costs, supports, from the point of view of regulatory policy, the shift of goods traffic onto the railways. The changes in course towards more competition on the railway in Germany and at the European level are directed towards making rail goods traffic qualitatively more attractive by means of a greater diversity of customer-orientated services available to users of shipping services. At the same time, increasing schemes of cooperation between railway enterprises are giving new impetus to cross-border rail goods transport.

In order to make it possible to monitor the success of a sustainable transport policy, concrete goals are necessary. These can be derived from the desired qualities of the future transport system and also from the targets for reduction in various forms of pollution caused by transport. The goals outlined below should be understood as ambitious overall aims which the current state of knowledge indicates to be achievable and which can also be considered to be economically and socially justifiable:

- **More efficiency – less traffic growth**

  More goods on the railways

  Increases in efficiency, among other things, should in the medium to long term decouple economic growth from transport growth. In this connection, efforts are being made to achieve, by 2020, a reduction in transport intensity in goods traffic by about 5% and in passenger traffic by 20% as against 1999.

  In addition, the modal split of non-motorised transport and also of the environmentally friendly transport carriers of rail, local public passenger transport and waterways are to be increased. The target is to double by 2015 the amount of goods carried by rail as against 1997. The amounts of transport on inland waterways should grow up by about 40% within the same period. Efforts are also being made to increase the share, in overall traffic, of public passenger transport (by rail and by road).

  We wish to achieve this by changing the price relationships between road and air transport on the one hand and between rail and inland waterway transport on the other. The watchwords here are, among others, the introduction of the distance-related toll for lorries, the eco-tax, management of parking space in towns, take-off and landing charges at airports and supporting the intentions of the EU for the introduction of an EU-wide distance-related emissions tax for air transport. Added to this are the German Government's capital investments in infrastructure and also the introduction of modern technologies to enable better use of rail capacity. The integration scenario upon which the revision of the Federal plan for transport routes is based shows that our targets for changes in the modal split are achievable within framework conditions which are changed in this way. Moreover, the instruments are being further developed with a view to setting further targets in due course.

- **Encouragement of transport by cycle and on foot**

  The aim is a clear increase in the overall transport share of cycle transport and the creation of a cycle friendly climate in Germany.

With the first national cycle transport plan for 2002 to 2012, plans for promoting cycle transport at all levels will be strengthened, better coordinated and implemented in a more targeted way. The municipal authorities who will in the first instance be responsible for this will be shown the entire range of measures by means of which cycle transport can be encouraged, and they could then select and implement appropriate measures in accordance with their circumstances at the time.

- **Further reduction of emissions of CO_2 and pollutants**

  Targets are the reduction, by 2005, of transport-related CO_2 emissions by 15-20 million tonnes as against 1998 and the further reduction of transport-related pollutants and climate gases:

  Thus transport must make an appropriate contribution towards the target of reducing, by 2008/2012, emissions of the six greenhouse gases specified in the Kyoto Protocol by 21% as against 1990. It is also the aim of the Federal Government, in conjunction with partner countries in the EU, to take measures to limit greenhouse gas emissions from cross-border air and shipping traffic.

  In addition, Germany has pledged to reduce, by 2010, its NO_x emissions by 60% and its NMVOC emissions by 69% as against 1990 (UNECE-Multi-Component Protocol). Transport must also make an appropriate contribution towards this target:

  On the basis of the threshold values Euro IV for motor cars and Euro IV or Euro V for heavy commercial vehicles, which will apply from 2005/2006 or 2008/2009, NO_x emissions from transport will fall by 57% and NMVOC emissions by over 88% as against 1990. With an additional scale of threshold values for commercial vehicles and diesel motor cars, NO_x emissions from transport can be reduced by 75% as against 1990.

To reduce the risk of cancer, diesel and benzene emissions are to be reduced as extensively as possible. On the basis of the above threshold values, by 2020 particle emissions from transport will fall by 74% and benzene emissions by 96% as against 1990. With an additional EU scale of threshold values for commercial vehicle and diesel motor cars, particle emissions from transport could be reduced by some 90% as against 1990. An important precondition for further road transport emission reductions is the EU-wide blanket availability of sulphur-free fuels.

- **Reducing pollution caused by noise**
  To reduce the number of persons regularly exposed to considerable noise, measures are to be implemented to reduce air traffic noise, to carry out noise remediation of roads and railways and to combat noise at source. The German Council of Environmental Advisors (SRU), for example, recommends target figures of 65 db (A) during the day and 55 db (A) at night. Because of the high levels of pollution, the first priority is for noise remediation. During the next few years quite considerable efforts must be made to achieve clear progress in noise remediation. The measures to be taken to achieve this will have considerable financial consequences for citizens and the economy, and must therefore be designed in a responsible way, but the principal focus point is to be noise remediation at source. This is the most efficient and most sustainable method of noise reduction.

- **Reduction of land consumption and natural pollution**
  Every day in Germany about 130 hectares are designated as new land for residential and transport purposes. The aim is to reverse the trend, which until now has been increasing, and permanently reduce land used. The target by 2020 is a level of new land used of a maximum of 30 hectares per day. In order to achieve this we intend to follow a twofold strategy of quantitative and qualitative control of land use. Land saving construction, compact town, grouping of infrastructure, availability of alternative areas and opening up of areas which are no longer used will enable specific land use to be further decoupled from economic growth. This must be complemented by economic incentive systems

in order to counter excessive demand for land in the future. Over and above this, of particular significance is a qualitative improvement of the residential environment, e.g. using land which is lying idle for gardens and inner-city green spaces in order to achieve an overall improvement in the residential environment in towns and cities and thus once again to make living in towns attractive in comparison to living in green areas.

In addition, in many places it will be necessary to reduce areas devoted to transport in residential districts. The proportion occupied by roadways in the overall area occupied by roads should be no more than 40%, and on space effective areas no more than 50% of the overall width of the roads. To avoid areas of land being split up, the Federal Government, in accordance with existing planning principles, is concentrating on greater grouping of transport routes.

- **Improvement of transport safety**
  Efforts are being made to continually reduce from year to year the number of accidents involving personal injury and the number of fatalities on the roads, irrespective of further traffic growth.

4. Measures and instruments to achieve targets

Outlined below are the seven areas for action for putting into practice a sustainable transport policy by means of appropriate measures and instruments and preserving areas of responsibility and financial authority. These are set out in terms of concrete examples by means of numerous plans, measures and activities. They are differentiated from each other in accordance as to whether public services (State, *Länder*, municipalities) or other players, particularly private industry, are primarily responsible for introducing and implementing them.

Complementing the measures, two pilot projects are to provide concrete examples as to how the targets can be achieved.

In order to demonstrate how more traffic can be put on the railways even outside the main traffic routes in the region, the Federal Government has commissioned the pilot project "*Bahnverkehr in der Region"* (Rail Traffic in the Region), the main content of which is similarly outlined below.

In addition, the Federal Government welcomes the Council's proposal to implement a pilot project for a comprehensive communications strategy for dealing with sustainable transport. The project proposal appropriately takes as its starting point the consideration that on the one hand in the minds of many transport users the motor-car has greater advantages than is actually the case. On the other hand the alternatives are felt to be disadvantageous or more onerous than they actually are. A precondition for a sustainable choice of means of transport is that this twofold prejudice must be overcome. Strengthening modern services for mobility as well as giving particular encouragement to mobility on two wheels can also increase the choices open to transport users.

The Federal Government will take up the Council's proposal and, in conjunction with the Council, examine which players in particular must be involved at regional and local level. It will present a proposal for selection of a suitable model town and indicate how the plan can be implemented in such a way that it can lead subsequently to a broad application of this initiative throughout Germany.

Action Area 1
- Traffic avoidance -

Promoting traffic-saving regional and residential structures and supporting traffic-efficient production structures for transport services.

Measures/Instruments

- **Taking greater account of traffic-saving regional and residential structures at all levels and stages of the planning process, and implementing such structures.**
- **Taking greater account of regional planning views in planning Federal transport routes.**
- **The conception of a future-oriented rail policy for State and *Länder* must expressly take into account the significance of rail transport for regional development.**
- **Incentives for efficient transport chains.**

State, *Länder* municipalities	Other players, especially private sector
• Implementation of the 1998 amendments to the Regional Planning Act, in accordance with which residential development is, by means of allocating and mixing the various uses of space, to be designed in such a way as to reduce traffic pollution and avoid creating additional traffic. • Implementation of the town planning model "Town with short roads". • Evaluation of transport infrastructure projects in accordance with their contribution towards putting into practice regional planning goals – allocation and development, shifting and easing measures – in planning Federal transport routes. • Strengthening regional planning elements in rail policy. • Taking greater account of fairness in allocation of space, developing, on an equal basis, all areas of the *Land* to contribute to the creation of comparable conditions for development. • Taking into account ecological aspects of land utilisation and usage in the forthcoming reform of the rating system (initiative by the *Länder* required, re rating in the *Länder*). • Matching availability of ÖPNV to changing regional and residential development, and directing regional and residential development by means of ÖPNV provision related to demand.	• Improved cooperation between transport carriers at nodal points. • Greater organisation of multi-modal transport chains, which are often broken. In this case, whichever carrier (including ÖPNV) which is best suited for the purpose will be used. • Development of sustainable concepts for mobility in large enterprises.

In the future greater importance must be assigned, among other things, to a form of town development which conserves resources: + In the area of residential development, development within town areas has priority over development outside towns; + Introduction of a system of land management, even at regional scale; + Land recycling; + Buildings management, multi-usage, land-saving forms of construction and housing; + Optimisation of economic instruments to achieve land-saving effects; + Redevelopment of transport infrastructure to have priority over new build.	

Action Area 2
- Shifting Transport -

Increase of the shares of ÖPNV, railways and inland waterways, and also non-motorised transport, in overall traffic volume.

Measures/Instruments

- **Increased application of market-economic instruments.**
- **Promoting and supporting ÖPNV to maintain and develop a modern infrastructure.**
- **Promoting non-motorised transport.**

State, *Länder*, municipalities	Other players, particularly private sector
• Ecological taxation reform, with preferential treatment for public transport. • Introduction of the distance and emissions-related fees for use of autobahn by lorries from 2003. • Distance allowances, independent of means of transport. • Implementation of the results of Task Force Rail, and opening of the rail network for competition in passenger and goods transport. • Introduction of more competition in ÖPNV as an instrument to mobilise customer-directed services. • Demonstration projects within the framework of the research focus point “System Rail 2010“, in which, by means of organisational, operational and technical innovations, advantage is to be taken of the potential for shifting services on to the railways.	• Development and introduction of new forms of provision and operation, using the most modern ICT applications in ÖPNV. • Further development of information systems covering all carriers. • Development of compatible, customer-oriented charging systems. • Exploiting potential for efficiency and quality improvements involved in competition, including ambitious environmental standards. • Exploiting potential for improvements in cost saving and services.

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• State support for the *Länder* within the framework of the Public Transport Finance Act. • Measures to promote cycle and pedestrian traffic, e.g. by the State through construction of cycle lanes on State highways, and by development, by the State, *Länder* and municipalities, of a joint concept for filling gaps for "Velo-networks ". • Road Traffic Act Bicycle Amendment with measures to promote and improve safety for cycle traffic. • Preparation, implementation and further development of the "National Cycle Transport Plan" 2002-2012. • Extension of traffic-calming measures in towns and municipalities.	

Action Area 3
- Capital Investment -

Provision of an efficient transport infrastructure for all carriers: rail, road, waterways, air traffic, and also for ÖPNV, bicycle and pedestrian traffic, particularly at nodal points and interfaces.

Measures/Instruments

- Continual balanced investments in rail and road, taking appropriate account of waterways.
- Maintenance and qualitative redevelopment of existing transport infrastructure, particularly in the State Highways Network has priority over new build. In this, the road must meet the requirements of the high transport volumes expected in the future.
- Key focus for rail investments in the area of redevelopment of existing networks and for the European High Speed.
- Modernisation and efficiency increases in rail transport by continuation of railways reform.
- Taking advantage of the possibilities for grouping services in the required new build of transport infrastructure.
- Linking within the infrastructure of the nodal points in the transport network (seaports, wharfs and airports and also inter-modal terminals) is to be qualitatively improved and if necessary extended.

State, *Länder*, municipalities	Other players, particularly private sector
• Implementation of the State Future Investment Programme 2001-2003 with additional EUR 3 billion for investment in the State railways (financed from interest savings and increases in UMTS licences).	• Further development of methods for gathering information regarding the transport situation, in order to be able to introduce improved transport management measures.

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• Increased direction of resources towards maintaining and modernising existing networks. Filling gaps in the autobahn network. • Grouping the construction of rail and road, such as, for example, with NBS Cologne-Rhein/Main. • Linking of airports Frankfurt, Leipzig-Halle or Cologne/Bonn to high-speed rail transport. • Increasing efficiency . of the transport infrastructure and optimising traffic flow by the use of telematic systems. • Promoting Combined Traffic Terminals and Goods Transport. • Improving rail links between seaports within the framework of strengthening Seaport Position Germany. • Implementing the National Cycle Transport Plan 2002-2012. • Anti-Traffic-Jam Programme 2003-2007 to clear significant bottlenecks on railways, roads and waterways. • Programme to impact on State autobahn traffic 2002-2007. • Supporting the development of the European “Galileo“ satellite navigation system	

Action Area 4
- Integration -

Extensive integration and networking of the transport systems within the overall system.

Measures/Instruments

- **Technical harmonisation between the respective networks of the respective carriers (inter-operability).**
- **Optimisation of the logistical interface functions at the nodal points in the transport network.**
- **Improvement of the framework conditions for Combined Transport, also by existing facilitation processes via regional planning.**

State, *Länder*, municipalities	Other players, particularly private sector
• National implementation of the EU directives on inter-operability in high-speed and conventional rail transport, particularly in European cross-border corridors. • Taking greater account, in planning transport concepts, of the mobility interests and needs of non-car-owning groups of the population. • Promotion of plans within the framework of the research initiative “Mobility in High Density Areas“ with new points of emphasis for an integrated transport management system. • Involvement of car sharing schemes. • Extension of the classical concept of Combined Transport (rail/road) to include waterway carriers (inland waterway and sea transport). • Exploiting hitherto unused potential in Combined Transport: investigating the market capability of the transport chain with regard to both quality and price when compared with through transport by road; testing the further development and introduction of stackable multi-purpose containers, among other things, with the aim of achieving more effective use of space in the terminals and speeding up operational procedures	• Measures to improve inter-operability in rail transport, particularly in European cross-border corridors. • Taking greater account of the mobility interests and needs of non-car-owning groups of the population through innovative mobility schemes. • Optimising the interfaces between transport carriers. • More emphasis on forming integrated transport chains (goods traffic) or travel chains (passenger traffic), including ÖPNV. • Development and use of new goods-handling technologies, introduction of new lifting concepts in Combined Transport. • Reduction of efficiency losses within the transport system. • Strengthening the international and logistical orientation of basic and further education in the area of transport.

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Action Area 5
- Environmental Protection, Safety -

Reducing Environmental Pollution and Increasing Transport Safety.

Measures/Instruments

- **Taking greater account of environmental effects, shifting, easing, and development goals in state planning of transport routes.**
- **Minimising interventions in the construction of transport infrastructure already in early planning stages.**
- **Tax and charging policy as incentive to steer developments.**
- **Reduction of fuel consumption and greater use of environmentally friendly alternative fuels.**
- **Encouragement of environmental consciousness and environmentally conscious behaviour on the part of those involved in transport.**
- **Noise remediation and noise reduction measures related to transport carriers.**
- **Improvement of transport safety.**

State, *Länder*, municipalities	Other players, particularly private sector
• Improved cost-benefit analysis together with introduction of space-effectiveness analysis and environmental risk assessment in the evaluation methodology used in reviewing the State traffic routes plan. • Testing for environmental compatibility: unavoidable adverse effects of investments in infrastructure will be balanced by nature conservation. Already today, for example, some 10% of the costs of a new road go towards the protection of the environment. Taking greater account of the effects of splitting up areas of land. • Fixing the concept of sustainable mobility in the public consciousness and encouraging sustainable transport behaviour. • Staged increase of the mineral oil tax up to 2003 within the framework of the existing ecological taxation reform. • Improvement of transport safety for vehicle occupants and non-motorised transport users by research and development; setting technical standards and further development of legal road traffic regulations. • Introduction from 2003 of a distance-related charge for heavy lorries using the autobahns with a scale of charges related to emissions.•	• Supporting the concept of sustainable mobility in the public consciousness and encouraging sustainable transport behaviour. • Measures to combat noise at source (e.g. increased use of smooth-running oils and tyres). • Improvement of transport safety for vehicle occupants and non-motorised transport users by research and development in the area of driver assistance systems. • Enforced introduction of smooth-running oils and tyres as the old are replaced, particularly by means of education and information measures.

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• Further development of the emissions-related motor vehicle tax. • Introduction of emissions-related landing charges for air traffic. • Monitoring and if necessary revising or abolishing subsidies which tend to increase traffic. • Supporting business initiatives to shift goods traffic on to Short Sea Shipping. • Environmentally friendly fuels: with a view to quicker market introduction, the Federal Government has agreed tax-based incentives for low-sulphur fuels from Autumn 2001 and sulphur-free fuels from January 2003. • The Federal Government is supporting the introduction of vehicles driven by natural gas and is promoting the use of natural gas in transport by means of a reduction in the tax on mineral oil to 2009. • The Federal Government is currently working on an improved legal basis for traffic noise control, particularly during the night. The State is already spending EUR 125 million per annum on noise control on State highways. German airports have already spent one billion DM on passive noise control in the last 26 years. • The Federal Government is presenting and supporting the ***V**erkehrswirtschaftliche **E**nergie**s**trategie* (VES) (Transport Energy Strategy) of the German automobile and energy businesses. Building on this, a common strategy for a broad country-wide market introduction programme is to be developed, together with the framework conditions necessary to achieve this. • Carrying forward the Special Programme „Noise Control for Cases of Hardship on Existing Rail Lines“ (about EUR 50 million per annum). • Amendment of the Air Traffic Noise Act, by means of which technical advances in noise reduction in aircraft are to be passed on to those citizens affected, the procedures for assessing and calculating aircraft noise are to be modernised and new threshold values for noise control zones around airports are to be established. • Noise remediation measures on roads and railways, and also use of low-noise materials for roadways • To improve the knowledge of motor-car buyers concerning specific fuel consumption and CO_2-emissions, the Federal Government will introduce, on the basis of an EU directive, an appropriate system of classification for new vehicles. • The Federal Government, together with all other players involved, will intensify its educational measures relating to the theme „travelling economically“.	• The pledge of the German automobile industry to reduce, by 25% as against 1990, the average fuel consumption of the German-manufactured motor vehicle coming on to the roads from 2005 contributes towards reducing road-traffic CO_2 emissions by 2005. It has already been possible to reduce average fuel consumption by 17.8% since 1990, so that this pledge is made from a position of success already achieved. The European Automobile Association ACEA has pledged to reduce the specific CO_2 emissions of the motor vehicle newly coming on to the road by 140g/km by 2008. The success of this strategy is being monitored by the EU Commission. • Continuing to develop low-consumption vehicles and alternative methods of propulsion. Initiative for a continuing strategy, e.g. by tax-based incentives for 3 and 5 litre motor cars. • Developing, with the automobile industry, further strategies for developing low-consumption vehicles. • ***V**erkehrswirtschaftliche **E**nergie**s**trategie* (VES) (Transport Energy Strategy) of the German automobile and energy businesses. It is the aim jointly to find an alternative fuel for passenger and commercial vehicles which is suitable from the point of view of technical, economic and ecological criteria

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Action Area 6
- Technology, Research -

Promotion of innovative technologies and support for mobility research.

Measures/Instruments

- **Encouraging the potential for innovation.**
- **Taking greater advantage of the potential use of information and communications technologies in order to avoid physical traffic.**

State, *Länder*, municipalities	Other players, particularly private sector
• The Transport Energy Strategy (VES) as a joint activity of the BMVBW, automobile manufacturers and also energy businesses. • Further development of the framework conditions for private sector introduction and promotion of telematics services. • Encouraging the potential for cooperation and networking in the maritime field through the Federal Government's Maritime Co-ordinator. • Transport-specific research programmes to develop strategies which show the way forward and concrete aids to decision-making. • Research into the effects of e-commerce on transport. • Federal Government research programme "Mobility and Transport" – sustainability, safety and competitiveness by means of intelligent transport. • Encouragement of scientific, technical and technological research to reduce traffic noise pollution (road, rail, and air traffic) within the framework of the "Light Traffic" research network set up by the DLR. The aim is to combat the causes of noise at source in an effective and sustainable way.	• The Transport Energy Strategy (VES) as a joint activity of the BMVBW, automobile manufacturers and also energy businesses. • Further technological development of individual transport carriers. • Development and market introduction of alternative fuels.

Action Area 7
- European and international involvement -

Strengthening transport policy within the European and international framework in order to develop a pan-European integrated transport system and to create equal framework conditions and fairer conditions for competition.

Measures/Instruments

- **Initiative for fair competition under comparable conditions, high safety and environmental standards and also to promote the development of means of transport which are safe, environmentally friendly, and inter-operable across Europe.**
- **Phased programme for opening national railway networks to third parties, and improvement of inter-operability.**
- **Individual elements of the taxation and duty systems in Europe must be brought closer together than they have been to date.**
- **Phased programme for implementing higher environmental standards.**

State, *Länder*, municipalities	Other players, particularly private sector
Abolition of tax advantages which distort competition. • Future increased importance of rail transport and nodal points in developing the trans-European transport network. • Removal of administrative and technical restrictions in cross-border rail transport. • Removal of socially and ecologically harmful distortions to competition in goods transport by road. • Implementation of the EU directives for development of the Community's railway enterprises and concerning the lifting of charges for the use of the railway infrastructure and safety certification. • Revaluation of minimum tax rates for benzene and diesel. • EU-wide mandatory introduction of exhaust gas Directive Euro IV from 2005/2006 and Euro V – lorries – from 2008/2009. • Supporting EU plans for introduction of an EU-wide distance-related emissions charge for air traffic. • The Federal Government is actively promoting at international level the introduction, among other things, of taxation on kerosene.	

• The Federal Government is trying to secure the removal of immunity from turnover tax for cross-border air traffic. However, in view of the competition situation of the European airline companies, this step requires first an initiative on the part of the EU Commission, agreement at EU level, and also a global solution. • The Federal Government is striving to abolish tax exemption status for heavy oil as a lubricant for commercial inland waterway transport. This requires amendments to international treaties. • Updating of noise threshold values for vehicles at European level. • Introduction and updating of noise threshold values for motor car tyres at European level on the model of an ecolabel for low-noise and fuel-saving tyres. • Further development of the EU emissions requirements for diesel motor vehicles: EURO V for motor cars and light commercial vehicles and also Euro VI for heavy commercial vehicles, insofar as the fuels necessary for this are available across the board throughout the EU. • Development of emission and noise reduction concepts for rail vehicles, ships and aircraft. Introduction of EU noise threshold values for rail vehicles.	

Pilotprojekt: ***Bahnverkehr in der Region - ein Modellvorhaben der Raumordnung*** **(Rail Transport in the Region - a Model for Regional Planning)**

Project duration: 2001 – 2003

Location:

- *Eifelquerbahn* in Rheinland-Palatinate
- Brandenburgisch City Railway Berlin/Brandenburg

Contact:

Federal Office for Building and Regional Planning

Aim:

To ensure a sustainable transport policy by shifting more traffic on to the railways. Provision of road and rail mobility and reduction of environmental pollution associated with transport, particularly by a better use of light railway capacity.

Measures:

- Analysis and evaluation of weak points and restrictions using the example of the two regions in collaboration with the *Länder*, municipalities and also the players involved in transport, and potential operators.
- Testing of concrete options for a solution.

The model project will examine the restrictions which on light railways have hitherto impeded an increase in rail traffic (goods and passenger traffic). To this end, new initiatives in regional rail transport leading to improved mobility will be demonstrated, together with the regional players, on the basis of available transport development concepts and taking into account regional planning goals. This particularly involves increasing the efficiency of the existing transport system and also linking together carriers in the region.

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To this end, initially in the two selected different regions together with the *Länder*, municipalities, local private sector and other participants and potential operators, existing weak points will be analysed and also concrete options for a solution will be demonstrated.

At the centre of the project are, among other things, the question of access to the network, conditions necessary to ensure fair competition between operators, the modernisation of the rail network and matching it to present day transport needs, testing existing framework conditions and changing them if necessary, and also ways in which possible obstacles to innovation could be overcome.

In detail the project will address the following topics and questions:

Analysis of the existing rail network and traffic potential

- Which service components must be improved to meet actual transport needs?
- To which investments for modernisation should priority be given in order to bring more traffic on to the railways?
- Interface problems.
- Can pledges for public investment and demand for transport services be usefully linked together?

Service potential

- What possibilities are there for increasing the attractiveness of rail transport by service improvement?
- What demands are to be made on operators to increase on-the-spot customer acceptance?

Testing an annual network card for operators

- Can the issue of an annual network card for operators create an economically useful and legally reliable incentive for bringing more traffic onto the railway without Deutsche Bahn AG being involved in additional costs?

Logistical and transport chains in the region

- What potential is there for developing logistical or transport chains in the region and what demands will be made by those involved for introducing them?

Optimisation of the regional transport network

- An examination is to be made with those involved in the region as to how the contribution made by rail transport can be optimised in such a way as to increase the efficiency of the transport system in the region as a whole. This involves better linking of carriers and also, for instance, the question as to which organisational solutions are suited to offering comprehensive transport services from one source.
- Where is the most urgent need for action?
- Development of strategies (short, medium and long-term) for rail transport and if necessary alternatives for other carriers.

regions within the framework of a concluding meeting at the end of August 2002.

The model project is organised in two stages.

The first stage up to mid-2002 will serve to allow the analysis of the problem, the discussion and preparation of options for a solution on the spot in the two selected regions. The results and lessons learned are to be passed on to other interested regions at the end of August 2002.

After conclusion of the first stage, from October 2002 the initiatives for solutions which have been developed are to be put into practice.
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III. Producing healthily – eating healthily

Consumers as the driving force for structural change

1. Initial situation

a) Need for fundamental re-orientation

Safe and secure foodstuffs are a fundamental human need. This is why consumers react particularly sensitively to nuisances and scandals in the area of food. Within the population, the economy, science and politics, following the BSE crisis a broad-based process of reflection and discussion took place concerning agricultural policy and farming. Everything concerning nutrition is being critically scrutinised and freshly evaluated in this debate, from the safety and quality of foodstuffs through production processes and their effect on the environment, nature and animals to questions of healthy methods of food provision or consumption. Therefore the entire chain of production and consumption is being put to the test.

b) Developments during recent decades

In the Fifties and Sixties the primary aim of agricultural and food policy was to secure the provision of food to the population. Increasing the volume of production was at the forefront. By intensification, increasing productivity (use of modern technology, improved seed and increased use of fertilisers and plant protective agents) and the associated decrease in workforce, together with specialisation on a few products, this aim was achieved. Despite specialisation and decreases in costs, State support for agriculture was maintained in order to remain competitive internationally.

Consumers demanded above all foodstuffs which represented value for money. The share of expenditure for food in available income has consistently and quite clearly fallen. Price continues to remain an important criterion in purchasing food.

The pressure to produce large quantities of foodstuffs at low prices is often at the expense of quality. Intensive farming also leads to pollution of soil, forests and watercourses and has contributed to a decrease in biodiversity. Intensive animal husbandry without sufficient land base is under criticism. Therefore, a method of animal husbandry which is fair to animals is becoming increasingly significant as, for example, the overwhelming majority of the population disapproves of battery methods for laying hens. Even the conditions under which living animals are transported and the length of transport time are coming more and more under the scrutiny of the critical population.

Although, among other things, the European Union has subsidised farming with enormous amounts of money, the aim of improving farmers' incomes was only achieved in a qualified way. The population is scrutinising in an increasingly critical way whether resources for farming as a whole are being correctly deployed and correctly allocated.

c) Embedding change within Europe and internationally

Surplus production, also subsidised in the EU, and offering this surplus for sale on world markets, has led to conflicts with trading partners. It has also made it difficult for developing countries to gain access to the market. Therefore the liberalisation of trade in agricultural products must be carried further. In this, competitors, particularly the developing countries, are giving notice of their own justified interests. Against this background, the present system of production-related State support for farming, which can be found in different variations in many countries, is no longer tenable.

The Federal Government has also set itself the aim of abolishing subsidies within the framework of the World Trade Organisation which tend to distort trade and are ecologically counter-productive.

d) Development of rural areas

Modern farming is managing with smaller and smaller workforces. Therefore new jobs in crafts and trade, in modern services and in nature conservation must expand the economic base of rural areas. Also, competition for the use of land, such as for transport and residential purposes, is increasing within rural areas. Therefore there is an urgent need for a new model for a system of sustainable development of rural areas.

e) Conclusion

By way of conclusion, it is clear, on the basis of the initial situation, that "carrying on in the same way" is impossible for the Federal Government. The requirements for consumer protection, the forthcoming expansion of the European Union, the forthcoming reform of the European agricultural policy and the priorities for the development of rural areas demand new answers. Whoever maintains that it is just a matter of improved controls for fodder and foodstuffs and that otherwise things can remain the same has not recognised the signs of the times and is not taking advantage of the opportunities which a process of reorientation represents for consumers, farmers and for all other interested parties. Above all, after the discussions of recent years here in Germany and in the European Union, the taxpayer will only be prepared to continue to make high contributions towards farming if these contributions are in the interest of society.

2. Concrete Vision

a) Priority for preventive consumer protection

The core of the model is a quality-oriented farming and food economy, ready for competition and producing in an environmentally-compatible way, which corresponds to the basic principles of sustainable development. Within this model preventive health-related consumer protection clearly has priority. Under the concept of a system of preventive consumer protection all foodstuffs must be unobjectionable from a health point of view. First priority is assigned to human health.

For foodstuffs safety, husbandry which is fair to animals together with a system of quality-oriented production compatible with the environment, the State is setting out mandatory requirements in the form of legal regulations. This legal framework will apply to all producers. Effective monitoring will ensure that this standard is maintained.

b) Consumers decide

Incentive measures on the supply and demand side are to improve the conditions under which high quality foodstuffs, produced and processed in an environmentally-compatible way, can succeed in the market. In this, consumers have a key role. Consumer information, in conjunction with a meaningful system of product classification, creates the possibility that consumers with their demands can improve the market chances for high quality products.

For sustainable production and sustainable consumption of healthy and safe foodstuffs it is necessary to consider all the links in the production chain, from the agricultural suppliers to the consumers. For this purpose, the concept of the "magic hexagon" has come to be accepted.

Every link in the added value chain should act in accordance with the model for sustainability. For example, the commitment of the nutrition industry and foodstuffs trade, in introducing seals of quality, in supervising certified operations and in the presentation of high quality products, is indispensable for the success of a strategy which conforms to the market.

The above measures strengthen consumer confidence. For German agriculture this can translate into a significant competitive advantage. On this basis stable customer relationships can be built. This confidence can extend beyond the domestic market to the EU market and the world market.

Nutrition has a direct influence on health and well-being. Nowadays heart and circulatory diseases are among the most common causes of death in Germany – and an important cause of these diseases lies in eating habits. This fact is being recognised by an increasing number of the population. Nutrition must be healthy in two ways. Foodstuffs should not, with normal habits of consumption, be the source of any dangers to health, but also every single person can, by means of nutritional awareness, actively promote his own health and well-being. Finally nutrition has a further significance extending beyond the pure intake of food and healthy eating: that is, the area of enjoyment. Linked to this are also impressions of what the food looks like and the surroundings in which "food intake" is undertaken.

c) Caring interaction with nature and environment

The basis for a sustainable system of agriculture and food production is a method of production and processing which cares for resources and also for nature and the environment as a whole. Natural resources and their ability to continue

to function should be permanently preserved for present day and succeeding generations. Sustainable agriculture means in particular that soil, water and air are protected and that soil fertility and biological diversity are conserved or improved. Standards for systems of husbandry, transport and slaughtering which are fair to animals are to be maintained.

d) Conventional farming and ecological agriculture are mutually complementary

Both forms of agriculture, a quality-orientated conventional system of farming and ecological cultivation, have their own justification and their own market. A system of farming which produces in an environmentally-compatible way, guarantees foodstuffs which are unobjectionable in terms of health and meets the requirements of animal protection, is entitled to stable framework conditions and State funding. It is not conventional farming of itself, but a form of intensive farming without any link to the fodder on a given farm, which among other things leads to problems in materials circulation (e.g. producing liquid manure), which is a justified target for criticism. By contrast, by maintaining a link to a given area of land and by good technical agricultural practice which meets the nature protection requirements of the new Federal Nature Conservation Act, even conventional farming can very largely satisfy the requirements of sustainability.

The main pillar of agriculture which will be sustainable in the future is ecological cultivation. Currently, in Germany and internationally, the market for eco-products is showing a marked growth. In the case of eco-products, customers even today are expressing a willingness to pay more for these products, which expressly recognises their contribution to environmental and animal protection. Here too a programme of improvements in incentive conditions is easing the way for enterprises which are willing to change their working practices or which are already practising ecological cultivation. With the bio-seal, which makes it easier for consumers to accept and obtain eco-products, another instrument is provided for enterprises practising eco-cultivation. If it says "eco" on the outside, it's "eco" on the inside.

e) Sustainable agriculture in an international context

The re-orientation of agriculture as laid out with Agenda 2000, reduces the incentives for agricultural over-production and thus can, among other things, support greater liberalisation in trading conditions and make it easier for developing countries to gain access to the market. A sustainable system of agriculture which produces high quality products is quite able to create preferences for its products with consumers, and is quite able, given fair trading regulations, to face up to international competitors and to assert itself in competition. Free markets are not least also a question of global justice which makes it possible for the developing countries to use their comparative advantages in trading of foodstuffs to achieve economic development.

f) Opportunities through brand profiling

A regional brand profile can be a programme which presents a successful contrast to standardised products. It makes possible firm customer relationships and thus a certain degree of independence from the market for standardised products. This involves, in particular, measures to strengthen regional patterns of retail circulation in accordance with the motto "From the region for the region". By including the processing of products, such as the production of meat and sausages, this programme can broaden the economic base of the agricultural enterprises and the rural regions. One of the advantages of this initiative is that producers and customers are still able to come into contact, so that the producer can respond to the wishes of the customer, and the customer can be informed about the quality and the production process. By means of food classification, regional production is to be identified as operating under ecological or conventional principles.

g) Other sources of income for agriculture

Finally, there are also economic prospects for a multi-functional system of agriculture in opening up new sources of income by means of diversification. In the light of limited supplies of fossil fuels, one area which would be sustainable in the future is the production of renewable raw materials and renewable forms of energy. The farmer and forester as a custodian of energy, who generates electricity from biomass, is creating for himself another economic leg to stand on. With funding in accordance with the Renewable Forms of Energy Act, the Federal Government has created favourable conditions for this to take place. There are no limits to the initiative and imagination of farmers in developing new areas of business –whether this is by setting up a farm café, by direct marketing or by developing educational facilities. New areas of activity for farmers are being opened up, not least by means of increased payments for achievements in the area of environmental and nature conservation.

h) Sustainable development for rural areas

Sustainable development is quite decisively a matter of taking a good look at the rural area as a whole. It is an area in which to live, an economic area, a natural area, and an area for recreation. To balance these functions in a way which is viable in the long term is not easy. On the one hand the economic significance of farming for the rural area is decreasing, on the other farming continues to put its mark on the area in many different ways. The regional brand profile for foodstuffs and multi-functional agriculture and forestry with their additional sources of income are important starting points from which to begin to strengthen the economic base of rural areas.

Jobs and also attractive educational and leisure facilities are important in giving young people in rural areas a sense of a future. Sources of income outside agriculture, in crafts, trade and modern service professions or in tourism, must be created in order to compensate for the smaller number of jobs in agriculture.

By actively getting involved, all relevant players can make a contribution towards strengthening regional patterns of circulation, whether these players are farmers, forest owners and foresters, the Local Agenda 21 groups, the regional economy or the consumers. The latter have the opportunity, by their informed decision to purchase products which have been produced and processed in the region in an environmentally-compatible way, to make an essential contribution towards putting the idea of sustainability into practice. Finally only people on the spot can recognise the concrete potential for development within their region and mobilise it by means of a network of activities. The great interest shown in the pilot project "*Regionen aktiv - Land gestaltet Zukunft"* (Regions in action – the countryside shapes the future) is an encouraging sign in this connection.

Through competing claims for use, the rural area as an area of nature is under increasing pressure. For centuries the agriculture practised by peasants and farmers left its mark on the unique quality of this cultural landscape and the diversity of plants and animals. The beauty and unique qualities of the very different rural natural areas are important in preserving the national heritage of nature and culture. In a time of more rapid change these landscapes are also a homeland and area of recreation for many people. The conservation of tradition and cultural heritage is closely linked with these landscapes. Therefore conservation and preservation of the cultural landscape or measures for nature conservation rightly belong among the social tasks for which agriculture is quite justifiably expecting some support in return. The subsidies paid by the EU, the State and the *Länder* to agriculture and forestry, which are to be increasingly shifted from agricultural production on to these tasks and the development of the rural area as a whole, thus take on a new quality, because agriculture gives something in return.

i) The European context

Agricultural policy is usually developed at European level, thus every effort must be made to bring these aims into the European negotiations. Central in this connection is the comprehensive review of the Common Agricultural Policy. The subsidy guaranteed to European farmers within this context must be vetted in the light of the aims of sustainable development.

3. Measures and instruments

The area for action covers a broad spectrum of starting points for a system of sustainable development, from the content of foodstuffs, through production processes which conserve the environment, to consumer behaviour and healthy eating. Accordingly, the measures clearly extend beyond food and agricultural policy. Therefore, in implementing the strategy, all relevant players must be involved and the measures coordinated. Only if this is successful can sustainability be pushed through.

The Federal Government measures outlined below can be organised under four focus points which in terms of content are closely linked:

- Food safety, quality and healthy nutrition,
- Agriculture and environment,
- Development of rural areas,
- International implications.

Individual measures can therefore, in a manner of speaking, be related to several areas. And of course the implementation of the Federal Government strategy must be compatible with similar plans at other political levels, from the municipalities, the *Länder*, to the European Union and negotiations and obligations within the framework of the World Trade Organisation and the Food and Agriculture Organisation of the United Nations.

a) Food safety, quality and healthy nutrition

aa) Watching the way from field and barn to the consumer's table

Food safety is indivisible: it applies to all foodstuffs, to all enterprises and must, as already outlined, be guaranteed through all stages of production (watching the way).
In the "magic hexagon" a pact for food safety and quality has been created for the consumers.
Input area, agriculture, processing, trade, consumers and also politics determine the direction for permanently ensuring confidence in foodstuffs. The "magic hexagon" is an informal forum for presenting ideas and initiatives for safety, quality and sustainability.

bb) The input area

Significant reasons why BSE was able to become a danger lie in the structures for the division of labour in the fodder industry and in agriculture, including intensive trading in fodder and animals, insufficient statutory regulations and defective control systems. For this reason, the new agricultural and nutrition policy must first begin here.

Improvements in food safety are not only possible and required in animal products, but also in plant products. The input area can make a particular contribution to greater food safety in the areas of plant protection, fodder, fertilisers and also seed. Agricultural technology can also contribute to sustainable agriculture: negative effects on the environment can be reduced by a the development of new machines and also of new procedures. Thus, for example, the large quantity of plant protective agents could be reduced without reducing the effectiveness of plant protection.

Important initial measures have already been successful. In particular, the ban on turning meat and bone meal into fodder was pushed through, thus blocking a significant potential source of infection by BSE. Even the fact that the mixed fodder industry has pledged to publicly declare all constituents of fodder is one step towards more safety in the input area. The private sector has also pledged only to use those fodder constituents which are set out in a list provided by the industry.

The Federal Government is agitating in Brussels for an EU-wide complete ban on antibiotic growth promoters in animal fodder. As a flanking procedure to this, the laws an animal medicine have to be changed in order to minimise the overall use of antibiotics in animal husbandry. The Federal Government is also supporting a clearer system of classification for genetically modified fodder.

cc) Agriculture

It has recently become compulsory to record the use of medicines in agricultural animal husbandry. A stock record book must record, among other things, the type and the quantity of medicines and the time when they were administered.

Environmentally compatible plant protection is a further theme in connection with which agriculture can make a contribution to environmental and nature protection and preventive health measures for consumers. Plant protection –whether chemical or non-chemical – is necessary to produce foodstuffs of high quality. The use of chemical-synthetic plant protection agents is to be reduced to a necessary minimum. One step in this direction is the extension of ecological cultivation, which minimises the risks of plant protection using chemical-synthetic methods. Also very promising are the developments towards new, economic technologies and towards plant protection agents with improved properties and targeted effects.

In the EU the common directives of the approval system must be applied as quickly as possible to plant protection agents used in all member states, and solutions must be found for cultures with comparatively small amounts of land under cultivation.

An effective system of health and consumer protection begins right back in the production chain. In this connection a first important step is a preventive system of soil protection directed towards avoiding the penetration of harmful materials into the soil, whether these be effluent sludge, forms of bio-waste, fertilisers and plant protection agents. Because of the particular importance of production of healthy foodstuffs, steps should be taken to ensure that the cultivation control measures (particularly the production off effluent sludge, forms of bio-waste, liquid manure and other industrially produced fertilisers together with mineral fertilisers) do not increase the amount of harmful substances in the soil. So conservation particularly must therefore be orientated towards a long-term perspective and the requirements for sustainability must also apply to all areas of land under agricultural use.

In the opinion of the Federal Government, the following measures are needed to achieve this goal:

- The regulations relating to effluent sludge shall be changed. At all events, only forms of effluent sludge with very low levels of pollutants are being approved as fertilisers. The parameters of the investigation are being widened and complemented by hygiene requirements.

- The entry of heavy metals and organic pollutants into liquid manure via fodder, animal medicines and stock-keeping shall be reduced. In this, the same measures are to be applied as in the case of effluent sludge.

- The use of Thomas phosphate is being vetted by applying the same measures as for effluent sludge. In other mineral fertilisers the cadmium content shall be limited.

- For all fertilisers threshold values for relevant pollutants shall be introduced.

To take advantage of further potential reductions in environmental pollutants, the Fertiliser Regulation is being further developed. The aim is to bring the amount of fertilisation needed for plant cultivation into line with the requirements of health and environmental protection.

dd) The area of processing

A focus of the activities of the Federal Government is currently in ensuring the food safety and quality of meat, because this area was the most severely affected by a loss of confidence through the BSE crisis. Even today constant monitoring and comprehensive assessment of production processes is taking place in the whole area of food production. These measures are to be continually redeveloped and brought into line with new knowledge. Examples of this are the new introduction of maximum quantities for plant protection and pest control agents in foodstuffs and tobacco, stronger regulations concerning additives in foodstuffs and regulations concerning radio-nuclides and lead in mineral and table water.

To increase safety for the consumer, from October 2000 materials presenting a risk of BSE are being removed from the food chain and harmlessly disposed of. The list of materials involving risk is being thoroughly readjusted to reflect new scientific knowledge. Processing businesses must ensure by means of suitable slaughtering and production procedures that the requirements regarding materials constituting risk are being consistently met and checks in accordance with corresponding standards are being carried out.

ee) Commercial trading

Commercial trading has to take care of the task of distributing and offering for sale healthy, high quality and sustainably produced foodstuffs.

During the course of the BSE and foot and mouth crises commercial trading showed marked losses in turnover. It can avoid this problem in the future if it takes part jointly with the other players in new quality partnerships with clear criteria and classifies these products accordingly. High quality and certified products above all will then have better chances in the market if they have been accepted by the consumers.

ff) The consumers

Our picture of the consumer is changing. Until now his protection, in the welfare sense, for example against dangerous products or contents, stood in the foreground. It is precisely in a market economy that consumers can go on to become the driving force of structural change. The State can, on the supply side, only set minimum standards for the manufacture and production of products. With their decision to purchase and to consume, however, the consumers can demand those products which satisfy demands for high quality, are produced in a particularly environmentally compatible way, or are traded fairly. In this way a corresponding change on the supply side of the market will also be economically recompensed by a corresponding demand.

Certainly such behaviour on the part of consumers is no self-starter, but is linked to specific conditions. The most important precondition is clear and comprehensible information concerning the quality of the product and how it is produced. Thus the only recent decision to classify bio-products makes it possible for purchasing decisions to be made upon a secure basis.

In many areas of consumption products are developed and often also classified which, for example, because of their low energy consumption meet particularly well the principles of sustainable development. In the case of foodstuffs classification, in the interests of the consumer, regulations need to be fundamentally revised in order to become more meaningful and more transparent. Finally, however, manufacturers and trade must work together in packaging, presenting and advertising products in order that the enlightened consumer has a chance to decide in favour of sustainably produced goods.

In addition to clear information, however, this initiative for action requires responsible behaviour on the part of the consumer. Personal priorities, values and social models set their mark on consumer behaviour. In addition to the consumers' own financial capabilities, these preferences decide whether somebody is prepared to pay a higher price for bio-products and or products produced in a way which is fair to animals and compatible with the environment. Certainly, on the basis of recognised marks of quality there is a functioning system of competition. Not only in bio-shops, but also in the supermarket bio-products should therefore increasingly find their place.

From the previous analysis there are two consequences. Because it is a matter for every individual, in the first place we need, under the rubric of consumer policy, discussion within society concerning values and priorities for sustainable development. In doing so it is necessary to get to grips with the demands and ideas of consumers and also with the possibility of their being able, by responsible consumer behaviour, for example, to promote environmental and animal conservation. In the second instance we need an active and proactive consumer policy. This means transparent and mandatory standards for product classification. With the draft Consumer Information Act agreed on by the Federal Government, important rights of information will be given to consumers.

In order to be able to properly evaluate the possibility for responsible consumer behaviour, it is precisely in connection with nutritional habits that social realities should not be overlooked. Thus today many people eat in canteens or increasingly buy convenience foods. But anyone who gets food from a large scale kitchen does not have any influence on the selection of ingredients. Therefore, for instance, operators of large-scale kitchens and canteens and also the manufacturers of convenience foods are also decisive players who are increasingly to be brought in to the discussion process.

The Federal Government is strengthening consumer interest particularly by the financial support of representative consumer groups and by involving consumer representatives in the discussions within the framework of the "magic hexagon". In addition the Federal government itself is carrying out education and information measures, for example concerning the complex of themes surrounding "healthy eating" for children and young people. The aid-Infodienst, the Federal Agency for Health Education and the German Nutrition Society have already, for several years, been involved in this area (with brochures, educational materials, exhibitions and join-in tours).

The Federal Government will support the Sustainable Development Council in its campaign initiative "*Zukunft gestalten durch Verbraucherverhalten"* (Shaping the Future by Consumer Behaviour). This initiative, centred around the demand for a "sustainable basket of commodities", will address a large number of questions such as, for example, how do we want to live in the future? What will we eat, what kind of insurance will we buy? How will we save energy, in what and why will we travel, and where? The theme links together discussions on a social scientific basis with those on an ethical-normative basis and also discussions orientated towards innovation. It goes beyond the immediate area of food and deals with the entire palette of consumption by the end users.

The campaign will be marked by a "new style", because it is no longer a question of convincing the consumer to follow a given specification. It is rather that the search for this specification – the "sustainable basket of commodities" – itself becomes the subject of the campaign. The campaign follows the basic idea of the sustainability policy, namely that of participation. It will be open for other players, for example from the world of business. In its component elements the campaign will also involve tried and tested elements of consumer education, product information such as the bio-seal and also the model regions participating in the programme "*Regionen aktiv"* (Regions in Action). It will place these within the common framework of a sustainability policy and will complement them with the consumer campaign "Sustainable Basket of Commodities". Discussion of the question of a "sustainable basket of commodities" should promote further discussion concerning ethically responsible consumption and the model of an active consumer policy.

gg) Overall measures

European Food Safety Authority and Federal Office for Consumer Protection, Federal Institute, Consumer Information Act

The January 2000 White Book of the European Commission on Food Safety develops the concept of a comprehensive framework for policy in the area of food safety according to the idea "from barn and field to the table". It is the aim to achieve the highest level of food safety in society and by greater transparency to win back the confidence of consumers in food safety.

For this purpose a European Food Safety Authority has been set up which is responsible for providing expert scientific advice in the area of food safety (provisionally based in Brussels).

Germany has set up the Bundesamt für Verbraucherschutz und Lebensmittelsicherheit (BVL). The BVL will improve collaboration between State and *Länder*, and also with the EU institutions, in control and supervision of foodstuffs. It will prepare general administrative regulations and also group the management tasks, e.g. the approval of certain materials.

In addition the Bundesinstitut für Risikobewertung (BfR) was created. This Institute has a high degree of organisational autonomy and independence from direction. The BfR carries out risk assessment and communication, to give consumers advance information concerning possible health risks. It will be the German counterpart to the European Food Safety Authority.

This division of responsibilities will help to avoid future conflicts between risk assessment and risk management. At the same time it ensures that the BfR can carry out the task of risk assessment without political and economic influence.

To improve market transparency and strengthen consumer rights the Federal Government has agreed the draft of a Consumer Information Act. The rapid development of production and marketing techniques for consumer products means that the existing information deficit of consumers is constantly increasing. The consequences of this can be insecurity and loss of confidence. By means of the new Act the Federal Government will give a new quality to consumer information. That the consumer has sufficient information is a precondition for self-determined decisions in the market place.

Green genetic technology: protecting the consumer and guaranteeing freedom of choice

Every kind of new technology involves opportunities and risks which have to be carefully weighed up before the technology is applied. The possible opportunities of green genetic technology lie, for example, in saving plant protective agents and

in developing plants for difficult climatic conditions. Risks are seen in possible harmful effects of genetically modified organisms on people and the environment. Criteria to be used in evaluating green genetic technology are preventive health consumer protection and the protection of the natural environment from possible harmful effects.

Possible risks for human health and the environment are subjected, in accordance with the German Genetic Technology Act to a comprehensive preventive safety evaluation in each individual case.

To guarantee in a sustainable and practicable way the freedom of choice of consumers, whether they want to eat genetically modified foodstuffs or not, is an essential concern of consumer policy. Preconditions for freedom of choice are classification and information.

This also implies that tolerance values for unavoidable contamination of food and fodder which lead consumers to assume, on the basis of the classification that they contain no genetically-modified organisms, are indeed practicable, but as low as possible.

The current proposals of the European Commission for an amended Food/Feed Regulation and a regulation to trace back food tracks in July 2001, the submission of which had previously been a repeatedly requested by the member states – and also by Germany – contain comprehensive regulations concerning the approval, safety evaluation and classification of food and fodder made from genetically modified organisms.
At the present time they are under discussion in the respective bodies of the Council and the European Parliament.

Animal protection regulations: minimum standards for husbandry appropriate to species

The Federal Government has introduced minimum requirements for keeping laying hens. Battery farming is to be banned from 2007. For pig keeping the minimum requirements for husbandry appropriate to the species are similarly being reviewed. Current poultry keeping methods are being monitored with regard to conditions appropriate to the species and proposals are being developed to set the minimum requirements with regard to the penetration of daylight, interspersal, stocking density, and environment.

The EC-Animal Protection Transport Directive is to be tightened up, the specifications regarding animal transport are to be further developed within the community. Central German requirements are a significant reduction of maximum transport times for livestock and also the abolition of the system of transport cost reimbursements for slaughter cattle. The monitoring systems for transport for slaughter animals must also be improved. To achieve this requires harmonisation, across the EU, of the documents such as the transport plan or the monitoring reports of the member states. The Federal Government is pressing for this to be done.

Compliance in conventional cultivation

Representatives from the fodder industry, from agriculture, from slaughtering, from meat processing, from trade and also from the CMA, have taken up the Federal Government's initiative for the creation of a seal for conventionally produced foodstuffs and have agreed upon the foundation of the limited company Qualität und Sicherheit GmbH (QS). The aim of the company is to develop, through all stages of the production chain, a transparent process of quality assurance.

The seal is first to be introduced in the area of meat and meat products. It supports, for example, the voluntary reduction in the amount of antibiotics introduced into animal feed. It is planned to extend the QS system beyond the area of meat and meat products to other product areas. An autonomous and neutral monitoring system will ensure that inspection criteria are met. In addition there have already been other stages of comprehensive quality assurance systems which, for example, going beyond the legal requirements, are directed towards a method of production which meets particularly well the requirements for animal protection (e.g. Neuland).

Certification in ecological cultivation: the bio-seal

In September 2001 the Federal Government publicly introduced the bio-seal. With  seal an integrated quality standard was set based on the so-called EC Eco-Regulation. The bio-seal gives consumers clarity and assurance in the face of the multiplicity of labels for ecologically produced foodstuffs. In doing so it provides an incentive for the food trade and the farmers to give more backing to bio-products. In addition, the "trademarks" of the cultivation associations used until now will find further use.

The bio-seal is organised by the State. It is open to products from EU and non-EU countries. A precondition for the award is certification through all stages of production which will demonstrate that the requirements of the European Community Eco-Regulation have been completely met.

b) Agriculture and environment

To meet the definition of a sustainable system of development, nature and environmental protection must be practised across the board, taking into account, it is true, the concerns of agriculture and forestry.

Of all the user groups of nature and countryside, agriculture is the most significant, taking up 55% of the land (and 30% of the woodland) in Germany. A form of agriculture which takes greater account of the requirements for nature and environmental protection is therefore a priority goal for sustainable development in Germany.

Measures in this area are directed first towards the continual development and actualisation of good agricultural technical practice as a minimum standard for all operations. In addition, ecological cultivation is to be clearly developed as a model for a sustainable form of agriculture. At the same time, the use of economic instruments such as agricultural environmental measures and contractual nature protection, but also an effective system of environmental financial control, must be enforced. Finally, equally important is a greater ecological bias in the provision of State funding for agriculture.

aa) Ecological cultivation: precursor of sustainable agriculture

Ecological cultivation today very largely meets the criteria for sustainability. At present it involves a share of about 3% of all land; it has the character of a model and can assume the role of a precursor for sustainable agriculture.

The Federal Government therefore is particularly strongly promoting ecological cultivation and the changeover of conventional operations to ecological cultivation. By 2010 ecological cultivation should be carried out on 20% of land. This leads to less pollution of soil and watercourses, to better interaction with animals, and to the conservation of the natural bases for life of all living beings. To achieve this the instruments outlined below were put in place.

bb) The Federal Programme "*Ökologischer Landbau*" (Ecological Cultivation)

To further improve the framework conditions for ecological cultivation, a Federal Programme "*Ökologischer Landbau*" (Ecological Cultivation) was set up for 2002 and 2003, with EUR 35 million being provided for each year. The programme is to contribute towards a sustainable growth of the ecological sector. At the centre of the programme are educational, explanatory and general information measures. A further key focus point is the promotion of research and the development of new technologies and also putting into practice the knowledge gained.

cc) Further development of the EC Eco-Regulation

In developing the bio-seal, again and again it became clear that further development of the EC Eco-Regulation was necessary. The Federal Government has compiled a list of the essential weak points of the EC Eco-Regulation and has requested the EU Commission for the regulation to be amended.

Manifest weak points, or rather necessary measures are:

- Involvement in the monitoring system of the business enterprises, particularly the wholesale trade, operating in the market for eco-products,
- Pledge to change over the whole operation to eco-cultivation,
- Fodder for the animals should for the most part come from the same eco-operation or from one in cooperation with it,
- The list of conventional forms of fodder exceptionally permitted within ecological animal husbandry should be monitored with a view, preferably, to reducing its size, and
- Regulations for aqua-cultures should be incorporated within the EC Eco-Regulation.

dd) Action Programme "*Bäuerliche Landwirtschaft"* (Rural Agriculture)

Rural Agriculture, as part of the "magic hexagon", is responsible for the safety and quality of foodstuffs. The Federal Ministry of Consumer Protection, Food and Agriculture will therefore, in conjunction with representatives of interest groups and active players in the rural area, discuss in an open dialogue measures to support rural businesses, and will propose an action programme "*Bäuerliche Landwirtschaft"* (Rural Agriculture). The aim of the action programme is to reinforce rural agriculture in Germany in all its diversity and to support its sustainable development. In this, the starting point is the multi-functional system of agriculture and forestry, based on the rural middle class, which in 2001 reached a share of about 95% of all rural businesses.

ee) Agricultural environmental measures and contractual nature protection

A further important building block for a more environmentally compatible form of agriculture are the agricultural environmental measures. By means of a further redevelopment of the second pillar of the Common Agricultural Policy (CAP) these measures are increasingly becoming a central instrument of the common agricultural policy and the policy for rural areas. They are based on an attractive, countrywide and properly financed selection of flexible agricultural environmental programmes to meet individual regional requirements.

Similarly they adhere to the model of contractual nature protection which until now has been seen as successful both from the point of view of nature protection and also from the point of view of agriculture and forestry. In this way agriculture and forestry can be remunerated in a targeted scheme for achievements in the area of nature and environmental protection. This instrument thus represents an important contribution to multi-functional agriculture. At the same time farmers and foresters can be won over to the principles of nature and environmental protection.

ff) Modulation

The Federal Government wishes to take advantage of the freedom of movement which the Agenda 2000 offers the new agricultural and food policy. This involves, in the first instance, diverting financial resources from their role hitherto of providing subsidies for production into subsidising a sustainable system of agriculture, and particularly into agricultural environmental measures. This re-orientation of agricultural funding policy is one of the central points of the agricultural turnaround. With the Modulation Act, passed on 22 March 2002, which comes into force on 1 January 2003, the re-orientation is put into effect. In accordance with the Act, the direct payments, above a tax exemption figure of EUR 10,000, will be curtailed by 2% and reallocated into the second pillar of the Agricultural Policy (modulation).

gg) Cross Compliance

The linking of Common Agricultural Policy direct payments to compliance with environmental protection criteria, the so-called cross compliance, is, with modulation, a second opportunity created by the Agenda 2000 to give greater weight to the principles of sustainability. In cases of non-compliance with the published criteria, payments could be wholly or partially curtailed. The resources retained in this way could similarly be redirected into subsidising environmentally-related measures. It will be examined to what extent cross compliance could be applied in Germany, taking into account the administrative costs.

hh) Amendment of the Federal Nature Conservation Act

With the amendment of the Federal Nature Conservation Act, which came into force on 4 April 2002, the foundations were laid for a modern, future-directed programme of nature protection, which creates a fair balance between user interests and the need for nature to be protected, and at the same time improves the acceptability of nature protection.

Important cornerstones of the amendment of the Federal Nature Conservation Act for agriculture are:

- With regard to the compensation regulations, the *Länder* are given room for development which is clearly conceived on a wider scale. In the future under these arrangements they can decide for themselves the point at which limitations of use for agriculture, forestry and fisheries are to be compensated.
- Contractual nature protection as an important instrument of co-operative nature protection will also be retained in the future.
- The *Länder* are to set a regional minimum density figure for linear and punctiform elements required to form biotope networks and take appropriate measures in the event that density falls below the minimum and such elements need to be re-established.
- The Act also contains general principles of good technical practice for agriculture, forestry and fisheries insofar as these are required from the specialist point of view of nature protection. The targets for this represent a framework system of regulation for the *Länder*. The *Länder* can adjust the regulations to suit their respective local and natural circumstances and – where necessary – also add further principles. The establishment of principles of good technical practice from the point of view of nature protection also provides the working framework for the future development of the agricultural environmental measures.

To meet nature protection requirements, the following principles of technical good practice in particular were incorporated into the Act:

- Cultivation must be carried out in a way suitable to the locality and the sustainable soil fertility and long-term usability of the land safeguarded.
- Avoidable disturbances of existing biotopes are not to occur.
- The elements of landscape required to form biotope networks are to be conserved and where possible increased.
- Animal husbandry must be in a balanced relationship to plant cultivation, and harmful effects on the environment are to be avoided.
- On slopes threatened with erosion, in flood areas, in localities with a high water table and also in marsh areas, grassland change is to be avoided.
- The natural environment of the agricultural area in use may not be disturbed more than is required to achieve a sustainable yield.
- Recordings, as required by the technical statutory regulations relating to agriculture, are to be made concerning the use of fertiliser and plant protective agents.
- In using woodland for forestry the goal must be to enlarge near-natural woodlands and to cultivate these sustainably without clear-cutting. An adequate level of planting of trees native to the area is to be maintained.

ii) Emission control and agriculture

Agricultural operations over a certain size are subject to an approvals procedure in accordance with the Federal Emission Control Act (BImSchG). Particularly those operations with high stock densities which present problems for environmental reasons must go through an approval procedure in which the operator’s compliance with his obligations under the BImSchG is verified according to the current state of technology and thus possible harmful environmental effects are appropriately monitored.

During the process of amendment of the Technical Instructions on Air Pollution Control (TA-Luft), the requirements for animal husbandry operations to protect against and to prevent harmful effects on the environment according to the current state of technology were further developed. In this process, ammonia emissions and the entry of nitrogen into ecosystems were taken into account. In regions which are already highly polluted this makes the further extension of stock husbandry markedly more difficult.

Maximum emission levels for specific air pollutants were also finally introduced with the so-called NEC (national emission ceilings) directive which was recently passed at European level. Its aim is to reduce the emissions of air pollutants which contribute to acidification, eutrophication, and ozone formation close to the soil. Agriculture too will profit from efforts to improve the environment. In return it must clearly reduce its ammonia emissions, an area in which it is responsible for over 90% of total emissions.

jj) Water pollution control and agriculture

By the year 2015, in accordance with the European water framework guidelines, good quality should be achieved in all watercourses. Management of watercourses in the future will be related to flood areas and will extend beyond State and *Länder* borders. To achieve this, coordinated programmes of measures and management plans are to be set up.

For surface waters, emissions restrictions and quality standards are being set for specific priority substances. In addition agriculture is being supported in developing measures to reduce diffuse entry of substances.

c) Development of rural areas

Participants in sustainability are the rural districts, parishes together with the farmers and owners of woodland, but also all other decision-makers in the rural area, from Local Agenda 21 groups through regional business and crafts, to providers of catering and tourism. Only if all players work together will the rural area further develop its infrastructure and be an attractive living environment. To achieve this it is necessary that all players act together in a network of partnership in order to jointly develop innovative ideas and perspectives and to recognise and take advantage of existing potential. In addition, direct contact between players creates the possibility for each to identify himself in a positive way with "his" region and to understand the rural area as a part of cultural identity. With this initiative overall the economic base of the rural regions will be broadened. This involves, for example, a tourism infrastructure and also educational facilities and hence an intensive interchange between town and country.

aa) Bund-Länder Joint Task “Improvement of the Agricultural Structure and of Coastal Protection” (GAK)

The GAK is the most important organisational instrument in the area of structural funding of all agricultural enterprises. The spectrum of measures under the GAK provides the opportunity of guiding the direction and tempo in realigning agricultural and food policy. At the same time the incorporation of the GAK in the EU subsidy policy offers the opportunity of expanding the financial framework by the use of EU resources.

The Common Task is being set up in accordance with the principles of sustainability for both conventional and ecological systems of agriculture. Therefore the Planning Committee for Agricultural Structure and Coastal Protection has decided to shift the emphasis for subsidy to procedures which are compatible with environmental, natural, and animal interests, and also to funding diversification.

However, the new funding principles of the GAK represent another important step towards supporting a sustainable form of agriculture. Farmers who organise their operations in accordance with the requirements of a form of production which is particularly compatible with environmental and animal interests, will be financially supported to help defray the higher production costs.

bb) Sustainable cultivation of woodlands

Forestry in Germany is the second most important land use and produces the most important renewable raw material – wood. Forestry is legally obliged to operate sustainably. This covers the preparation of timber and the permanent safeguarding of the protective and recreative function of woodland. To conserve the biological diversity and the stability of woodland ecosystems the Federal Government is making efforts to establish a near-natural system of woodland cultivation, if possible, throughout all the woodland areas used for forestry.

Intact woodlands are indispensable for life on earth. Precisely in densely populated Germany, woodlands, in addition to their raw materials function, fulfil many different kinds of other functions which are used by people consciously or even unconsciously. These include above all the functions of woodlands for soil and groundwater protection, for the climate, as the living area of a species-rich flora and fauna and for the recreation and quality of life of human beings. A loss of these functions would have direct effects upon future options for development.

But woodlands are also a mirror for sustainable interaction with nature. Up to the present time the woodlands in Germany, by the efforts of the forestry operations and forest owners (complemented by targeted efforts to protect woodland as a near-natural form of vegetation), have remained covering 30% of the overall land area. During the course of centuries the woodlands were exposed not only to considerable changes but also to heavy pollution. Examples here are the extensive destruction of woodlands as a result of the world wars or the creeping damage due to airborne pollutants from our industrial society. Germany's high level of development in road networks and infrastructure has its price in divided woodlands increasingly polluted by noise and harmful substances. This must also be a cause

for concern because the woodlands continue to be the last refuge not only for many plants and animals but also for the stressed fellow citizen who hopes to find recreation, relaxation and the experience of nature there. Primary and secondary harmful effects through air pollution have for two decades been at the centre of the discussion of the "new kind of damage" to woodlands. The Federal Government therefore continues to consider a consistent clean air policy to be an urgent requirement. This is part of a comprehensive concept to safeguard our natural foundations for life in the long term. In it, complementing each other, are measures for clean air, for climate protection, for the use of energy and for re-orientation of agricultural policy.

Woodlands and their management are increasingly subject to social demands. Therefore the aim of a sustainable system of development relating to the woodlands in Germany must be to harmonise the different demands made by society on woodland both with each other and also with the needs of the woodland owners, and in this way to conserve the woodlands as coherent near-natural living spaces for people.

As an important step towards achieving overall consensus within society about how we are to deal with woodlands, in 1999 the dialogue process "*Nationales Waldprogramm für Deutschland"* (National Woodland Programme for Germany) was brought into being. This process involves recognising social conflicts, encouraging within society knowledge, consciousness and understanding of woodlands and also of their state and their management, and on this basis developing, with the support of a broad majority consensus, proposals for action for forestry policy.

cc) Renewable raw materials, renewable forms of energy

Renewable raw materials are an important building block in the ecological modernisation of the economy which the Federal Government wishes to achieve. With its funding policy the Federal Government wishes to promote the use of renewable raw materials for material and energy purposes. To help develop technologies and procedures for renewable raw materials, the Federal Government is making available considerable resources for research, development and demonstration schemes. Examples of very promising initiatives are a market introduction programme for rapidly biodegradable lubricants and hydraulic oils on the basis of renewable raw materials, or the use of rapeseed oil as fuel (bio-diesel).

With the Renewable Energies Act (EEG) of April 2000 a priority regulation for electricity from renewable forms of energy has been created. In this the reimbursement for electricity out of biomass is markedly increased and a fixed remuneration introduced. Thus the preconditions for investments for electricity generation out of renewable forms of energy and also planning security for investors were created.

With the "Market Incentive Programme Renewable Energies" (MAP) funding of resources of hundreds of millions per year was made available to lessen the disadvantages of investment in renewable forms of energy as against the fossil energies already established in the market.

On the basis of the EEG the Federal Government, with the Biomass Regulation of June 2001, has also created the conditions for a greater development of electricity production from biomass. The Biomass Regulation is an important step towards greater climate and environmental protection. It opens for farmers, owners of woodland, employees and businesses in the rural area new possibilities for production, sales and therefore income, and creates planning security for investment schemes.

dd) Pilot Projects "*Regionen aktiv"* (Regions in Action) – new agricultural policy for the taking

The rural regions have a key role in reorganising agriculture. The pilot project "*Regionen aktiv - Land gestaltet Zukunft"* (Regions in Action –the Countryside Shapes the Future), started in September 2001, will show in 18 regions how what the population require from agriculture can be taken into account more strongly than before, and which new routes are open to rural development. The regions will be given an impetus to develop concrete visions for their future which can then be put into practice to serve as models.

It is only by showing the new perspectives and by encouraging alternative sources of income that farmers can be won over as partners in the agricultural turnaround towards a multi-functional system of agriculture. They need and they want work which will build their security and an intact social space in the country. The projects are thus able to contribute towards securing and creating employment.

Pilot Project:

REGIONEN AKTIV - Land gestaltet Zukunft (Regions in Action - The Countryside Shapes the Future)

Project duration: 2001 – 2005

Location:

Partner: BMVEL

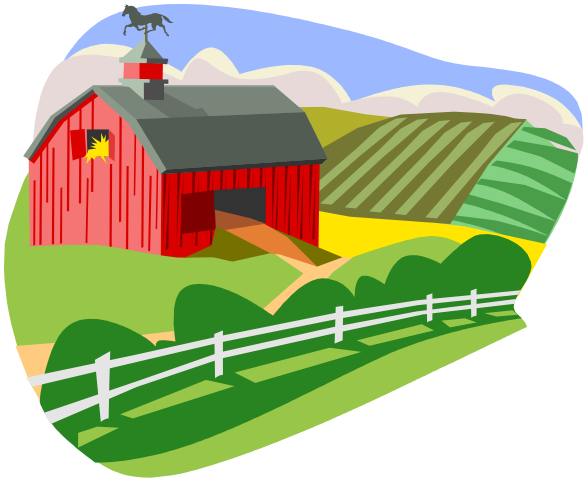
Aim:

Practically to try out, in model regions, the realignment of consumer protection and agricultural policies determined by the Federal Government

Measures:

A selection of 18 model regions within the framework of a two-round competition. It is important that in each case the concept of a quality oriented multi-functional form of agriculture, directed towards sustainability, is as clear as the greater account taken of consumer interests and of strengthening the rural area as a whole, for example by the creation of competitive new jobs and sources of income in the area outside agriculture. The easily comprehensible, transparent production in the region is particularly well-suited to restoring the lost confidence of consumers.

In addition, a multi-functional system of agricultural should, by care of the cultural landscape, services in tourism, the generation of energy from biomass and many other measures, fulfil important functions in the rural area. Multi-functional agriculture provides businesses on the spot with the opportunity to develop other sources of income in addition to the production of food and fodder.



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To achieve these goals, the areas of policy effected at all levels, but also State and non-State participants are to work together in a network of partnership and develop innovative ideas and perspectives for the regions. This process involves better harmonising the interests of consumers, producers and traders and also health, environmental and animal protection concerns. Education, qualification and a process of learning from each other are similarly indispensable parts of this process.

The winners of the competition are supported by the Federal Government for a period of four years with a total of EUR 35.5 million in realising their concepts for integrated rural development. In this process the regions can develop different points of emphasis to correspond with their respective problems and potential. In selecting the regions care is taken to ensure that the typical regions of Germany are covered. Thus across Germany a process is to be put under way which in the future will look after itself and demonstrate how what the population requires from the landscape can be taken into account to a greater extent than previously, and which new routes are open for rural development. The model regions with their innovative ideas should become a model for the entire rural area and its interrelationships with the town.

In the first round of the competition 206 regions took part. An independent jury consisting of representatives of the professions, the unions, district corporate bodies and science finally selected a total of 18 model regions in all (six regions from the East German *Länder* and 12 regions from the West German *Länder*).

The spread of the model regions right across Germany reflects the diversity of rural districts in Germany. Among the winners of the competition are structurally weak, remote districts such as the Oder estuary. Similarly, rural regions with favourable conditions for development are represented, for example the Chiemgau. Finally some other model regions are also distinguished by close links between rural and urban areas, such as, for example, the Weserland around Bremen.

Information from: www.modellregionen.de

ee) UNESCO biosphere reserves

A contribution towards the sustainable development of rural areas is also made by the 14 German biosphere reserves recognised by UNESCO. The aim of the biosphere reserves is to develop, test and permanently put into practice models of a harmonious interaction of people and nature in the sense of an ecologically, economically and socio-culturally sustainable development.

Biosphere reserves are spatially divided into three zones: in the core zone nature is to develop as far as possible in a way which is not influenced by human beings. The care zone is for the conservation and care of ecosystems which have come into being through, and are influenced by human usage. The aim is above all to conserve cultural landscapes which include a broad spectrum of different living areas. The development zone is a living, business and recreational area for the population.

d) International implications

aa) Changing direction in the EU

In accordance with the resolutions on Agenda 2000, taken in March 1999 by the Heads of State and Heads of Government, a mid-term review of the Common Agricultural Policy is to take place in 2002/2003. This will review the market regulations on cereals, oilseed, milk and beef and also the agricultural expenditure of EU-15.

The forthcoming mid-term review will be used as an occasion to introduce a fundamental realignment of the EU agricultural policy with altered framework conditions, which will result in a comprehensive reform of European agricultural policy and will involve as many markets as possible.

The Common Agricultural Policy will in the future be more strongly orientated towards the interests of the consumer and thus towards the market. Agricultural production must be orientated to a greater extent than it has hitherto towards the economic, social and ecological principles of sustainability.

This involves taking consistent account of the social demands made on agriculture in the areas of consumer, animal and environmental protection and also in the area of social responsibility. In this way, within the framework of a policy of integrated rural development, potential sources of income and long-term perspectives should be opened up to the people working in agriculture and in the rural areas.

European agriculture must improve its competitiveness. Cornerstones of the desired reforms are stronger orientation towards the market and quality competition, reduction of subsidies related to production, the gradual decoupling of payments from production, and greater funding for rural development.

With a gradual process of dismantling these measures, some of which also distort the market, the producers should be better able to react to market signals. The decisions of producers are thus no longer directed towards State subsidies; rather, production enters into genuine competition which defines itself through the quality of the products and the way in which they are produced. In this way the stronger orientation towards the market above all serves consumer interests. Safety and quality of foodstuffs must become the central hallmark of European food production.

The measures for rural development and for promotion of the environment were, in Agenda 2000, grouped together into a second pillar of agricultural policy. This second pillar currently comprises only 10% of EU expenditure on agriculture. It must be developed into an instrument for integrated rural development with a markedly higher share of overall expenditure. The aim must be to promote

sustainable economic and living areas within the rural area, which transcend the narrow relationship with agriculture and also extend to involve non-agricultural activities. Socially desirable activities on the part of agriculture in environmental, nature and animal protection should be encouraged in this way.

The financial resources available to this second pillar are to be the markedly improved by redirecting funds from the first pillar (direct payments in the market area). Therefore it should be established across the EU and for all member-states that all direct payments in the market area (1st pillar) are to be curtailed (degression) and some of the resources thus released redeployed into the 2nd pillar (obligatory modulation).

bb) Supporting EU enlargement to the East

The integration of the Central and Eastern European states in the EU is the most significant project in European politics to ensure peace and stability. The countries joining will have the chance for comprehensive participation in the EU internal market, which at the same time should offer considerable opportunities for the sale of quality products from the German agricultural and food industry.

Agenda 2000 is an important orientation for broadening the scope of the area of agriculture. Since a continuation of present day policy in an expanded European Union would neither be appropriate nor fundable, it is in the German interest to develop an agricultural policy which can be sure of permanent financing in an expanded EU and can have a positive effect on the German position as a net contributor.

Moreover it is necessary across the EU to raise minimum standards of food safety and to increase their transparency and control. Food safety is not divisible, no more divisible than is the necessity for a sustainable form of agriculture. Therefore the standards of the accession countries must be brought up as quickly as

possible up to the level of the old member-states. This process can be supported by advisory work, such as happens already within the framework of bilateral or twinning projects.

cc) WTO

At the forthcoming continuation of the agricultural negotiations within the WTO it is the aim of the EU that, in addition to concerns related to trade – access to markets, export competition, internal subsidy – the concerns not related to trade, such as preventive health protection and consumer protection, food safety, animal protection, social concerns and environmental conservation should be equally taken into account.

The EU is convinced that the further liberalisation and expansion of trade with agricultural products makes an important contribution towards the sustainable development of both industrial and developing countries. Precisely in the case of the developing countries, worldwide trade and the international division of labour offers the opportunity to use the available comparative advantages to secure their own development. The corresponding way towards trade relaxation measures for the poorer states is something which the EU has already suggested with its "everything but arms" initiative.

Criticism on the part of the developing countries and corresponding non-governmental organisations could be ignited against the classifications –the bio-seal and the conventional quality classification initiated by the Federal Government – if with the help of these labels it became more difficult for the products from a developing countries to find an access to the German market. But participation in this classification system is voluntary and does not represent a precondition for gaining access to the German market. Moreover, both classifications are open to foreign products so that worldwide any producer is free to submit to the

quality criteria and control system and thus meet the preconditions for participating in the corresponding label. Certainly problems arise in so far as the producers in the developing countries might have neither the necessary infrastructure, e. g. approved inspection authorities, nor the required financial resources to participate in one of the classification systems. Therefore the Federal Government is supporting producers in the developing countries by means of appropriate programmes, so that participation in one of the quality and classification systems does not serve as an obstacle to a trade.

dd) Securing nutrition and safety of food are indivisible: they must apply to all people worldwide

The bigger the European house grows, the more influential the European states will be, even in the global context, and the more international responsibility they will bear. Over 800 million starving people in the world warn that even for the European states not only food safety, but also the security of nutrition is one of the great tasks. To make nutrition secure is also an important foundation for world peace.

The Federal Government is actively promoting the realisation of the right to nourishment set out in the UN pact concerning economic, social and cultural rights, and is supporting the initiative of the 1996 World Food Summit to clarify this right and to make it enforceable. It is also supporting measures for clarification of the basis for the development of a voluntary code of conduct relating to the right to nutrition. In addition it is promoting the goal of the World Food Summit of reducing the number of starving people by half by 2015. It is promoting national policies and strategies to create the necessary framework conditions for sustainable agricultural development, by means of which it will be possible for the poor rural population to take part in the development process.

In fisheries policy too the Federal Government, in view of further decreasing fish stocks and the importance of fish for world nutrition, is emphatically supporting more environmental compatibility and sustainability and also the protection of marine ecosystems. In doing so, it places particular emphasis on internationally agreed measures for the conservation of fish stocks. The Federal Government will continue its active whale conservation policy and is making efforts to recruit new members for the International Whaling Commission who will similarly agitate for a consistent whale conservation policy. The genetic resources for nutrition and agriculture should be conserved worldwide and sustainably used, the access to these resources should be made easier, and the advantages resulting from the use of these resources should be balanced and fairly distributed. The Federal Government recognises the right of countries to design their national legislation within the framework of the appropriate legal system in such a way that seed can be used for sowing and for local research. In addition, the Federal Government emphasises the principle of the sovereignty of all countries over their genetic resources and also the necessity to preserve and conserve traditional knowledge, as required within the framework of the UN Convention on Biological Diversity (CBD). Therefore the Federal Government, at the next CBD conference, will press for the passing of the "Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization" as a general orientation for the implementation of the CBD recommendations. In particular the Federal Government supports the implementation of the International Undertaking on Plant Genetic Resources, as decided at the 31st FAO Conference in November 2001.

Security of nutrition and safety of food are also in the international context two sides of the same coin. The best way to achieve both is the way of sustainable agriculture. It is a matter of making sustainable agriculture possible for all farmers and making its products accessible to all consumers.

The Federal Government will therefore at the international level – particularly within the framework of the FAO and the WTO – take an active part in the negotiating role of the EU in the interests of global sustainability.

IV. Shaping demographic change

New transition into the Third Age of Life

Encouraging and strengthening families

Demographic change is a fact which in the long term presents our society with great challenges. Even a markedly increased birth rate and a noticeable increase in immigration will change little of that fact during the next decades. Therefore, the emphasis in this section is on the question as to how we can shape demographic change in such a way that the economic and social effects can be managed properly and the relationship between the generations is not strained.

It is a fundamental matter for concern for a society which is stable in the long term that young people decide to become parents and to bring up their children within the family to be responsible and mature citizens. But family life today is carried on in many different forms: those who are married and those who are not married, parents who bring up their children together, mothers and fathers who bring up their children alone. Children live in step families, adoptive families and foster families. In every case saying "yes" to the child is a personal decision affecting an individual's life which is not available in social terms. Certainly this decision, so to speak, marks the face of our society. Children and young people embody the future and the vitality of our country. With their questions and problems they keep our society young. They contribute to a situation in which the great questions concerning the future retain their political significance and maintaining the status quo is not the order of the day.

There are three key approaches to a sustainable policy for a child-friendly society:

- the economic basis of families must be strengthened,

- the availability of child care and also all-day schools must be extended, and
- the whole of society must be more closely orientated towards the needs of children (e.g. in road traffic).

In the first instance, families must be put into a position were they can earn themselves the income they need. Where this aim is not achieved, families must be subsidised according to need, so that living with children does not lead to unreasonable falls in their standard of living. With a whole series of measures the Federal Government has improved the economic situation of families. At the beginning of 2002 the child allowance was raised for the third time since 1998 to its present level of EUR 154. The tax allowances were extended. Families with children are among the winners in the taxation reform. A family of four on average earnings has already in 2002 more than EUR 1,850 more in their household budget, and in the following stages of taxation reform this burden will ease still more. Similarly, through the German Education and Training Assistance Act (BAFöG) more students will again receive state support, and also the housing allowance for families was raised.

The new age for parents gives mothers and fathers an equal opportunity of devoting themselves to caring for their child and at the same time of maintaining contact with their profession. In reconciling family and professional needs, a broad-based, need-orientated provision of facilities for the care of children by qualified staff, as well as all-day schools, play an important part. In addition, in a society in which children are becoming fewer and fewer, these facilities make an important contribution towards the learning of social behaviour. The development of these facilities is a task for the *Länder* and the municipalities. Within the framework of the planned Community financial reform the question will be reviewed as to how much financial leeway there is to achieve this.

Overall, a child-friendly society offers many opportunities for a living community, the lived experience of solidarity and better quality of life for all. On the one hand parents in our society are confronted with the loss of value systems which were generally unifying and actually lived. On the other hand in our modern society

there are fewer structures to support the family in the private domain, such as, for example, relatives and neighbours. Parents today are left more to their own devices. Finally, families are directed to a supporting social environment. This requires, for example, flexibility on the part of the employer if parents have to look after their children for a short time. In everyday life a living environment which is fair to children, safe roads as well as consideration and tolerance all play an important role. Thus the goal of the child-friendly society is quite intrinsically also a challenge for those participating in sustainable development within society: for employers and trades unions, municipalities and planners, churches and welfare associations – in the final analysis, for every one of us.

Challenges of demographic developments

An ageing population will, in the coming decades, be a characteristic feature of our society. For work and for the jobs market, for education, for medical care and for social security this has grave consequences. How will the relationship between the generations develop as they work together, if the age pyramid turns on its head? How flexibly, how innovatively can an ageing population respond to the challenges of economic and social structural change? How will numbers in the workforce develop (particularly women and elderly employees)? What does this mean for political commitment, for our democracy?

If we attune ourselves to the fact of demographic change and in the coming years change course, there is no reason for pessimism. Basically it is a matter of finding the balance again in responsibility between the generations. With the reform of the old age pension an essential element of the contract between the generations was realigned. From the point of view of today the conditions have been created to be able in the future to continue financing state pensions insurance for those who have contributed to the system. A level of pension is being ensured which

continues to allow a high standard of living. At the same time the theme of inter-generation equity has been once more spelled out in strengthening individual responsibility by means of the state-funded supplementary pension.

Nevertheless, it is highly significant for the economic and social vitality of the country, and also for the long-term stability of the social security systems if, as a result of the age structure after 2015 the proportion of the population in work markedly falls. Against this background it is above all important to develop appropriate ways of involving older people in working life, to develop their potential for education and qualifications, their chances to determine themselves the shape of their own lives.

Besides attractive opportunities for further employment for older people, there must also be opportunities for a self-determined life in old age when strength and health diminish. In particular, advisory agencies, self-help groups, outpatient and mobile services, day facilities and also inpatient facilities are the foundation for a necessary infrastructure which must be oriented towards the ideas, needs and wishes of the older person. In the event that nursing care is needed, statutory nursing care insurance makes a significant contribution towards continuing to maintain the independence and autonomy of older people. It also helps to ensure that those in need of nursing care and their relatives receive sustainable support in dealing with this difficult life situation.

Our picture of the older person, of his potential and his limitations, must be put to the test. Until now the picture has too often been marked by the introduction of early retirement to relieve the job market. On the other hand the changed living requirements of old people are also to be taken seriously. Overall, our task in the coming years can be summarised as follows: the opportunities for older people to participate in economic and social life are to be developed and to be exploited to full advantage. This will succeed to the extent that society takes account of their

living requirements, their potential and their limitations. This is especially true in the case of opportunities for education and qualifications and for participation in working life.

How incisive the consequences of demographic change are for economy and society can be seen in the following figures: because of the low birth-rate at the moment in Germany, the generation of parents is only being two-thirds replaced by children. At the same time increased life expectancy is leading to a massive shift in the age structure. Projections for the year 2050 start from the premise that the proportion of people aged 65 and over will increase from 16% of the total population today to around 29%.

According to projections of the Institute for Employment Research at the Bundesanstalt für Arbeit (Federal Institute for Employment), the potential number of persons in work in 2001 is around 44.4 million. If one starts from the basis of a greater number of people in work, particularly women, and also of a medium annual figure for migration, the potential number of people in work reaches a high point between 2010 and 2015. The number would then, under these conditions, continually fall to a figure of about 41 million in 2030. Even with a markedly higher number of immigrants the decrease could be mitigated but could not be compensated for.

The proportion of the population of those in work (employees and self-employed) is a definitive indicator of the extent to which the consequences of democratic change can be managed. The wage-earners produce the economic performance, create prosperity for every one, pay taxes and the social security contributions. Independently from individual elements in the organisation of the social systems, independently of whether they are financed by allocation or by capital provision, the active population pay for the services for children and young people and also for the old and the sick. The social security systems are thus more favourably placed the higher the proportion of active people in society is. Certainly continuing high productivity creates the space which makes it easier to manage the consequences of demographic change.

To take advantage of the employment potential of an ageing population, which becomes a more prominent theme in the light of the demographic developments from 2010, there is leeway fundamentally in two directions. In the first instance it must be considered how the number of those in work can be further increased, and secondly the question must be asked whether society ought also to provide opportunities to old people, which under suitable conditions make employment attractive to them.

Larger proportion of women in work

The opportunities available for young families, for women and men to reconcile their wish to have children and a family with their wish to continue in professional life will quite definitively decide whether in the future a higher proportion of women is in work. The proportion of women in work has risen from 1960 from 38% to 44%. During this time the picture of women in the professions has fundamentally changed. In completing education and professional qualifications women have today largely drawn level with men, and in some areas even overtaken them. About 45% of those studying at university are women. It is true that there continue to be more women in school than in the engineering office. The proportion of women in managerial functions continues to be far too low. The need to bring up children today still generally leads to a break in working biography, even if the parents soon return to work.

If in the interest of the majority the proportion of women in work is to be increased in the long term, reconciling the wish to have children and a family with professional life must no longer be allowed to remain their problem alone. The following steps are necessary to achieve this:

- Good and comprehensive facilities for the care of children in all age groups.
- Flexible organisation of work so that parents can respond to the changing needs of children and families.
- Increasing preparedness on the part of men to take over tasks in looking after children and in the family, for example by changing the claim on parenting time to allow women to shorten the break they take from work.

Longer working life

Besides a higher proportion of women in work, a longer working life is the second strategic starting point for increasing the potential for employment in an ageing society. Therefore at the beginning of the working life it is important to have shorter time for training and an earlier entry into professional life. The high number of those breaking off studies and those studying long term have until now tended to work against this. It is also on this basis that decisive significance attaches itself to a fundamental reform of colleges. (cf. Chapter E V.)

In pensions policy we have already set the necessary course for the future. In the medium term, pressure on the active generations remains acceptable for the next 30 years. Income during old age, ensured by the statutory pension scheme, remains relatively high and is complemented by state-funded individual provision.

Nevertheless, because of the falling number of those in work after 2015, a fundamental paradigm shift in the role of older people remains necessary for the economic and social vitality of our country. This paradigm shift has already been introduced. In the past, the direction of policy was decided by the need for early retirement in order to free up the employment market. For years, businesses have "shunted off" older employees into retirement at the cost of the social security system.

The idea of "retire at 60" was often publicised. From now on, by gradually raising the preferred retirement age, efforts are being made to restore the actual retirement age and to avoid early retirement.

Meanwhile, on a broad front, in businesses and trades unions and in society as a whole, a process of rethinking is beginning. On the initiative of the Federal Government, in March 2001 in the *“Bündnis für Arbeit, Ausbildung und Wettbewerbsfähigkeit”* (Alliance for Labour, Training and Competitiveness), measures were agreed to improve the employment chances of older employees. The Federal Government, trades unions and business representatives jointly agreed that a paradigm shift was necessary. "Instead of a premature departure from working life, in the future greater emphasis on the employment of older people, the prevention of unemployment and the re-incorporation of those already unemployed was to be the priority goal of policy measures relating to the employment market", was what the Alliance partners agreed. The German Federal Institute for Employment is actively involved in this process of changing course. Against the background of a partial shortage of skilled personnel, since August 1999 it has begun a long term initiative across Germany for the placement in employment of older employees.

Pensions reform: the course is set

In the pensions reform, the Federal Government has determined upon a structural reform which maintains security in old age at a stable level in spite of demographic challenge. In this, as far as can be seen today, measures to relieve the burden on old age insurance by further raising retirement ages are not necessary.

In the short term the task remains to reorientate the actual retirement age towards the statutory retirement age of 65. From today’s point of view the existing age limit of 65 may remain unchanged, taken into account that from the year 2012 an earlier start of retirement with reductions on the pension amount will no longer be possible for everybody but will be limited to persons from the age of 62 which have paid into the pension scheme for a long time.

These flexible elements in the pension system are appropriate. Any retirement age can only indicate very roughly from which age society assumes that a new stage of life should begin. As necessary as these elements are for the financial structure of a pension system, it is equally necessary, for the reasons stated above, to create for older people suitable opportunities to participate in working life.

With increasing age an increasing proportion of those in work no longer feel themselves up to the stress at work and to the quickly changing demands there. Similarly, with increasing age restrictions relating to health also gain in significance. For this reason the existing flexible elements in the system for provision for the elderly which provided for a smooth transition into retirement will in future become more significant, and consideration will have to be given as to whether in the long term this flexibility can be further developed.

Active in the Third Age of Life

All these considerations presuppose that the life situation of older people, their needs, their potential and their limitations, are realistically considered. What is necessary is a humane way of thinking which is directed towards increasing the chances of older people of participating in economic and social life and in shaping their own life as a whole.

From the standpoint of this approach, it becomes clear that the older people are not a homogeneous group, but that their life situations differ in many different ways. In a smaller group of them, there soon become apparent disabilities relating to health which lead to them having to finish work. Overall, the group of the "young old", i.e. persons between 65 and 70, are relatively little affected by health-related

disabilities in the third age of life. Thus they are able actively to enjoy retirement. Provided that forms of employment are offered which match their needs and their potential, they could still be leading an active working life.

The widespread assumption that capabilities are diminished with age is only true in the case of certain physical criteria. But even in physical capabilities for example, the great number of older people who are active in sports show that we must revise our picture of the older person.

This is even more true of mental capabilities. New research shows that under certain conditions older people can be as mentally sharp as they were in their youth. Moreover they have a great deal more experience of life, and, related to this, a high degree of social skills. For these reasons we simply cannot afford in the employment market to do without the potential capabilities of older people, which are often still high, or without their knowledge, their experience and their talent.

It is true that the studies also show that a comparatively high degree of capability does not drop automatically into the older person's lap. But setting aside possible restrictions caused by health, this kind of capability is more likely to be present when people undertake ambitious activities, continue with education, pursue diverse interests and generally participate in social life. Qualifications and further education are thus the important themes in enabling older people to participate in working life. If as a result of demographic change school classes become smaller and fewer students attend colleges, this can help to improve the quality of education and training given there. But it is equally necessary that schools and colleges attune themselves to the further education and qualifications of older people as an important task for the future.

The same is true for the job situation. Contingency measures such as job rotation, job sharing and opportunities for professional qualification all play a part in this. Here a new area opens up for action by businesses and trades unions. It is, however, quite decidedly necessary for businesses to adapt themselves to the needs of older people, their potential and their limitations. In this connection, developing suitable forms of work will achieve greater success the more these forms of work are developed jointly with those effected.

New transition into the Third Age of Life

But the limitations of such a fundamentally sensible approach should also not be overlooked. With increasing age it is harder for people to withstand the pressure to achieve at work, to cope with the daily stress, to keep on responding freshly and flexibly to changing conditions. And at a point which is different for each individual, they are no longer able and no longer wish to "carry the can" right up there on the front line.

Contrary to popular opinion, however this does not necessarily mean retirement. Thus the teacher stressed in school can, in the right circumstances, work very well in the further education of adults. The nurse stressed by the night shift is perhaps interested in getting involved in old age nursing care. The engineer who no longer wants to submit to deadlines could take on a new satisfying task by using his experience to advise young entrepreneurs.

The key to understanding the issue, then, is that the opportunities for greater participation of all the people in the workplace will possibly increase if, after they have finished the occupation which they have carried out hitherto, these people take up other work which corresponds to their potential and their living requirements. Understood in this way, this involves a new phase in working life and not simply a

continuation of a previous occupation. Change into a new form of activity which corresponds to the potential and requirements of older people is a distinguishing feature of this path. In this sense the smooth transition from a previous job into retirement will become a personal, and in some circumstances longer, phase in an individual's working biography.

This raises the question of which statutory social and fiscal measures are necessary to smooth the way for older people into a third stage of working life. This question is also pressing because this stage of working life can begin before the fixed retirement age of 65 and extend beyond it. Conceivable would be a model which continued from a statutory retirement age of 65. One option being discussed among experts is whether – going beyond the current already existing regulations regarding pensions for those with long years of contributions –approval could be given for early retirement in return for corresponding pension reductions. In the other direction current law already allows working beyond the statutory retirement age, when there are supplements to the pension. If this option is followed, both stages of transition, before and after the statutory retirement age of 65, i.e., for example, between 60 and 70, could form a self-contained stage within working life for which more or less consistent standardised regulations already apply.

An important element in such models is how additional earnings limits will be calculated. The current law allows unlimited additional earnings after the age of 65. There are earnings limits in the case of premature pensions and also in the case of pensions for disability. Similarly there are regulations for the calculation of income in the case of delayed pensions.

Even in the regulations relating to part-time earnings for old people there are already elements of a flexible transition into old age. The question would have to be considered whether in the future the current regulations must be designed in a more innovative way in order to increase flexibility.

These initiatives concern opportunities for the older generation. The old age social-security systems have the function of making possible an evening to life which is materially secured to a high degree, calculated on the basis of the retirement age. In the opinion of the Federal Government there should be no incentive for carrying on working which results from poverty in old age. This would have nothing at all to do with sustainable policy. Therefore the decisive factor is that the necessary flexibility is provided for the older generation at the existing high level of material security.

But the new model for the transition into the third age of life should not be allowed to be reduced to questions of social security. The challenge is first to the businesses and staff associations when it is a question of developing a profile which corresponds to the lifestyle needs of older people. Opportunities for qualifications and further education, tailored to their potential, are to be developed. The Internet for older workers could, for example, be a course which broadens the possibilities for getting work and at the same time broadens the possibilities for communication for older people. A flexible organisation of work, attuned to the rhythm of life of older people, would be another element. But also there is a challenge to wages policy, for instance for developing suitable pay structures, and reconciling individual work output and leave regulations.

In summary, against the background of a demographic developments in the coming years, a paradigm shift must be accomplished. A greater involvement of older people in employment first makes it necessary for us to correct our picture of the older person. The so-called "young old" generally have good potential for becoming involved in social and economic life.

This will succeed to the extent that businesses and staff associations, trades unions and trade associations as well as the state and the social security system adapt to the lifestyle situation of older people, their potential and their limitations. A new model for the transition into the third age of life, understood as a chance for another stage of working life with its own unique profile, could be an important step along this road.

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V. Changing old structures – developing new ideas

Education offensive and college reform

1. Starting the education offensive

Shaping change with education

In particular, sustainable development means taking an active part in shaping the continuing structural changes in society and economy. A precondition of this is that the person can deal with the rapidly growing knowledge, new technologies, and changing working and living relationships. To select the important information from the plethora of knowledge, to evaluate it and to apply it, poses great challenges to the modern person. A broadly based education in conjunction with greater social competence gives the person the red thread which will enable him to orientate himself within the context of a dynamic development of society and economy and to take an active part in shaping the changes.

The knowledge, skills and attitudes obtained through education are among the most precious things that a person and a society can possess. They expand horizons, open up in personal and professional life new chances and perspectives and empower people to participate in society. Education, also understood as a culture of interaction and of respect for the other, helps to overcome social restrictions. Broadly based education, however, combined with the capability of applying knowledge in a problem oriented way to solve current tasks, is also a decisive factor in the economic future of our country and our success in international competition.

In summary, education and qualifications have three aims:

- Development of personality
- Participation in society
- Capability for employment

Is our educational system equipped to meet this challenge? The direction of developments in recent years shows that there is a need for people to be active. Thus, for example, the proportion of young people from 15 to under 17 in Germany without a high school leaving diploma rose from 8.5% in 1995 to 9.3% in 1999. The chances for these young people entering employment with good prospects are small. The proportion of those aged 25 without a high school leaving diploma, without vocational training and not following a course of training rose from 9% in 1991 to 11% in 1997. The international benchmark study PISA also shows that the proportion of 15-year-olds who have only low reading skills is, at almost 23%, high in Germany compared with international figures.

But even before the PISA study, the problems connected with it were intensively discussed in Germany. Thus, the Education Forum of the Bund-*Länder* Commission made recommendations this autumn which take up these questions and largely agree with the concepts outlined here.

Deciding: strengthening early encouragement and thus equality of opportunity

All kinds of expectations from parents and society are directed at the school. It is supposed to impart knowledge, provide training in social behaviour, encourage creativity and balance out inequality due to origin. The list could go on almost infinitely. If it does not meet the extensive expectations, massive criticism results.

Until now will it was too little realised that successful learning is linked to elementary individual conditions on which the school has little influence. Even at the start in primary school, meaningful participation in education presupposes a given state of physical, mental, psychological and social development in the child. For example, if the child has great problems in paying attention, in concentrating, and in moving within the group, this can adversely affect the child's participation in education.

Only if we do not close our eyes to the fact that for different family, social or economic reasons a considerable number of children do not possess these elementary preconditions for successful learning, do we get to the core of the difficulties which our schools are facing today. Most affected by this are children from socially disadvantaged families and those with parents who were born abroad. If we want to prevent them failing at school later, we must tackle the question here. Therefore it is necessary for learning to be integrated socially in a way that takes into account background in the parental home and social environment. Thus kindergarten and school gain a growing educational significance, in order to balance out, as far as possible, inequality of opportunity resulting from origin.

A crucial factor is the recognition that, with targeted early encouragement in the kindergarten and in the elementary school, developmental deficiencies in children can be largely evened out. By contrast, later, measures taken both in and outside school can have only limited success in catching up on development and thus

preventing failure at school. Here it is that the course can be decisively changed towards lifelong-learning and successful professional development.

This means that above all the educational task of the kindergarten must be newly defined and as many children as possible should be involved in early encouragement schemes in the kindergarten. This is particularly important for children from socially disadvantaged families. Similarly, by means of individual encouragement in primary school, elementary capabilities in learning the German language, in reading, writing and arithmetic can be gained and, in this, effective and preventive educational work can be done.

Early encouragement, however, also has great significance because in the day nurseries and in the primary school there is among the children a curiosity and eagerness to learn which makes it easy for them to find access to new subjects. Thus at this age children learn foreign languages particularly easily. There is a great interest in elementary scientific and technical questions. Without overtaxing them, access can be made easy for children and thus prevent later barriers making access more difficult. Indeed, it is only at this age that they can practise social behaviour comparatively easily.

In essence, this approach gives rise to the following consequences:

- The need to redefine the educational task of the day school facilities with priority being given to early encouragement,
- Individual encouragement of children in the first years of primary school,
- Removing inequality of opportunity for children which results from social origin,
- Advice and further training for teaching staff to be able to carry out early encouragement on an individual basis

- Intensive collaboration between school and parental home, including qualified staff for advising parents, and
- Examining whether, and to what extent, attendance at day nursery should be free of charge.

School as space for living

Learning is more attractive for children and young people the more the knowledge and capabilities which they have learnt are relevant for their lives. Schools as islands of education, imparting knowledge and cultural techniques cut off from life, cannot fulfil their task. Education needs a sounding-board in the family, in leisure time and in the social environment, if learning in school is to bear fruit and promote the personal development of the children and young people. If books are read in the parental home and they talk about them in the family, children and young people can apply and further develop what they have learned in school. But if the dominant tone at home is passive consumption with little conversation it is less likely that children and young people will pick up a book and get to grips with what is in it. Someone who in their leisure time takes part in sport or follows their musical bent will similarly be essentially more ready to learn in these subjects.

Indeed the acquisition of values, social behaviour and also capacity for teamwork in children and young people depends on everyday experience and on models who live these values. Taking responsibility, accepting the consequences for one's own actions can only be carried out in real life and only within narrow limits in the teaching situation. This raises the question whether in the life of the children and young people there are a sufficient quantity of places where they can gain such experience and develop social behaviour. What are necessary above all are adult role models, parents, teachers, neighbours, trainers in sports clubs etc, who practise these attitudes in daily life and get to grips with the children and young people.

As a result, society cannot simply delegate to schools the task of educating children and young people. Only with school, parental home and social environment working together is the link between learning and life produced which is so important for a comprehensive education. Most parents are also aware of this, get involved, get to grips with their children and concern themselves, for example, with usefully structuring the free time of their children. But even here we will only progress if we do not close our eyes to the realities of our modern society. For some children and young people this parental home, the social environment and the framework for meaningful leisure time as supportive places for learning the art of living are only available to a limited extent. Not a few children and young people are left to themselves in the afternoon, often their leisure programme is characterised by simple consumption.

Thus the school itself must become more of a space for living, in which, besides teaching, the children and young people in their leisure time can use their abilities and can practise social behaviour. Of course even the best school cannot replace the parental home, but it can only sensibly complement it. However a good school culture, committed teachers and good leisure opportunities, can, working together with parents, promote the development of young people and create a stable learning environment. Also the school itself can establish links to businesses and social institutions and in this way make possible important experiences and encounters with people outside school. In order to be able to take on a greater educational function in this area than they have previously, the schools must, in terms of staff and financing, be placed in a position to be able to take over these important tasks.

In order that the school becomes more of a space for learning and living than it has hitherto, the following measures are important:

Need-based expansion of provision of all-day schools with an emphasis on social learning,
Development of pedagogical concepts of the school as integrated space for learning and living,
Further training of teachers and also other skilled teaching personnel for this expanded task,
Intensive collaboration of schools with parents and institutions outside school.

Lifelong learning

Continuing structural change, the tempo of technological and scientific development, particularly in information and communications technology, require from people lifelong learning. Simply completing school and college once and for all is no longer enough. Yesterday's completed education will only be worth half its value tomorrow. For the future it is necessary that

- Further education is rated as highly as school and vocational training have been to date,
- In schools, learning is taught and learned (learning skills),
- Higher education institutions take on qualified further education as a task in its own right, and
- The building blocks for lifelong learning are inserted in an individual's working biography.

The Federal Ministry of Education and Research has gathered together, in a programme for action, concrete areas for action towards a "learning society".

Thus the Federal Government wishes, so far as lies within its powers, to promote lifelong learning and to contribute towards a corresponding change in educational structures.

Education for sustainable development

Linked with the principles of sustainable development is also a certain approach, a way of addressing and solving the problems. To see things from the outset in all their economic, social and ecological interconnections, interdisciplinary knowledge, participative learning and the development of social skills characterise this educational approach. The framework guide "*Bildung für eine nachhaltige Entwicklung"* (Education for Sustainable Development), published by the BLK describes the central tasks for day nurseries, the institutions for school and vocational education and also colleges. In 2001 the Federal Government presented to the German Bundestag a "*Bericht zur Bildung für eine nachhaltige Entwicklung*" (Report on Education for Sustainable Development) laid down in Bundestag Drucksache 14/7971, which outlines the concrete measures required.

According to this report, an essential aim of education for sustainable development is to teach configurational skills. These configurational skills involve:

- forward thinking which looks on the future with imagination and creativity,
- living, complex, interdisciplinary knowledge,
- the ability to shape the immediate environment in shared action with others, and in this connection to be able to take part in decision making processes within society.

This pedagogical approach, important for sustainability, should be integrated with greater emphasis in all areas of education.

2. Fundamental higher education reform

Knowledge is the most important resource for sustainable development. In view of the tempo of technological development and economic and social structural change in a globalised world, we need the best brains to be able offensively to shape structural change according to the principles of sustainable development. The spiritual and economic vitality of a society, its ability to accept the challenges of the 21st century, also depends on whether our higher education institutions achieve excellence in research and teaching at an international level and thereby provide the impetus for the renewal of the economy and society.

The Federal Government therefore sees in high-performance schools and institutions of higher education at a top international level the foundation for a long-term successful development of our country. Without education and research, new initiatives to carry out the necessary modernisation of state and society, to permanently safeguard the natural foundations of life, to maintain economic competitiveness and the equitable distribution of work, income and chances in life, cannot be developed.

Higher education institutions are the driving force for economic and social development. They must provide research and teaching which can compete at an international level, they must make the pressing questions of our time their own and see to it that new knowledge is quickly transferred into society and the economy. In the U.S.A. the renowned top-flight universities are the point of crystallisation for the development of communications technology and the so-called "new economy", the driving forces for economic structural change. These famous universities attract first-class scholars from all countries and provide the decisive impetus for technological and economic development. Meanwhile, competition for the best brains has flared up worldwide between institutions of higher education. This is the case for professors, but also for junior scholars and students.

Working conditions, staff provision and equipment, and also the climate at the higher education institution and its location in an attractive environment, are the deciding factors.

In research and teaching at German universities often excellent work and often internationally recognised results are produced. Nevertheless, at the current time many German higher-education institutions are not yet sufficiently equipped to compete in the international arena. A widespread bureaucratic system of regulations and the still widespread individual control of educational and financial administration cripples individual responsibility and initiative at the higher education institutions.

The law relating to public sector pay makes it difficult to recruit and to encourage top personnel. Building measures or the acquisition of large items of equipment must be applied for and often approved by means of lengthy procedures. It is true that, since the 1998 amendment to the Framework Act for Higher Education (HRG), higher education institutions can themselves select up to 25% of their own students, but they are not yet equipped for this in terms of personnel and procedures. Not least, many higher education institutions are under-financed in view of the great increase in student numbers over the years. For these reasons, the management boards of higher education institutions and faculties are often only conditionally in a position to set points of focus, to position higher education institutions as a whole for competition, and to carry out the management functions necessary for a modern "service business".

The Federal Government therefore sees in a greater development of higher education institutions and in the setting of clear resource priorities the most important preconditions for higher education institutions to produce outstanding achievement in research and teaching and to remain in competition internationally for the best brains. This goal can only be achieved by a reform of higher education institutions which is carried out with vigour. In the future the state should limit its involvement to mandatory framework and target setting requirements for the work of higher education institutions, and withdraw from a bureaucratic process of detailed control.

With the amendment of the HRG the necessary framework was created to achieve this. Some *Länder* have already set off on the road of thinning out the thick net of regulations for higher education institutions. In the meantime more freedom is being given to higher education institutions in applying budgets and in setting up courses of study, and also in running their internal affairs. In addition to this more efficient framework conditions must be created which will allow all the higher education institutions sufficient leeway for directing performance and building up their profiles, and at the same time make them responsible for the results.

Not least the discussion concerning public sector pay reform has shown how much work in convincing is still to be done in this connection. With the Act on the reform of the provisions concerning the employment of civil servants the Federal Government has taken an important step to give qualified junior scholars prospects and possibilities to carry out research independently and on their own responsibility at a significantly earlier point in their careers. Secondly, with pay more related to performance of higher education institution lecturers, the right signals should be given.

In giving access to courses of study the higher education institutions must continue – in line with Article 12 of the Basic Law – to offer sufficient opportunities to guarantee the basic right of free choice of place of education. In this connection, successful study and an efficient use of resources can be expected if the higher education institutions get the students suited to them and the students get the higher education institutions or subjects which suit their abilities.

We should also wave goodbye to the idea that all higher institutions should be the same in the aims, scope and quality of the facilities they offer. We want here to allow more competition, because properly functioning competition at the end of the day leads to higher quality. The independent profile of a higher education institution in research and teaching and the scholarly reputation linked to this,

makes a decisive contribution to such quality. For this reason the State and the *Länder* have given up the cumbersome and obligatory systems for study and examinations in favour of more flexibility for the higher education institutions. It is true that this requires at the same time the firm establishment of other flexible and reliable quality assurance mechanisms (e.g. accreditation and evaluation).

In this context the following structural elements characterise a form of autonomy for higher education institutions which sets them free and at the same time makes them responsible for the results:

1. Extensive freedom for the higher education institution over internal organisation, use of resources, and above all in the selection of personnel.

2. With the reform of the law relating to public sector pay, new principles were established. These should be further developed to make possible the free selection and performance-related pay of top personnel.

3. The *Land* and the higher education institution agree targets which determine the development and performance indicators for the institution for the medium term. A professional management team within the institution then has the necessary freedom of movement, but at the same time is responsible to the *Land* for the results achieved.

4. The *Länder* and the State set quality management criteria with which the performance of the higher education institutions can be measured (a precondition for competition between institutions).

5. Higher education institutions are financed from within global budgets. A significant part of the funding is allocated on the basis of performance, as already proposed in the HRG.

6. The higher education institution decides on the study disciplines and systems for training and examinations which it will offer. It deploys its potential to be attractive to students, lecturers and researchers. Overall it is the task of the management team to continue to develop the institution's profile to meet the requirements of the time.

7. By the introduction of points systems for performance and also by graduated Bachelor and Master's degrees, movement between German higher education institutions, and international mobility, will be promoted.

If the higher education institutions are released to follow this path into freedom and competition, this will give an enormous boost to innovation and outstanding achievement. If clear targets and timescales are agreed between *Land* and institution, on the one hand this strengthens the position of the politicians, and on the other hand reduces the possibility of them making detailed regulations for the institutions. Until now the institution could point to the educational administration and the educational administration could point to the institution if development did not go as planned. This agreement makes the management team of the institution responsible for the results. Certainly, this presupposes that, at least in the medium term, a global budget (including performance-related elements) is allocated to the institution.

In the situation today the HRG already provides a wide scope for implementing the reform of the higher education institutions outlined here. Should further changes or supplements to the HRG be necessary, the Federal Government will enter into discussions with the *Länder*.

The orientation of higher education institutions towards achievement and competition is not at all in conflict with the aim of making study possible for students from all social classes, irrespective of the income and means of their parents. Quite the contrary: to exploit the potential in talent which we have here is a precondition for achieving these goals.

Access to study should not be allowed to be dependent on the parental purse. Equal opportunities for access, and the financial support of students who cannot finance their studies from their own resources, are thus integral components of this concept.

After student funding has for years fallen in real terms, the Federal Government, by means of the fundamental reform of the BAFöG, has widened the circle of those entitled to it, has substantially raised the funding and at the same time has extended it to include aspects of international and European developments. In addition, with the educational credit system, a permanent, reliable aid to completing a course of study has been created, irrespective of the reasons for exceeding the maximum funding period.

VI. Innovative Enterprises – successful economy
Innovation as the driving force of sustainability
Sustainability as the driving force for innovation

1. Scope for innovations

A successfully developing economy is an integral component of sustainable development. This can only take place on the basis of an efficient economy and businesses which are internationally competitive. Only in conjunction with sustainable economic development can a high degree of social security and environmental protection be guaranteed in the long term. If we wish to progress along this road towards sustainable development, we must strengthen the power for innovation in our businesses.

The potential performance of our economy is quite critically determined by its power for innovation. Innovations are the mainsprings of economic growth, employment and improvements in environmental protection. For example, progressive energy-saving technologies make an important contribution to climate protection, reduce energy costs in factories and create a considerable number of additional jobs.

But a purely technological-scientific concept of innovation would miss the mark. Going far beyond this, sustainable development requires visions, the breakthrough into a new way of thinking. A new way of thinking needs room to manoeuvre and wide horizons. This raises the question whether there is today this room for manoeuvre in businesses, in the state, *Länder* and municipalities, in higher education and research institutions, that is, within the framework of existing institutions and structures, or are innovations being hampered because of too many clauses and the tendency to make detailed regulations?

The existing institutions and structures must be put to the test if we wish to open up scope for development and thus promote innovations. This is the case, for instance, with the tendency to wish to control things in detail by means of Acts, regulations and administrative regulations, budget approvals, tax incentives and subsidies, and to create a high degree of equity in every individual case. To carry this out requires, on the one hand, a large and expensive administrative apparatus. On the other hand it restricts the choice between various options for achieving goals and thus reduces efficiency. But increases in efficiency are the key to the competitiveness of the economy, to lower use of energy and resources in the interests of climate protection and better results in the area of education and research.

A person who agrees targets, who can actually make administrative decisions at their own discretion or set priorities within a budget, is acting more on their own initiative. More scope for innovations, more efficiency in the use of resources and a culture of responsibility and thus sustainable development are what results when politicians and administration renounce their claim to regulate matters and control them in detail. Voluntary agreements between government and business with clearly-defined goals, an independent system of monitoring and sanctions if the goals are not achieved are therefore often an alternative to state regulation.

2. Globalisation and structural change as challenges

To ensure that the power of innovation in our economy also continues in the future, we must face the challenges which globalisation and economic structural change bring with them. The shift of value creation and employment from production to service provision, which has been observable for years, continues to accelerate, information and communications services acquire greater and greater significance. Above all service provisions enterprises which require intensive know-ledge are advancing and are determining the need for technology and innovation.

Moreover the dynamics of innovation have changed: the gradual improvement of products and production processes is progressing more rapidly, the development of new technologies and their realisation in the form of new products is becoming more and more significant.

Studies by the Fraunhofer Institute for Systems and Innovation Research in Karlsruhe/Germany show that multinational businesses are increasingly coming to concentrate their research and development activities in one or two locations in the world. But in selecting these locations it is not only the quality of research which matters. Also important are the local conditions for bringing newly-developed products onto the market. Innovative core activities are bunched together where attractive markets, highly-developed production structures and excellent conditions for research are gathered together. For example, the "lead market" for medicines is where the highest quality standards are, which are also seminal for other countries. If these quality standards are met, this creates in practical terms access to all markets in the world.

What do the above developments mean for the strengthening of the power for innovation in Germany? How are we prepared to meet the new challenges? Where are our strengths and weaknesses?

Particularly strong on innovation in Germany are the traditional industries with higher technology such as the automobile and machine construction industries or the chemical industry. On the other hand, there are shortcomings in their links to leading edge technologies, such as information technology, biotechnology and the new materials. This differentiated picture can also be seen in the process of opening up new markets: while, for example, German environmental technology occupies a leading position in the world, many new market developments, such as communications and information technology, have to date lagged somewhat behind. Outstanding technical achievements are only possible with qualified personnel. Here is one traditional strength of German businesses. Certainly there is a decrease in the readiness of businesses to invest in training – from the point of view of the power of innovation, an ominous development. Here is one central area of responsibility for businesses to address.

The German research system is highly differentiated and decentrally organised, which internationally is considered a great advantage. Certainly such a system must be highly networked, sufficiently flexible and dynamic. In particular it is important in the future to develop the international network.

What conclusions can be drawn from these strengths and weaknesses? What must we do in order to maintain the competitiveness of our technologically highly developed economy in the long term?

In the long term it will be a matter of linking the development of future technologies with the existing economic-technological efficiency of German industries and of opening up new markets. In doing this the assimilation of knowledge which is available worldwide is just as important as funding the production of knowledge in our own country. Internationally developed new technologies must as soon as possible be made useful for our own bases of production. Foreign research institutions and businesses should be attracted into Germany in order to create high quality research and development capacity with international connections.

Science and research have not only an essential share in the concrete development of sustainable innovations: above all they also provide the knowledge which gives guidance about the necessary direction of progress and develop scenarios for the future.

The topography of our research is shifting and will further develop in a targeted way. The classic "sequential" route from basic research through applied research to development and innovation is increasingly giving way to a networked process. In this, not only are knowledge and ready solutions put into practice, but in the opposite direction complex problems are presented to research and solved, in a continual process of the exchange, in a way which matches the market.

There are central new questions and opportunities lying between the traditional disciplines and professions: thus research teams and cooperation groups must now preferably come together in a way which is interdisciplinary and which crosses professional lines of demarcation. Research networks like the Helmholtz network project "*Global zukunftsfähige Entwicklung"* (Global development sustainable in the future) or initiatives based on new concepts such as socio-ecological research are models for this. And the most efficient exchange of information happens via people's brains: we shall further promote the international exchange of scientists and the exchange process between science and the economy and remove obstacles to this.

The attractiveness of the German system of innovation is not only determined by competitive factors such as costs and salaries, but also quite critically by the ability to find and implement new structures and markets. Opportunity lies in the development of innovations which will find opportunities for application worldwide. This often requires years of offensive learning such as that which takes place in long term pilot schemes. But this learning pays for itself: someone who first develops and then controls complex solutions gives the businesses involved competitive advances and attracts international investors.

Many of the structural changes in production, transport or housing and construction, necessary from the point of view of sustainability, can serve as the basis for such complex learning processes. Whether it is a matter of developing a form of energy provision which is sustainable in the future, or concepts for organising mobility in an environmentally-compatible way, or a system of production of high value foodstuffs which conserves natural resources and at the same time is economically viable – these are only a few examples of important future questions to which we need innovative answers.

With its pilot projects within the framework of the Strategy for Sustainability, the Federal Government is providing the impetus for a such a learning processes. For example: the fuel cell. Using the fuel cell could lead to an efficiency revolution in energy generation. It is true that the preconditions for this are further technical progress, broad-based market penetration and reductions in costs. In carrying out practical trials of stationary and mobile fuel cells, we provide the impetus for tech-

nical improvements and accelerate market introduction. Yet in the end there should be a form of technology ready for the market, which uses resources efficiently, can be successfully marketed in international competition and thus create jobs. Sustainability as innovation thus becomes the trademark of an economy which is sustainable in the future.

3. Strengthening the power of innovation

For the Federal Government, strengthening the innovation skills of German businesses is an important component of its economic and research policy:

- Thus, with specific research and development programmes (PRO INNO, industrial joint research including ZUTECH and InnoNet) we are promoting the ability of small and medium-sized businesses to develop innovations and co-operative research and development schemes.

- We are supporting the exchange of knowledge and personnel, with the BTU programme we are removing financial obstacles to the setting up of young technology-oriented businesses and we are stimulating the research and development potential in the East German *Länder*.

- The Federal Government has in the past three years orientated research and technology policy by the model of sustainable development. This includes funding measures for sustainable management in various professions and regions and new research programmes in the important action areas of mobility, construction and housing. Systematic account has been taken in these schemes of the central criteria of sustainable development, such as energy and resource efficiency, environmentally appropriate materials, cycles and the integration within products of the principles of environmental conservation.

With the Action Programme "*Wissen schafft Märkte"* (Knowledge creates market opportunities) we are speeding up the transfer of technologies to businesses. Thus we are seeing to it that the results of research are more rapidly translated into innovations. To aid this process we wish, for example, to strengthen the role of the patent and licence system and make it easier for parts of companies to be hived off.

- The "Technology-oriented Visiting and Information Programme" (TOP) of the Federal Ministry for the Economy and Technology is an example how innovation transfer can be carried out "on the spot" within the process of an innovation benchmarking system orientated towards businesses and practical applications. Particularly for small and medium-sized businesses, the form of direct exchange of experiences between businesses encouraged by TOP is a more effective way of putting innovative ideas into practice. TOP provides the opportunity to demonstrate, in addition to "classical" innovation themes, also innovative forms of job design, knowledge management, payment and remuneration and also quality management.

- In July 2001 the "*Innovationsbeirat*" (Innovation Advisory Board) with high-ranking people from science, the economy and non-governmental organisations began its work. It will provide advice to the Federal Government particularly concerning decisions regarding research policy.

4. Sustainability: driving force for innovation

Innovation is not an end in itself, rather it should help to take concrete steps in the direction of sustainability. It is a matter of setting the economic signals; this means, in particular, prices, within this context. The orientation of the German economy on the model of sustainability is a central opportunity for maintaining long-term competitiveness. Non-renewable resources are becoming more and more scarce and thus more expensive. The determining factor of nature/resources is thus the central starting point for the future costs and benefits structure. Businesses which are

today developing and implementing innovative solutions within the area of energy and resource efficiency are achieving a strong competitive position in the world-wide market. This is the basis for a high degree of value creation and for ensuring employment in the long term. In this context, management which uses resources efficiently benefits both the environment (less waste and pollutants) and also the economy (less costs through reduced use of materials).

The "Dow Jones Sustainability Index" shows the improved opportunities for competition enjoyed by businesses who attune their strategies to sustainability. Institutional investors are increasingly examining whether and to what extent firms follow the sustainability model. Socially and ecologically responsible businesses are regarded in the long term as being more successful overall because they are better at integrating into their business plans social trends and attitudes. Many progressive businesses take advantage of the opportunities which lie in a sustainable management approach. So, for example, they meet together in the German Environment Management Association (B.A.U.M.) or the forum econsense of the BDI.

Certainly it is also the case that innovations whose goal is sustainability are orientated to a longer timescale and are often associated with an initially greater entrepreneurial risk. To link short-term and long-term business goals can to all intents and purposes be difficult to arrange in practice.

The Federal Government therefore wishes to contribute towards orientating the innovatory dynamics within the German economy along the lines of sustainable development. Advantage should be taken of the potential of sustainable systems of management by process optimisation and strategies for product use. Ways should be shown to improve resource efficiency by means of new procedures, materials, products and services. The distance that the “dematerialisation” of production can go is shown by increases in efficiency in water consumption: around 1900 one tonne of water was needed to produce one single kilogram of paper. In 1990 only 64 kilograms were needed. Today the most modern paper factories work with almost closed production cycles which manage with 1.5 kilograms of

fresh water. We want to design the framework conditions in such a way that innovations along the lines of sustainability maintain market value. In development, production, sales and marketing and also in the use and disposal of products, as also in service provision, it is a matter of exploiting the opportunities of sustainable management.

5. Shaping work innovatively

Until now, innovation was often understood as simply technological progress. In the future the “soft innovation factors“ such as optimal communication in businesses, development of networks in the international “community“, intelligent and flexible organisational structures, will be increasingly significant. Thus there is great potential for innovation in organising process and operating schedules in management and administration in such a way that the maximum benefit, both from the point of view of the business and that of the co-workers, is gained from the use of the resource “work“. “Soft“ innovation factors such as organisation of operations, qualification and motivation of co-workers, management behaviour and communication are at least as important for the economic efficiency of our economy as the traditional “hard“ form of technological innovation.

The consequences for innovations policy are these: it should not simply be restricted to the funding of basic research and technology and the creation of framework conditions conducive to innovation, but must also provide initiatives for innovation within the area of working relationships. In encouraging innovation therefore, employees come more strongly into focus. Many businesses have, for example, by means of competitions about knowledge and ideas or by regular discussions with co-workers, achieved decisive innovatory advances. Thus good communication within the business becomes a decisive innovatory factor.

In the area of promoting innovation within businesses, social responsibility, the motivation of employees and the economic success of businesses go hand in hand, because it has long since been clear that socially responsible businesses are more successful in the long term since they are better at integrating into their business plans social trends and attitudes.

The Federal Government has recognised the significance of innovative working relationships and therefore in its innovation policy is following a multi-dimensional approach: in addition to the intensive promotion of "technology-orientated" innovations we are promoting research into innovative working relationships. So, for example, with the framework concept "*Innovative Arbeitsgestaltung - Zukunft in der Arbeit"* (Innovative Job Design - the Future for Work), advantage is to be taken of the potential within innovative job design. Businesses and co-workers receive concrete guidance and aids to action. Employees at all levels should be in a position to take part in the innovation process actively and creatively.

The direction is clear: successful innovation processes are based on a proper interaction of technical, economic and human factors. The development of such forms of innovation depends on a multiplicity of skills which must exist in businesses, but also in society and in politics. Therefore we have established the theme "*Arbeit durch Innovation"* (Work through Innovation) in the *Bündnis für Arbeit, Ausbildung und Wettbewerbsfähigkeit* (Alliance for Labour, Education and Competitiveness).

Federal Government, business and trades unions have recognised the identification and presentation of good examples of innovative working relationships as an important element promoting innovation and have set up an online information facility. Here businesses can get information concerning model solutions, which have proved their worth in practice, concerning, for example, organisation of work, working hours, further education and personal development. In addition there are already many further projects for innovative information provided as facilities for the modern world of work of our social partners.

The overall economic goal must be to integrate employees to a greater extent within innovation processes in order to discover, put to use and further develop existing resources. One way is by involving co-workers more in decision-making processes and their results (for example through discussions involving co-workers, internal ideas competitions, group work, continual processes of improvement).

Human resources management means creating incentives to make the workforce ready to embrace innovation. This includes transparency and communication on the part of management. Information and promises given to co-workers must be reliable. Workflow must be designed and organised flexibly. Career prospects and prospects for personal development must be opened up to the co-workers. In addition, an important role is played by the work of staff associations and councils in encouraging innovation, for example, in the form of innovation dialogues within the business. Particularly at the operational level, it is all about removing prejudices and making better use of the experience of older employees.

Experience shows that businesses which shape their work in this kind of innovative way act more quickly and with more success in the marketplace. Changes, new developments are seen by them in the first instance as opportunities and not as cost risks. But such a "proactive" attitude is the precondition for economic success in a time when framework conditions are changing more and more quickly.

VII. Reducing land use – encouraging sustainable residential development

1. Initial situation

Dealing in an economic way with scarce, indeed irreplaceable, resources is one of the fundamental principles for sustainable action. This principle is also particularly applicable in respect of land use.

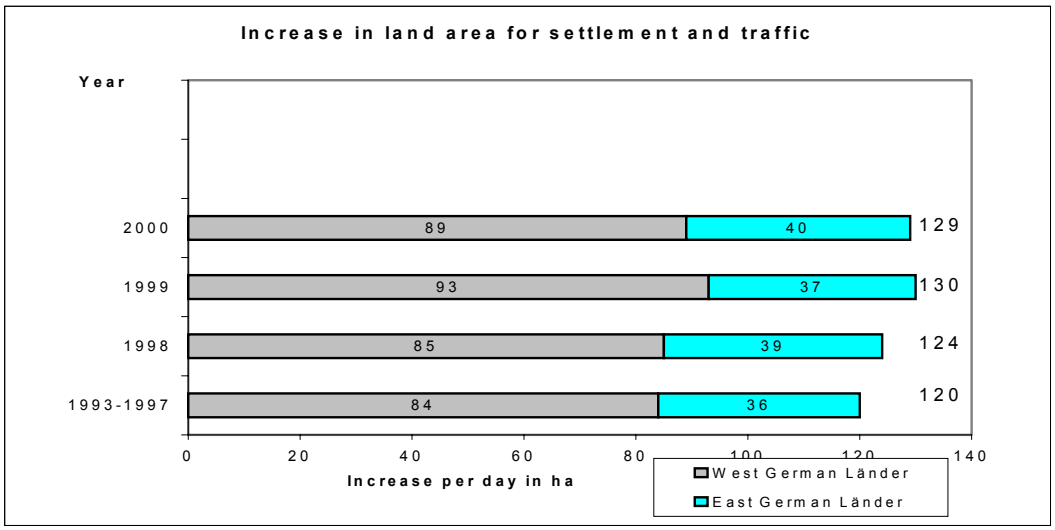
Particularly in a densely populated country like Germany, it is necessary to conserve the land in its ecological functions as the basis of life and the living space for human beings, animals and plants and as a component of the ecosystem with its water and nutrient cycles.

There is no area of action in which the complex structure of ecological, economic, and social requirements are so visible as in the area concerned with the limited resource of land and residential development. In this connection, both the increasingly high ratio of land used for transport and residential purposes as against land used for agriculture and forestry, and also the splitting up of areas of land are associated with negative effects on the environment. Examples of this are the conflict between transport growth and recreational use, the loss of living space and the barrier effect on wild animal species or the dispersion of pollutants.

At the same time what is involved is conserving the land in its many different usages, for example for housing and recreation, agriculture and forestry, other economic and public uses and also transport. Thus to provide the population with sufficient, suitable and affordable housing space is an important goal. Also for commercial purposes and infrastructure sufficient areas of land must be available at economically justifiable prices. Moreover options for use by succeeding generations must be kept open.

An economical use of land, in a way which is compatible with nature and socially acceptable, is a central element of a sustainable system of residential development – this is the pledge we made in 1996 at the UN Human Settlements World Conference Habitat II, together with the other UN member states.

It has already been possible to decouple the use of residential areas from economic growth. It is notable that the use of land in the West German *Länder* markedly fell from levels of up to 114 hectares per day in the Seventies to 71 hectares per day at the beginning of the Nineties. In the East German *Länder* during the course of reunification there was a clear need to catch up in construction of roads and housing. Now it is a question of achieving an overall clear reduction in land use. The daily use of land for residential and transport purposes overall has risen to 129 hectares per day. This trend should be reversed and directed towards levels of 30 hectares per day in the year 2020. Here in the first instance the challenge is addressed to the *Länder* and municipalities because, within the framework of regional and capital development planning, they set the provisions concerning the reservation of land. The urgent need for a system of control can be seen by looking at how land use has developed in recent years:



It is true that 11.8% of the overall land area of Germany seems small, but as a result of increasing use of land for housing, decreases in employment density, increasing requirements for leisure, consumption and mobility, the amount of land used for housing, mobility, leisure and employment has been growing for years, and this is also split regionally in very different ways into areas of agglomeration and rural areas.

The projections of land demand for housing developed by the Federal Office for Building and Regional Planning for 2015 indicate that in the next 15 years an increase of 12.4% in the demand for land for housing can be expected. This increase is essentially attributable to an increase in owner-occupation. Here the demand for land rises by a good 21%, whereas in the rented housing sector it remains at about its 2001 level. But the stronger demand in the ownership sector must be met with a smaller level of daily land use. It is therefore decisive for future development that housing development must take place not only on greenfield sites but also to a greater extent within towns and cities.

In this connection it must be taken into account that the demand for land will show larger regional variations. Regions with housing provision backlogs will increasingly follow the line of development, in which houses will be rebuilt.

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In the new *Länder* now the revitalisation of housing no longer in use is contributing in many city areas to a reduction of land use. In the long term the expected drop in population will also have a dampening effect on residential development.

What is indicated overall is that a sustainable form of residential development must also include concern for providing sufficient housing space. The same applies in the case of a policy of land provision which also makes it possible for future generations to carry out positive industrial and commercial development.

Residential land should not be allowed to be equated with "reserved" land. A significant proportion of residential land consists of greenfield and undeveloped areas and also includes environmentally-compatible uses. On a rough calculation the land used for residential and transport purposes also often includes the comprehensive equalisation measures which today statutory regulations require should be carried out in the case of every new use of land. It is also a matter of the quality of the land use. Realising this creates the room for manoeuvre which is necessary to harmonise the ecological components of sustainability with the economic and social dimensions, despite land use.

Against this background, sustainable residential development can be seen to be a complex management task, which at all political levels requires careful balancing of the different concerns.

2. Strategy

A sustainable form of developing the residential structure with its effects on the use of land must be quantitatively and qualitatively controlled.

The quantitative approach pursues the goal of further decoupling specific land use from economic growth and of reducing more and more the reservation of land. Watchwords like space-saving construction, compact town, grouping of infrastructure, provision of land in compensation and releasing areas of land which are no

longer used are directly connected with this approach. Land recycling, more extensive mixed use and traffic-saving residential designs with residential development concentrated at nodal transport points and along transport axes also have an indirect effect on reducing land use.

But sustainable control of residential development in parallel with the reduction of land use must also be aimed at qualitatively improving land use. So, for example, the improvement of the living environment in inner cities can make the population more ready to accept again that living in the town is an attractive alternative to living in the green belt. Where expansion of residential development is required because of increasing demand for housing, it is also justifiable to locate this outside the town, if this leads to ecologically-compatible, economically efficient and socially acceptable residential structures. The form of development taking shape outside the town, with single occupancy or multiple family dwellings, small gardens and ample open spaces can be a positive component of sustainable residential development.

At the same time, it is precisely in the environment of towns and cities that we must manage to improve the face of the landscape and the recreational value of open space. In rural regions it is particularly significant to conserve intact open spaces in the landscape.

Therefore it is only a double strategy of quantitative and qualitative control of land use which is suitable to design residential development in a sustainable way. For all that it is necessary to reduce future land use, an exclusively restrictive land policy would have considerably undesirable economic and social consequences. It would not only restrict economic growth, but would above all lead, through shortage of land and associated shortage of housing space, to displacement effects at the expense of the lower-income sector of the population. Therefore, regional planning regulations for the protection of open space should above all be flanked with economic incentives for a policy of land clearance or mobilisation at suitable locations.

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3. Measures and instruments

To develop the range of available instruments in a targeted way, the thing to do would be to differentiate on a regional basis the areas covered by the various measures. What this involves is:

- conserving open space,
- controlling residential development at the interface between town and country in a way which is compatible with social, economic and ecological considerations and also conserves land, and
- intensifying the development within town and city areas and designing it in a more attractive way.

Within the framework of regional planning, building, and town planning legislation, a wide range of instruments directed towards sustainable development already exist and are being used. Therefore, at the foreground of further consideration of this question will be economic incentive systems to counter excessive land use in the future.

a) Conserving open space

Precisely in a densely populated country like Germany, the conservation of open spaces, including their ecological functions, forms a great challenge. This involves protecting them from being used for building and reservation as such, and protecting landscapes from being split up by infrastructure schemes.

Near-natural landscape areas should as far as possible be conserved. To secure and further develop natural and near-natural areas a biotope network is necessary.

With the amendment of the Federal Nature Conservation Act the conditions were created for a biotope network extending across Germany, which should make up at least 10% of the land area.

Germany has a wide range of different instruments for coordinating land planning. The regional planning laws of the State and the *Länder* in their guiding principles also concern the protection of open spaces and the conservation of the natural foundations for life.

In order to ensure that all land is dealt with in an economical and protective way, building law and nature conservation law work closely together. Unavoidable interventions in nature and landscape, which are considered to be required after all the circumstances have been weighed, are, in accordance with the intervention regulations in the nature conservation laws, to be compensated for by measures for nature conservation and care of the countryside .

With the instrument of landscape planning, local communities and those at higher levels responsible for planning are required, in accordance with the Building Code, to integrate in their building plans the goals of nature conservation and care of the countryside. Through the new Federal Nature Conservation Act, this instrument was introduced to cover the whole of Germany.

Existing statutory instruments, such as the priority given to the re-use and use of residential land which has fallen into disuse before the use of open spaces, and also the release of areas which have not been used for a long time, must be more intensively applied. No further permitted uses and building in open areas should be allowed.

The development of traffic routes due to an increase in the volume of traffic has contributed to a corresponding use of open spaces and thus also to a continuing splitting of living spaces and cultural landscapes. Here it is a matter of preventing further adverse effects on the landscape, for example by grouping traffic routes.

b) Residential development at the interface between town and country

Current town planning law is already directed towards avoiding interventions in nature and landscape, or rather with providing ecological compensation for the intervention in nature and landscape associated with land use. A condition for using new building land is that appropriate land is provided in compensation, and measures for compensation implemented. Developing building scheme plans is subject to the imperative of protective treatment of land. Cases of reservation of land are to be limited to what is absolutely necessary. The regulations concerning the building land register make an important contribution towards a register of existing reserves of building land, and hence to further measures regarding the use of these areas. Finally, there is an imperative for revitalising and releasing land which municipalities can implement in the case of areas of land which have been unused for a long time.

The dangers for inner-city localities, and in the long term for the functioning of towns and cities as a whole, as a result of settling extensive retail operations on greenfield sites, were recognised. The existing range of instruments should not be relaxed.

In any event there still remains much to do, even in the future, to promote sustainable residential development by means of concrete measures.

Until now the external costs of excessive land use were not sufficiently charged to those responsible, but for the most part had to be borne by the general public. There are no economic incentives which might lead to a change in behaviour. Many municipalities, because they are in competition to attract retail developments and because of the local taxation income they expect to receive, have no interest in controlling the development with the help of sanctions regarding land allocation.

Nevertheless it is the case that with intelligent concepts it is possible to reduce the demand for land without restricting concerns of economic and housing policy. Thus, a series of communities have already introduced a communal system of land management by means of which they carry out a comprehensive co-ordination process of activities and measures regarding the use of the limited resource of land. This process is based on considering potential uses such as building, open space between areas of building, undeveloped land, vacancy or under-utilisation of properties and also on an evaluation of the planning state. In this way, on the one hand suitable locations can be offered for investors, and on the other it is possible to improve the mobilisation of building land. More municipalities should use this instrument and in doing so must, if required, be supported by appropriate support schemes.

Even a land policy involving several local communities is today used in some individual cases and deserves to be more widely publicised. By greater collaboration between municipalities and regional co-ordination, communal building plans involving more than one community can be agreed, joint plans for land usage developed, and the foundations for a long term regional policy for land provision laid down.

The introduction of distance-related charges has placed users of private cars and public transport on an equal footing, thereby supporting a strategy for concentrating residential development at passenger train stopping points. It is true that the progressive development of the distance-related charges works in favour of long-distance commuters by private car, as a result of which the positive effect of this measure for residential development is, at least in part, nullified again.

c) Development of inner-city areas

From the point of view of an active and economical system of dealing with land and a sustainable system of residential development, everything suggests a programme of mobilising building land as part of development within a town and against residential growth out into open land. A fundamental re-orientation of the concept of residential development is already today contained as a postulate in many regional planning concepts under the rubric “development inside before development outside“, and has already been put into practice in some initiatives. It is about finding new space for housing and commercial uses in the first instance in the existing town and city areas, and not giving a further boost to the process of suburbanisation by comprehensive new build measures on a greenfield site. The State research project “*Städte der Zukunft”* (Towns of the Future), in which a sustainable town development was put to the test by measuring results based on specific indicators, showed that the ambitious inner-outer development target ratio of 3:1 had, in the towns which were reviewed, largely been achieved. Also in the future, a key role in this will fall to the municipalities, which they should actively fulfil in the course of a voluntary commitment. Also required, as they have been hitherto, are regional planning targets and also a system of monitoring land development which is based on them.

The activities of regional and town planning have for years been particularly directed towards the upward valuation of the inner cities. At State, *Land*, and municipal level there are a large number of proposals and initiatives for strengthening the inner cities. It is in Eastern Germany that the funding of city developments has contributed towards stopping the inner cities from decaying further and towards making them attractive. The increase in the capital development subsidy for investments in quality improvements in old inner-city housing will also encourage the revitalisation of the inner cities. It is generally the case that considerable significance attaches to the development of property funding for the development of the residential structure.

Decisive significance also attaches to land recycling as a means of reducing growth in residential land. The re-use of undeveloped areas of land in the inner cities, the amount of which has strongly increased with the changing economic structure, is already being practised in many cases. Re-use of previously used land once again represents an increasing proportion of overall residential and commercial building in towns and cities as against building on land not built on before.

Funding for building in towns and cities is to be used as a central instrument of land recycling – until the latter is fully functioning in accordance with the requirements for economic efficiency. There must be better interlock between funding for housing construction and an urban development policy for the conservation of inner cities and for weakening the process of suburbanisation. This is also an interesting approach for mobilising building land by means of land recycling, because it directs housing construction funding to where, from a town planning standpoint, available housing construction land is quickly to be re-used. The funding can be used to even out the rising scale of building land costs between city centre and hinterland and to improve housing and living conditions in such a way that the development of housing for young families with children in the town once again becomes a real alternative to single-occupancy housing in a suburban community with the daily transfer to the workplace in the town and back. Contracts drawn up under public law between investors and authorities are increasingly proving valuable in countering existing obstacles to recycling resulting from land contamination.

Success has been achieved within the framework of the State programme "*Stadtumbau Ost*" (City Restructuring East) in making the funding of housing policy measures dependent on the fact that there is a city development concept approved by the local authority and that the measure to be funded fits within this concept. At the same time the State is making financial aid available to the *Länder* to enable them to deal with the consequential town planning measures which

result from the housing policy measures for which funds have been allocated. For the most part these involve the demolition of housing which is no longer needed and the town planning adjustment measures arising from these schemes. In this way inner-city building stock which is standing empty but worth keeping is to be used for housing measures which otherwise would be carried out in the communities outside the cities, when the cities already have a problem with vacant property.

This takes account of the fact that concentrated forms of residential development as an alternative to “green belt housing“ are only accepted if they involve an ecological and social upward revaluation of the living environment. High-quality housing with gardens as an alternative to single-occupancy housing in the suburbs can also be developed in inner cities: an upward revaluation of green and open spaces in cities is an essential precondition for this. This will help ensure that inappropriate land use is prevented and a sustainable form of residential development is encouraged.

An essential measure which can lead to the mobilisation of building land in the inner city area is the redevelopment of the rating system. Base values for the present-day rating system are the rateable values last set on 1 January 1964, which must be regarded as out of date. In the meantime, as far as concerns the law relating to inheritance and capital gains tax, on the basis of decisions by the German Constitutional Court, rateable values were abolished as a basis for the valuation of property. In the further discussion concerning redeveloping the rating system, particular attention should be paid to the fact that the rating system does set economic incentives for sustainable residential development. In this connection, a reform of the rating system requires collaboration between the *Länder* and the State.

F. Taking Global Responsibility

Sustainability does not end at national borders. In this time of globalisation every investment, every implementation of a national structural measure and above all our manufacturing and lifestyles have effects which go beyond our national borders. A scientific method of ascertaining this is the “ecological footprint”, which measures human use of the environment in terms of space requirement per inhabitant. This procedure allows us to compare the lifestyles of various societies relatively simply, and to assess their sustainability. The world-wide average ecological footprint per person is calculated at 2.8 hectares. That is twice as much as scientists think would be compatible with sustainable development. World-wide, people in industrialised countries use an average of four times the natural resources used by people in the developing countries. At the same time, they often help themselves to resources from other countries and to endangered environmental assets. This is why, particularly in the wealthy countries, production and life-styles must be changed and the available natural resources (e.g. forests, lakes and oceans) used more efficiently, so that living conditions can be improved on a world-wide basis.

All this makes it clear that a national sustainability strategy refers not only to the consequences of world-wide changes in this country, but also that we have to take account of the effect of our own actions on the situation in other regions of the world. The interdependence of global ecosystems means that it is possible to experience them in the same way as the international network of economic and financial systems.

These days, internationally agreed rules increasingly establish the framework for the way in which individual states handle such matters. The lives of individuals

are as influenced by this as they are by, for example, the globalisation of the media and consumer models. There is often tension around the implementation of international agreements and social norms against a background of the demand for independence and cultural identity, which has to be taken into account in the organisation of global social, economic, ecological and political framework orders, which are intended to ensure that globalisation promotes sustainable development and does not impede it.

The fact that the world has grown closer together has sharpened our awareness of our mutual dependency. At the same time, it has become clear that the developing countries are not always able to assert their interests sufficiently within international codes and structures. Very often, developing countries are not prepared for globalisation, so that they are unable to take full advantage of it, and the progress of their development recedes further.

However, over the last few years, some progress has been made in important areas. The strengthening of the United Nations has clearly consolidated social models such as democracy and human rights. Milestones were the peaceful changeover in South Africa, the successful transfer of a series of Central and Eastern European countries to democratic and market-based systems and democratisation in South America. Global solutions are increasingly being developed for global environmental problems. A number of environmentally damaging substances are already being successfully controlled by international agreements on the environment, and there are likely to be more in the foreseeable future.

Economically, some countries, particularly in South East and East Asia, have made tremendous progress. Considerable success has also been achieved in the areas of health, education and population development. In 1997, for example, people in 49 developing countries had a life-expectancy of more than 70 years at birth. As late as 1990, this statistic applied to only 22 countries.

Despite all this, over the last years, the world-wide rift between rich and poor has widened still further. Poverty, hunger and hopelessness are facts of life in many of the developing countries. In addition to that, another 815 million people are chronically undernourished, despite the fact that the world produces plenty of food. The share of the developing countries in world trade has reduced, from 0.7% in 1980 to 0.4% in 1998. Many of these countries either do not have a suitable product base or they lack adequate marketing structures to survive the rigours of international competition. Furthermore, the industrialised countries are still prevented from trading with precisely those products which could be supplied competitively by developing countries.

The meteoric progress of information technology and the increasing significance and spread of the Internet have also further marginalised many developing countries, particularly their more rural regions. 90% of all Internet users live in the industrialised countries. The rift between North and South is also becoming noticeable with the global consequences of climate change: it is already clear that the developing countries are having to suffer the overwhelming consequences, such as an increase in droughts and flooding. Apart from that, the opportunities for the poorer populations and states to adjust to the changing climate or to make appropriate provision for the inherent risks are less than in the industrialised countries.

With regard to world-wide interdependency and the effect of living conditions in other countries, it will be important to organise globalisation responsibly and in such a way that the developing and transformation countries can make use of the opportunities for globalisation, and that we meet our obligations to future generations. This will require workable international institutions and rules which will create the framework conditions to allow developing countries to participate more easily in the decision-making process relating to the organisation of globalisation. This means striving for a fair balance of interests between industrial and developing countries as debated at the Rio 1992 Earth Summit.

The German Government welcomes the proposal of the Sustainable Development Council following the example of the Brundtland Commission to set up a United Nations World Commission on Sustainability and Globalisation. This will not create new administrative structures, but will constitute a political initiative to organise globalisation in accordance with the principles of sustainability.

International trade will, in future, have to orientate itself more consistently toward the improvement of world-wide living conditions. At the Millennium Summit in September 2000, the world community confirmed that it would concentrate its activities in this direction by acknowledging international development targets. By 2015 world-wide poverty and malnutrition, amongst other things, should be reduced by half and infant mortality by two thirds, and there is intended to be more equality of the sexes. In addition, by 2005, every country will be required to implement sustainability strategies, so that the current trend of loss of the natural resources which we all need to survive can be reversed by 2015.

Ultimately, we must never lose sight of the fact that the fight against poverty and protection of the environment can only be successful where there is peace. For that reason, close association with other fields of external relations, particularly the maintenance of peace and the fight against terrorism, is essential.

I. Fighting poverty, promoting development

International endeavours in the fight against poverty are both an expression of human solidarity and make an important contribution to the preservation of our own interest in international stability and security and in the protection and availability of global public products. Because all this is dependent to a large extent

on the prospects for developing countries. Around the world, 1.2 billion people have to survive on less than one US dollar per day. Human misery, social tensions, environmental damage and political crises are often the consequence of such disadvantage.

For the Federal Government, fighting poverty therefore constitutes an important part of its overall policy, which is directed towards world peace and future security. The core starting points are changes to national and international structures which will contribute to socially and ecologically tolerable growth, the promotion of democracy, human rights, equality of the sexes, the reduction of the causes of conflict and the maintenance of global and local natural resources in partner countries.

This means that the conditions and scope for action will have to be created, so that the people affected are able to make use of their creative opportunities and develop their potential. In this respect, the Government has taken a number of initiatives, important examples of which are as follows:

- The debt relief introduced at the World Economic Summit in Cologne in 1999 means that, on certain conditions, 38 of the poorest countries can save up to 70 billion US dollars on the servicing of their debts. Money which is released by dispensation will be utilised for social programmes in these countries, and will therefore benefit the people directly. With widespread participation of the people in the developing countries in poverty-reduction strategies, there is now a basis for coordinated collaboration between states and multi-lateral organisations.

- The Federal Government's contribution to the halving of extreme poverty has taken the form of the "*Aktionsprogramm 2015*" (called Action Plan 2015 in the following), adopted by the Cabinet in April 2001. This means that, for the Federal Government, the target agreed by the United Nations at the Millennium Conference in 2000 has become a specific obligation. The important starting points of the 75

action plans being implemented at international level, both here and in our partner countries include: the improvement of opportunities for education and employment, the promotion of entrepreneurial capacities, protection and safety of access to essential resources such as land, water and energy, basic education, especially for women and children, the reduction of EU import duty on products from developing countries within the framework of the new World Trade Round and promotion of the process of democratisation.

- A basic education is an essential component of the 20-20 Initiative, which was adopted by the United Nations at the World Social Summit in 1995. It provides that interested developing and industrial countries mutually undertake to devote an average of 20% of their national budget, or 20% of their public development aid, including their contributions to multilateral organisations and non-governmental organisations, to basic social services. These also include basic health programmes, including reproductive health and population programmes, fresh water supplies and waste water disposal programmes. Germany has supported the
  Initiative from the outset, and has so far entered into corresponding cooperation agreements with 27 developing countries. The average proportion of basic social services within the framework of Germany's bilateral state financial and technical collaboration with these countries in 2001 was 24%.

- The dramatic spread of the HIV/AIDS epidemic affects millions of people in the developing countries, and is threatening to destroy all the efforts made towards their development in the last decade. The Federal Government has reacted by making a stronger commitment. The bilateral funds for targeted measures for the fight against HIV/AIDS were increased to around 70 million euros per year. In the forefront are

education, prevention reinforcing of the healthcare systems and providing consultation for risk groups, and particular support is given to the treatment of infected mothers. Partnerships with private companies in developing countries and with pharmaceutical companies have been built up. Over and above this, Germany will contribute 150 million euros to the global fund to combat HIV/AIDS, Malaria and Tuberculosis founded by the UN General Secretary Kofi Annan and the Heads of the G8.

- An essential component of the promotion of development is the securing of fair trading opportunities for the developing countries. The EU decision to open the market to all products (except for arms) from the least developed countries, is a first important step. It will allow these countries alone to earn an additional 3 billion US dollars. The Federal Government has given its particular support to the implementation of this initiative. Within the framework of the new World Trade Round, the Federal Government will continue to work towards a further reduction or even the abolition of import duties on important processed products from developing countries, in order to minimise their dependence on the export of raw materials. Over and above that and within the framework of both the EU and the WTO, the Federal Government is continuing with the further reduction of export subsidies and other support which inhibits competition, whereby exceptions can be made for developing countries, for example, on the grounds of reliable self-sufficiency and the development of their agricultural sectors (“development box“).

- By itself, the continued development of regulations which benefit the developing countries will not suffice. Many countries also need support in order to be able to make use of their export opportunity by producing a range of goods which, in terms of quality and customer requirements, are in demand on the world market.

The Federal Government has taken this concern into account, by ensuring that activities in the areas of organic farming, forest certification and fair trade are incorporated into a comprehensive programme designed to promote social and ecological standards in developing countries. The intention here is that the partnership countries should have greater opportunities to sell certified wood and to establish themselves more effectively on the German fair trade market which, to date, has grown only slowly. (Value of goods marked with the TransFair Seal in 2001: 53 million euros; market share still mostly under 1%, 2.5% for tea, 1.5% for honey, and 1% for coffee).

- For the social organisation of globalisation, what is needed is increased collaboration in between the International Labor Organisation (ILO), the World Trade Organisation (WTO), the United Nations Conference on Trade and Development (UNCTAD), the International Monetary Fund (IMF) and the World Bank. Within the framework of cooperation for development, the Federal Government will also support the upholding of the ILO agreements, in particular the agreement on the abolition of forced labour and the exploitation of child labour, on non-discrimination, freedom of association, and the right to negotiate tariffs. However, in order to better enforce the rationalisation of core employment and social standards in international trading relations, consideration must be given to additional incentives and improvements.

- In the area of disaster relief, the Federal Government will give more weight to disaster planning. Particularly in the developing countries, the very existence of more and more people is threatened by natural disasters. In such cases, it is important to react swiftly and without getting entangled in red tape in order to alleviate the most serious need. Over and above this, we aim to promote preventive measures within the terms of sustainable development, so that such disasters do not happen in the first place, or at least have less serious consequences.

Using indicators which can both determine susceptibility to disaster and analyse the cost and effect of preventive measures, the countries concerned will be able to make their own decisions on investment and mobilisation of self-help in their disaster planning.

- In addition to projects such as the building up of local structures for disaster planning, civil protection, fire prevention and earthquake-proof construction, the Federal Government will also support the own production of food in order to stabilise supplies. Within the framework of the WTO, the Government will support the embedding of the concept of the ability of countries to feed themselves in the WTO agreements as a non-trading concern.

2015 Action Plan

At the turn of the century, at the UN Millenium Conference in September 2000 in New York, the heads of state and governments set themselves the target of cutting extreme poverty in the world by half by the end of 2015. Germany was one of the first states to give a binding undertaking to contribute to the halving of world poverty, with its "*Aktionsprogramm 2015 - Armutsbekämpfung, eine globale Aufgabe*" (2015 Action Plan – Fighting Poverty, a Global Challenge) passed by the Federal Cabinet in April 2001.

In this Action Plan, the fight against poverty was stated to be the all-embracing task of development policy and an important part of the Federal Government's overall policy. The Action Plan sees the fight against poverty as a long term process, geared towards the structural causes of poverty which, within the meaning of global policy structure, starts internationally, in the countries co-operating in development, but also here at home. This means that both the counter-effects of poverty and environmental destruction on us and the effects of our consumption and policy models on global opportunities for sustainable development are taken as a central theme, and makes clear that support for sustainable development is therefore an inter-departmental matter and a task for society as a whole.

The 2015 Action Plan defines the re-organisation of the Federal Government's development policy in the form of a Cabinet resolution. It will be implemented jointly with all the relevant protagonists both within and outside the Federal Republic. A Forum for Dialogue 2015, first convened in February 2002 and made up of political, media, commercial, trades union and other civilian personalities, will accompany and support the implementation process.

II. Deepening cooperation between the state and the economy

A logical consequence of the growing number of challenges in development policy and the increasing overlap with the economy which arises in the course of globalisation is the intensification of the partnership between the private and public sectors. In the knowledge that the global tasks with which we will be presented in the future cannot be mastered by the public sector alone, the Federal Government has extended its collaboration with civil society in the North and the South, and also with the private commercial sector. The only way to meet these challenges is to mobilise all our potential, that of the state and the commercial and technical potential of the private sector. The measures taken and summarised under the key phrase Development Partnership with the Economy, will bring benefits in the development political sense, precisely because they will be in the interest of businesses. Project-related partnerships with businesses and measures to reinforce responsible business management will support the further establishment of the values and standards of the market economy in international trade relations.

There are already more than 800 project-related partnerships in existence, principally with small and medium sized businesses. The measures themselves take place in over 60 countries in the infrastructure zone, social sectors (such as education or health), agriculture and other areas of development policy, and their value can range from a few tens of thousands to several hundred million euros. Sparse state funds can thus be given considerable leverage and can be used to mobilise additional private funds for development purposes. This approach will be reinforced over the coming years.

In addition to project-related partnerships, responsible business management world-wide is another important key to the solution of these problems. The Federal Government is therefore promoting voluntary environmental and social quality seals and codes of conduct by companies, and has undertaken to progress

the implementation of the OECD principles for multinational corporations. These principles contain wide-ranging provisions which cover not only environmental, but also financial and social aspects of sustainability. This includes the internationally recognised core standards of employment, a recommendation on human rights and statements about fighting corruption and consumer protection. By implementing these initiatives companies can show their awareness of their corporate and social responsibilities.

In this respect, the “Global Compact” brought to life by UN General Secretary Kofi Annan has a pivotal significance. By entering into this global pact, company managers are creating nine new principles in the areas of human rights, employment rights and environmental protection and making them “their own”. Three of these principles are specifically dedicated to environmental issues, and relate to a foresighted strategic approach to environmental challenges, to concrete initiatives within the framework of common responsibility for the environment and to the development of new, environmentally friendly technology. The Federal Government supports Global Compact, for example by way of regular discussion rounds with companies, to which non-governmental organisations will also be invited.

III. Progressing the protection of the environment and resources world-wide

Despite all efforts and a number of successes, environmental problems are increasing world-wide, resources are being over-used and the opportunities for development of future generations curtailed. A reversal of this trend will only be possible through European and international cooperation; commercial and financial globalisation must go consistently hand-in-hand with ecological globalisation.

For this reason, the Federal Government is pursuing the ongoing development of global, European and bi-lateral environmental systems and programmes. One of the main focuses of this is the ratification and implementation of the Kyoto Protocol: a milestone in global climate protection with a significant effect on the environment, energy and development policies, an exemplary regime of sanctions and new instruments of the market economy. The Kyoto Protocol is symbolic as a cornerstone of effective “global governance” and, for that reason, it is important that the Kyoto Protocol enters into force in time for the World Summit on Sustainable Development in September 2002. This, however, is only a first, important step. Over the next few years, the Kyoto Protocol must continue to be fastidiously developed. The industrialised countries must continue with the reduction of greenhouse gases to target levels. Developing and newly industrialised countries must gradually accept specific restrictions, and effective reduction of emissions in the so far unrecorded areas of international air and sea transport must be tested.

Other focal points of Germany’s environmental policy are the adoption and implementation of the Sixth EU Environment Action Programme, which has wide-ranging aims for the protection of the environment within the European Union and in countries which are candidates for membership to the EU, as well as the ratification and implementation and/or continued development of the following environmental agreements and programmes, amongst others:

- United Nations Convention on Biological Diversity (CBD). Here, the focal aspects are: access to genetic resources and fair and balanced compensation for the commercial advantages gained from their use, biodiversity of forests and the treatment of non-resident species. The Carthagena Protocol on biological security, which sets world-wide minimum standards for the transmission, marketing and use of genetically modified organisms, should be brought into force as early as possible.

- The Montreal Protocol on Substances that Deplete the Ozone Layer. Here, the focus is particularly on further reducing the time limits to withdrawal from partly halogenated fluorochlorocarbons (HCFC), in order to further restrict the use of these CFC-alternatives world-wide. Apart from that the measures to prevent the smuggling of CFC must be reinforced, which has arisen as a result of various provisions in the developing and industrialised countries, as well as in the former Eastern bloc states.

- Better protection against hazardous materials at international level by the early enforcement of the new Convention on the world-wide ban on the twelve most persistent organic pollutants (POP Convention) and on trading with certain hazardous chemicals (PIC Convention). A world-wide infrastructure for the safe management of chemicals should be set up, in particular by the international standardisation of existing systems of identification for hazardous chemicals and by the implementation of Chapter 19 of Agenda 21.

- Global Programme of Action for the Protection of the Maritime Environment from Land-based Activities (GPA) and the Convention for the Protection of the Marine Environment in the North East Atlantic (OSPAR Convention). In view of the increasing contamination of the marine environment, the threat to fish stocks and the significant effects of the fishing industry on marine biodiversity, the Federal Government has given top priority to protecting the marine environment and sustainable environmentally-friendly use of marine resources. This applies both to the work done within the framework of the multilateral Agreement on Marine Protection and the Food and Agriculture Organisation of the United Nations (FAO), and to the imminent reform of the European Union’s Common Fisheries Policy.

- The Aarhus Convention of the United Nations Economic Commission for Europe (UNECE). The aims of the convention include the improvement

of transparency of operation by authorities and the strengthening of rights of participation and opportunities for the legal protection of citizens and environmental groups. The Federal Government also attaches great importance to the reinforcement of civil rights, particularly in environmental matters.

Sustainable development in all areas of life and commerce is conditional on a change in the attitudes and behaviours of society as a whole. At international level, too, better integration of all social groups will play a decisive role. The Federal Government supports initiatives aimed at increasing the involvement of non-government organisations in the work of international organisations.

The Federal Government also supports improved integration of environmental protection into different policy areas on an international basis: it is particularly concerned with international strategies for the protection and more efficient use of resources such as water and energy. Within the EU, too, it aims to push ahead with the ongoing process of integrating environmental protection into other community policies.

In order to bring the process of structural change and growth which accompanies globalisation into line with the protection of the natural necessities of life, the Federal Government is supporting appropriate global ecological framework conditions. In addition to expanding and strengthening multilateral environmental agreements and international environmental institutions, appropriate conditions include:

- The drafting and implementation of minimum environmental and social standards in the form of Codes of Conduct and guiding principles of international organisations, and voluntary self-restrictions jointly with the private economy. An example of this is the initiative by the Federal Ministry for the Environment relating to principles for the strengthening of environmental protection in the course of foreign direct investment to be worked out by a process of dialogue

with other Federal Ministries, trade associations, businesses and trades unions, as well as environmental, consumer and development associations. This initiative represents an essential contribution to the World Summit in Johannesburg.

- Greater consideration shall be given to social standards and environmental aspects in international trade and investment regimes (particularly in the World Trade Organisation – WTO), as well as international financial institutions such as the World Bank or the European Investment Bank, and the international financial service industries (for example, within the framework of the OECD recommendations on consideration of environmental requirements in relation to export credit insurance).

IV. Promoting sustainable use of resources

These international endeavours will only succeed in the long term, if the developing and newly industrialised countries can be successfully included, for example, in the fight against climate change. Although it is currently the industrial countries which are causing most of the greenhouse gas emissions, by 2025, it is the developing countries which will be responsible for just under half of these emissions.

In addition to universal integration of the environmental dimension into concepts, instruments, programmes and projects in all the promotional areas, development collaboration is supporting concrete proposals for environmental protection and sustainable use of resources with almost one quarter of the bilateral programmes. This applies as much to limiting environmental damage caused by poverty as to supporting the developing countries in realising development measures which will both reduce poverty and be tenable in the future.

With this background, the German Government will be pursuing the following central themes in the course of the development collaboration:

- The protection and sustainable use of forests, in order to contribute to climate stabilisation and biodiversity. Because deforestation involves soil erosion and creation of deserts over vast areas, as well as disruption to water systems and shortages of firewood and utilisable timber, all of which threatens the very existence of millions of people in developing countries. Despite may efforts, the forested regions in the majority of countries continue to be diminished in terms of both size and quality. Germany is supporting the necessary counter-measures with between 125 and 150 million euros annually, making it the largest contributor world-wide to forest maintenance.

It also promotes independent certification of sustainable forest management, which is intended to enable public and private consumers of wood products to make responsible choices. The Federal Government advocates demanding and effective regulations for the maintenance and sustained development of the world's forests.

- Efficient and environmentally friendly energy systems, preferably from renewable energy sources. For many countries, an adequate energy supply is the key to economic and social development. Around one third of the earth's population has no access to commercially supplied energy. This can only be sustainably guaranteed if the most environmentally friendly and efficient solutions can be found for the use of fossil fuels. This means that an increasing proportion of the overall energy requirement must be covered by renewable energy sources (mainly solar energy, wind and water power, geothermics and biomass),and energy efficiency considerably improved by new technologies. For the most part, this will require enormous initial investment, the provision of suitable framework conditions by reforming the energy sector, and the strengthening of a marketable demand. The development collaboration is making the first approaches to these aspects and, here too, seeks to work in partnership with the commercial sector.

- Improvement of water supplies and sustainable, integrated management of water resources. Around the world, some 1.2 billion people have no access to clean water, and twice that number are not connected to any form of waste water disposal system. Competition for fresh water has given rise to increasingly fierce political conflict between regions and states. The importance of water and its relevance to crises has led the German Federal Government to support sustainable, integrated water management programmes in many partner countries (supply, disposal, efficient use and protection of eco-systems). Germany also supports

cooperation of states on the management and protection of cross-border stretches of water (e.g. the Joint Technical Nile Water Commission) in several regions of the world.

- Improvement of living conditions in towns and cities and strengthening of the administration and provision of services in towns and cities. Cities in developing countries are often marked by widespread poverty, poor environmental conditions, squalor, insufficient access to water, inadequate waste disposal, and rising crime and unemployment. At the same time, many cities are also the engines of commercial development, in which 60% of the gross domestic product and 80% of the commercial growth of developing countries is generated – mostly in conditions which place the environment under increasing pressure. This means that the support for sustainable development of cities provided by international organisations such as UN-HABITAT or the World Bank and bilateral development collaboration make an important contribution to both the fight against poverty and the reduction of pressure on the environment. Measures required by Germany are targeted towards an environ-mentally acceptable development of cities by empowering municipalities and supporting local authority processes under Agenda 21, and building up local environment initiatives and networks.

- By far the largest proportion of poor and undernourished people is living in rural areas. The improvement of their living conditions and the elimination of malnutrition are a pivotal concern of the German Government. The development of sustainable agricultural systems and the promotion of other means of earning a living in the countryside can contribute much to this aspect. Cooperation with the Food and Agriculture Organisation of the United Nations (FAO) and other international organisations concerned with nutrition plays an important role in this context.

Pilot project proposed by the Sustainable Development Council:
"*Welthunger bekämpfen mit nachhaltiger, standortgerechter Landnutzung*"
(Combat World Hunger through Sustainable and Appropriate Land Use)

Duration of project: 2002 – 2005

Contact: BMZ and GTZ

Objective:

Dissemination of sustainable systems of land use appropriate for the location which have been proven successful in practise.

Land use systems can be described as sustainable, if they are capable of sustaining the income of the rural population and the productiveness of the land over the long term without having a negative effect on either the environment (erosion, loss of fertility of land, etc.) or on people (loss of livelihood, etc.). Land use must therefore be ecologically and socially sustainable and adapted to individual cultural contexts. Priority is given to the application of adapted local knowledge. A precondition for sustainable land utilisation systems is active participation by the local population, taking into account social groups of all kinds. Women are particularly significant here.

Measures:

The project is focussed on the dissemination and exchange of knowledge concerning sustainable systems of land use appropriate to their locality. This does not involve a unilateral transfer of knowledge from North to South or vice versa, but is particularly directed at strengthening the South-South exchange.

The project comprises the following components:

- Systematisation of experience to date in the area of sustainable systems of land use appropriate to their locality
- Mutual exchange of knowledge and networking at all levels, worldwide, from resource users to research
- Promotion of measures for the expansion and further development of sustainable systems of land use appropriate to their locality, in conjunction with those affected, and taking into account the particular significance of women in production and nutrition
- Development of strategies to establish at all political levels the principles of sustainable systems of land use appropriate to their locality
- Scientific support for current projects in areas where there are gaps in knowledge or insights of particular interest

Further information can be obtained from: Referat416@bmz.bund.de

V. Increasing and improving financial support for development

In order to be able to fulfil all these extensive tasks and targets, another change of course is necessary concerning the amount of financial resources needed to support sustainable development on an international scale. The German Government subscribes to the Gothenburg resolutions and pledge by the European Union to reach the 0.7% target as quickly as possible, and to have made concrete progress towards achieving this figure before the World Summit on Sustainable Development in Johannesburg. In accordance with the Council resolution at Laeken, the Federal Government will also examine how and within what timescale the 0.7% target can be achieved. It welcomes the decision of the European Council giving the pledge of the EU as a whole to achieve an average of 0.39% by 2006. To achieve this, all EU member states which – like Germany – fall below this figure will in any event be anxious, within the framework of their respective budget resource allocations, to achieve by 2006 at least a figure of 0.33% of GDP for public developmental aid. What is also required is to examine the possibilities for opening up other, even innovative, sources of finance for international development and global environmental conservation along the lines discussed at the UN International Conference on Financing for Development in March 2002 in Monterrey, Mexico.

Discussions at this conference did not only concern additional public and private financial resources to ensure sustainable development and to halve poverty in the developing countries by 2015. Within the spirit of a strengthened partnership, in which the developing countries recognised their primary responsibility for their own development and subscribed to the principles of democracy, human rights, rule of law and responsible government, the industrial countries will actively support them and in this way contribute towards the "global deal" which will be one of the themes discussed at the World Summit in Johannesburg.

The “Monterrey Consensus” passed by the governments also includes measures to facilitate access for the developing countries to the markets of the industrial countries, more efficient use of finance for development, and of the financial resources which flow into the developing countries from exports, taxation and duties, and also an improvement of the framework conditions for foreign direct investment and other private capital inflows (among other things, fighting corruption, transparent financial management, participation of civil society in the benefits of successful developments). There was broad agreement that within the framework of the existing regulations many developing countries must be allowed a degree of debt relief, which, in conjunction with programmes of the International Monetary Fund, provides a way out of unsustainable levels of debt. There was also agreement to promote the reform of the international finance system and in doing so to combat the misuse of financial globalisation, to strengthen the role of the developing countries in the international economic decision-making process and - recognising their current task - improve the coherence between the UN, the international financial institutions and the WTO.

VI. Taking advantage of the chances at the World Summit on Sustainable Development

The World Summit on Sustainable Development in Johannesburg in August/September 2002 is for the international community of states both an opportunity and an obligation. It is about critically taking stock and setting the right direction for environment and development. Germany is above all committed to the following initiatives:

- Agreement of concrete measures to resolve the global water crisis (preparatory discussions took place at the International Conference on Freshwater in Germany in December 2001).

- Development of strategies for the greater use worldwide of renewable forms of energy and also for increasing energy efficiency.

- Concrete progress towards halving extreme poverty worldwide.

- Strengthening the financial and economic basis for sustainable development in developing countries by means of trade facilitation measures and developmental collaboration.

- Joint initiative with German business, trades unions and non-government organisations to take greater account of social and environmental factors and also of sustainable development principles in making foreign direct investments.

- Development of the structures of the United Nations in the area of sustainable development with the additional aim of involving developing countries more effectively in the future direction of the processes of globalisation.

- Improved coordination of environmental activities in international institutions and within the framework of international agreements.

- Strengthening of the United Nations Environment Programme (UNEP) with a view to developing it into a World Environmental Organisation (WEO).

G. Measuring Results and Further Developing the Strategy

The national Strategy for Sustainability is part of the political programme for a Germany which is sustainable and able to meet the demands of the future. It sets priorities for the coming years and sets out concrete goals and measures. It represents an important step towards sustainable development. But the work goes on. Within the framework of a regular system for monitoring success, checks can be made as to how far the measures specified in the strategy have been put into practice and whether the desired goals are being achieved. And lastly the strategy itself must be further developed. Because the Strategy for Sustainability is not something static, but a long-term process in the course of which decisions which have been taken and solutions which have been found must be repeatedly reviewed to check whether they are correct. All these elements are components of a management concept of sustainability. They should ensure that it is easier to put the strategy into practice.

I. The management concept of sustainability

The Strategy for Sustainability is not to be a paper setting out general theoretical principles, but practical guidance for sustainable action in policy and in society. With the management rules for sustainability it describes general requirements for an ecologically, economically and socially well balanced programme of development. A list of measures in the priority action areas translates these management rules into concrete form. Indicators show where we are on course for a sustainable system of development. Targets make clear the need for action and are important in measuring results. Within the framework of a monitoring system, indicators show the stage which has been reached and on this basis indicators and targets will be adjusted to meet changing priorities.

...

This management concept of sustainability serves to operationalise, i.e. turn into practical policy, the necessarily rather abstract model of sustainable development.

The concept is complemented by the several pilot projects which will be implemented in parallel with this strategy and which, in practice, should show what potential for innovation is contained within the idea of sustainable development. The pilot projects principally cover the three priority action areas “Climate Protection and Energy Policy”, “Environmentally-Compatible Mobility” and also “Environment, Nutrition and Health” (cf. Chapter E I. to III.). In further developing the Strategy for Sustainability, further pilot projects are to be developed and implemented.

II. Implementation of targets and measures

The Strategy for Sustainability sets out targets and measures, but it is anything but a five-year plan. A sustainable system of development is least likely to be achieved with the instruments of a planned economy. The examples of ecological ravages which this kind of management has caused in the past are quite enough to demonstrate this. Sustainable development, therefore, is only conceivable within the framework of a social market economy, which certainly knows nothing of mandatory planned targets for the players involved. But what kind of goals does this strategy have?

To the extent that the German Federal Government is involved as a participant, it understands these goals as milestones in its policy. It will direct by them its action as a government and translate the strategic targets into concrete policy. This is particularly the case for the many measures set out in Chapter E. These involve a broad spectrum of instruments ranging from legislative and regulatory targets through funding measures to educational and marketing schemes for the concept itself. This bundle of measures will be put into practice step by step, if necessary supplemented and adjusted to meet changes in circumstances.

But when, for example, it is a question of conservation of resources, looking ahead to the economic future or the integration of fellow citizens from abroad, State action alone is not enough. Rather, active and responsible action on the part of all social groups is called for. Thus, business can contribute towards achieving these goals, and hence towards a system of sustainable development, by means of operational environmental management, investment decisions which are sustainable in the future and an appropriate policy relating to co-workers. Equally as important as the activities of businesses are the behaviour of citizens and the commitment of municipalities, trades unions, churches and other social groups. They all must work together if the sustainability project is to succeed. The model and the goals of the strategy will serve as guidance in this process: all players, within the State and within society, are called upon to model their action along these lines.

In putting forward the model and the goals a decisive role is played by the Sustainable Development Council in which people from important areas of society are represented. The Council can make a decisive contribution towards increasing public awareness of the goals of the Strategy for Sustainability and by putting them before a wide public and successfully carrying out the dialogue which it has already begun with groups within society. In this way, the Council should become the catalyst for a broad-based public discussion which is indispensable in translating the Strategy for Sustainability into action within society.

III. Measuring results and monitoring

Essential components of a national Strategy for Sustainability are a transparent and regular system of monitoring and a system for evaluating the stage which implementation has reached (measurement of results). In order to check where we are on the road towards a sustainable system of development, the strategy contains 21 key indicators as a yardstick for sustainability (cf. Chapter D Indicators and Objectives).

Even if the individual indicators are not considered in isolation, but it is only the system of indicators viewed altogether which provides a picture of the level of sustainability, the individual indicators are nevertheless an important basis for deciding where further action is needed.

The individual indicators make it possible in particular to establish whether and to what extent the different directions of the developments at which we are aiming are actually in tune with each other, and where there are shortfalls and obstacles in implementing the goals and measures.

The Federal Government will, for the first time in Spring 2004 and thereafter every two years, present a report on the implementation of the national Strategy for Sustainability. In this report it will set out principally,

- what contributions the Federal Government itself and other players (e.g. *Länder*, municipalities and business) have made towards achieving the targets set out in the strategy,
- what changes are indicated in the 21 key indicators and
- what conclusions can be drawn regarding the further development of the strategy.

IV. Further development of the strategy

The Strategy for Sustainability is not a ready-made product, but is a long-term process in which the strategy will be updated and further developed.

This is primarily the case for the key focus points for sustainable development set out in Chapter E. For the first three of the priority action areas set out there, detailed targets and measures already exist, whereas for the five other action areas in the first instance only the need for action has been sketched out and necessary measures set out in outline. These five action areas will be further developed in the next phase of work on the strategy and similarly provided with concrete targets and measures.

In order to provide a more comprehensive assessment of the current stage of development, the Federal Government is developing complementary national sustainability indicators. In doing so, it is also making its contribution to the activities currently under way at European and international level.

In addition, it will be necessary to examine which other areas for action should be included in the strategy. Sustainable development concerns all areas of policy. But in order not simply to stick at declarations of intent not backed up by commitment, a selection had to be made and points of focus developed. In doing so the Federal Government first concentrated on eight action areas which appeared to it to be particularly urgent. Of course this does not mean that the strategy is permanently limited to these themes. Further action areas will be added.

Finally, the strategy as a whole must also be regularly tested. Because a sustainable programme of development capable of being maintained in the future is a process of seeking, learning and decision-making for the whole of society, accompanied by regular social and economic changes. In the light of future developments we must ask ourselves whether the priorities for a sustainable programme of development have been correctly set. The players within politics and society are asked to pick up on changes within society and to be influenced by them in the decisions they make concerning the priorities within a sustainable system of development. Essential driving forces are also new insights in science and research and technological innovations which open up to us hitherto unknown possibilities. International developments too face us with new challenges. A strategy for sustainability should take account of this and it is therefore, to a certain extent, only ever tentative.

This means that the points of focus, targets, indicators and measures will be repeatedly reviewed, adjusted and further developed within the coming years: Are we still on the right course? Have we used chances effectively, assessed risks properly and looked ahead sufficiently? Are our goals still appropriate, are our measures effective enough? These questions are to be asked and answered at regular intervals. For the rest, this process of revision will be the same as the process of developing this strategy: it must be carried out in dialogue within society. In this, players in politics and in society are equally challenged. Each one should assess, for his area of responsibility, whether certain developments are in line with the goal of sustainability or whether they run counter to it, and should, as required, introduce changes and take additional measures. It is here that the Sustainable Development Council - to a certain extent as a monitor of social development - can draw attention to non-sustainable trends in a kind of early warning function, and can contribute to creating greater public awareness of developments which are particularly positive or negative.

The basis for this will be solid scientific cause analyses and projections concerning future possible or probable developments. Scientists and researchers are therefore central partners in this process. With their insights they create an indispensable precondition for assessing potential chances and risks within ecological, economic, and social developments.

The Strategy for Sustainability is not an instant cure which solves the problems once and for all. Rather, sustainable development remains a continuing task for politics and society. The Federal Government is addressing this task and encourages all social groups to take an active part in the sustainability project, and, in the interest of our children and grandchildren, to make their own contribution towards a Germany which is able to meet the challenges of the future in the One World.

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