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COUNTRY PROFILE



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INTRODUCTION - 2002 COUNTRY PROFILES SERIES

Agenda 21, adopted at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992, underscored the important role that States play in the implementation of the Agenda at the national level. It recommended that States consider preparing national reports and communicating the information therein to the Commission on Sustainable Development (CSD) including, activities they undertake to implement Agenda 21, the obstacles and challenges they confront, and other environment and development issues they find relevant.

As a result, in 1993 governments began preparing national reports for submission to the CSD. After two years of following this practice, the CSD decided that a summarized version of national reports submitted thus far would be useful. Subsequently, the CSD Secretariat published the first Country Profiles series in 1997 on the occasion of the five-year review of the Earth Summit (Rio + 5). The series summarized, on a country-by-country basis, all the national reports submitted between 1994 and 1996. Each Profile covered the status of all Agenda 21 chapters.

The purpose of Country Profiles is to:

- Help countries monitor their own progress;
- Share experiences and information with others; and,
- Serve as institutional memory to track and record national actions undertaken to implement Agenda 21.

A second series of Country Profiles is being published on the occasion of the World Summit on Sustainable Development being held in Johannesburg from August 26 to September 4, 2002. Each profile covers all 40 chapters of Agenda 21, as well as those issues that have been separately addressed by the CSD since 1997, including trade, energy, transport, sustainable tourism and industry.

The 2002 Country Profiles series provides the most comprehensive overview to date of the status of implementation of Agenda 21 at the national level. Each Country Profile is based on information updated from that contained in the national reports submitted annually by governments.

Preparing national reports is often a challenging exercise. It can also be a productive and rewarding one in terms of taking stock of what has been achieved and by increasing communication, coordination and cooperation among a range of national agencies, institutions and groups. Hopefully, the information contained in this series of Country Profiles will serve as a useful tool for learning from the experience and knowledge gained by each country in its pursuit of sustainable development.

NOTE TO READERS

The 2002 Country Profiles Series provides information on the implementation of Agenda 21 on a country-by-country and chapter-by-chapter basis (with the exception of chapters 1 and 23, which are preambles). Since Rio 1992, the Commission on Sustainable Development has specifically addressed other topics not included as separate chapters in Agenda 21. These issues of trade, industry, energy, transport and sustainable tourism are, therefore, treated as distinct sections in the Country Profiles. In instances where several Agenda 21 chapters are closely related, for example, chapters 20 to 22 which cover environmentally sound management of hazardous, solid and radioactive wastes, and chapters 24 to 32 which refer to strengthening of major groups, the information appears under a single heading in the Country Profile Series. Lastly, chapters 16 and 34, which deal with environmentally sound management of biotechnology, and transfer of environmentally sound technology, cooperation, capacity-building respectively, are presented together under one heading in those Country Profiles where information is relatively scarce.

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LIST OF COMMONLY USED ACRONYMS

ACS	Association of Caribbean States
AMCEN	Africa Ministerial Conference on the Environment
AMU	Arab Maghreb Union
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
CARICOM	The Caribbean Community and Common Market
CBD	Convention on Biological Diversity
CIS	Commonwealth of Independent States
CGIAR	Consultative Group on International Agricultural Research
CILSS	Permanent Inter-State Committee for Drought Control in the Sahel
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COMESA	Common Market for Eastern and Southern Africa
CSD	Commission on Sustainable Development of the United Nations
DESA	Department for Economic and Social Affairs
ECA	Economic Commission for Africa
ECCAS	Economic Community for Central African States
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
ECOWAS	Economic Community of West African States
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FIDA	Foundation for International Development Assistance
GATT	General Agreement on Tariffs and Trade
GAW	Global Atmosphere Watch (WMO)
GEF	Global Environment Facility
GEMS	Global Environmental Monitoring System (UNEP)
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection
GHG	Greenhouse Gas
GIS	Geographical Information Systems
GLOBE	Global Legislators Organisation for a Balanced Environment
GOS	Global Observing System (WMO/WWW)
GRID	Global Resource Information Database
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
IAEA	International Atomic Energy Agency
ICSC	International Civil Service Commission
ICSU	International Council of Scientific Unions
ICT	Information and Communication Technology
ICTSD	International Centre for Trade and Sustainable Development

IEEA	Integrated Environmental and Economic Accounting
IFAD	International Fund for Agricultural Development
IFCS	Intergovernmental Forum on Chemical Safety
IGADD	Intergovernmental Authority on Drought and Development
ILO	International Labour Organisation
IMF	International Monetary Fund
IMO	International Maritime Organization
IOC	Intergovernmental Oceanographic Commission
IPCC	Intergovernmental Panel on Climate Change
IPCS	International Programme on Chemical Safety
IPM	Integrated Pest Management
IRPTC	International Register of Potentially Toxic Chemicals
ISDR	International Strategy for Disaster Reduction
ISO	International Organization for Standardization
ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature and Natural Resources
LA21	Local Agenda 21
LDCs	Least Developed Countries
MARPOL	International Convention for the Prevention of Pollution from Ships
MEAs	Multilateral Environmental Agreements
NEAP	National Environmental Action Plan
NEPAD	New Partnership for Africa's Development
NGOs	Non-Governmental Organizations
NSDS	National Sustainable Development Strategies
OAS	Organization of American States
OAU	Organization for African Unity
ODA	Official Development Assistance/Overseas Development Assistance
OECD	Organisation for Economic Co-operation and Development
PPP	Public-Private Partnership
PRSP	Poverty Reduction Strategy Papers
SACEP	South Asian Cooperative Environment Programme
SADC	Southern African Development Community
SARD	Sustainable Agriculture and Rural Development
SIDS	Small Island Developing States
SPREP	South Pacific Regional Environment Programme
UN	United Nations
UNAIDS	United Nations Programme on HIV/AIDS
UNCED	United Nations Conference on Environment and Development
UNCCD	United Nations Convention to Combat Desertification
UNCHS	United Nations Centre for Human Settlements (Habitat)
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNDRO	Office of the United Nations Disaster Relief Coordinator
UNEP	United Nations Environment Programme

UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UNIFEM	United Nations Development Fund for Women
UNU	United Nations University
WFC	World Food Council
WHO	World Health Organization
WMO	World Meteorological Organization
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization
WWF	World Wildlife Fund
WWW	World Weather Watch (WMO)

CHAPTER 2: INTERNATIONAL COOPERATION TO ACCELERATE SUSTAINABLE DEVELOPMENT IN DEVELOPING COUNTRIES AND RELATED DOMESTIC POLICIES

Decision-Making: The German government has declared its commitment to an overall policy programme that is coherent with development policy aims. Consequently, all development policy tasks have been concentrated within the Federal Ministry for Economic Cooperation and Development (BMZ) and all legislation must be examined for its compatibility with development policy. Furthermore, Germany co-ordinates its development cooperation with the other Member States of the European Union at a number of different levels, ranging from the summits of the heads of state and government to the working party of the Council of Ministers.

In general, Germany pursues a integrated approach to development cooperation, which aims at giving equal attention to social, economic, political and ecological problems. Within this framework, the German government acknowledges the validity of the seven development goals of the international community of nations as confirmed by all 189 Member States at the United Nations Millennium Summit. See also under **Status**.

Programmes and Projects: As reducing poverty is our social duty and also an essential task if we are to secure a global future, the German government has elaborated a Programme of Action to meet its commitment of contributing to halving world poverty by the year 2015. The foundation of the strategy for poverty reduction is an extended meaning of the word poverty. Besides the need to improve the economic chances of the poor (opportunity), this meaning includes the need to strengthen their political involvement (empowerment) and an adequate social welfare network for them (security). With this approach, the German government is also tackling the structural causes of poverty. Essential elements of the Programme are a reform of international and national framework conditions to better benefit the poor. At the international level this includes in particular achieving better access to know-how, technologies and the markets of the industrialized countries for the developing countries. The German government is an advocate of these goals for example within the framework of the WTO negotiations. Scope for the implementation of the poor countries' own poverty-oriented development strategies must be maintained or achieved. A convincing example of this is the enhanced Heavily Indebted Poor Countries, HIPC debt relief initiative, which came about particularly at the urging of the German government and the personal intervention of the German Chancellor.

Status: At the national level, German development policy supports good governance and the efforts of Germany's partner countries to create a social, economic and political framework order with the prerequisites that are conducive to development and the participation of the poor. The realization that only limited funds are available, the desire to use these as efficiently as possible and to exploit existing strengths and experience, and the opportunities opened up by improved international co-ordination and division of labour were the motivation behind the German government's decision in May 2000 to pare down the number of countries with which it operated development cooperation, at that time numbering 118, and to concentrate development cooperation with individual countries on a reduced number of priority areas. Following a detailed analysis and assessment of cooperation with all the cooperation countries, the BMZ presented a list of 70 countries (see also under **Cooperation**). This list is sub-divided into partner countries and priority partner countries, depending on how-wide ranging cooperation is. The countries were selected using criteria such as: the degree of necessity in respect of development policy aims and interests; the likelihood of Germany being able to make a relevant contribution; the contributions being made by other donors; and the enabling environment within the partner country concerned.

The quest for solutions to increasingly urgent global development and environmental problems with global causes and impacts calls for multilateral cooperation. Germany recognizes the need to co-ordinate multilateral programmes effectively with bilateral cooperation measures in order to enhance the efficiency of development cooperation. In this context, Germany co-operates with all major UN bodies. The German government also makes use of its stake in the multilateral development banks and their special funds by exerting its influence in the respective governing bodies on their business policy, development strategy, country planning and projects with its own concept of

development policy. Thus, for example, the existence within all multilateral development banks of forward-looking environmental guidelines and the environmental impact assessments these provide for can be attributed to the influence of interested shareholders, including Germany. Special mention should be made of the intense efforts made by the German government within the Development Assistance Committee (DAC) of the OECD. These efforts were reinforced by Germany within the group of G8 Sherpas, to agree to untie development aid to the Least Developed Countries so as to enhance the effectiveness and efficiency of development cooperation.

Germany co-operates with its partner countries in the integration of environmental protection and sustainable use of resources into all areas of policy. With respect to the protection of the global environment, Germany supports: the Vienna Convention for the Protection of the Ozone Layer; the UN Framework Convention on Climate Change (UNFCCC); the UN Convention to Combat Desertification (UNCCD); the Convention on Biodiversity (CBD); and the relevant Protocols for Implementation. In this context, Germany supports also respective financing mechanisms (e.g. the Global Environmental Facility) and funds, which promote the mitigation of and adaptation to global environmental change. Furthermore, Germany recognizes that measures under development cooperation in the field of sustainable forest management and forest conservation make a key contribution to protecting biodiversity and the climate.

Capacity-Building, Education, Training and Awareness-Raising: Germany advises partner countries on economic matters. It operates within the context of the economic reform programmes supported by the World Bank and other donors. The German government is currently implementing projects in this area with funding totaling DM 150 million. One important aspect of all consultancy projects is upgrading the skills of institutions and their staff and management.

Information: General Information on sustainable development can be obtained at <http://www.weltgipfel2002.de>, which has been launched in December 2001. The website includes basic information on Germany's development cooperation and provides further links. Information about Germany's development cooperation can also be viewed at the official websites of the BMZ: <http://www.bmz.de>, and the GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit): <http://www.gtz.de>.

Research and Technologies: There are a number of institutes conducting development policy research in Germany. The following description mentions only those research activities funded directly by the BMZ. These include the BMZ's departmental research, the advisory and research activities of the German Institute for Development Policy (DIE) and the activities of the Advisory Council to the BMZ. Projects commissioned by the BMZ on areas of methodological or development policy importance deal for example with the social dimensions of development policy. DIE produces reports on development policy issues for German government institutions, for the EU and other clients abroad and provides advice on questions relating to cooperation between industrialized and developing countries. The Advisory Council to the BMZ, made up of scientists and academics in fields of importance to development policy, has for example dealt with the significance of human rights for development cooperation, the informal sector as a field for development cooperation involvement, the future of development cooperation between the EU and the African, Caribbean and Pacific partner countries, development policy aspects of conflict prevention, child labour in developing countries and the connection between economies of violence and development policy.

Financing: The departmental budget of the BMZ is the central instrument available to the Federal government for exercising an active influence on the poverty, which is once again on the increase in many parts of the world, on social polarization and on the destruction of natural resources. About two-thirds of Germany's official measures for the promotion of sustainable development world-wide are covered from the budget of the BMZ. See also under **Chapter 33** of this Profile.

Cooperation: As outlined above, Germany works together with the EU, OECD and G8 and co-operates with most major international multilateral institutions and development banks to promote sustainable development paths.

Based on Germany's new orientation in bilateral cooperation, the following countries were classified as priority partner countries: Albania, Bosnia and Herzegovina, Macedonia, Georgia, Egypt, Yemen, Morocco, Palestine, Turkey, Benin, Burkina-Faso, Ghana, Cameroon, Kenya, Malawi, Mali, Mozambique, Namibia, Rwanda, Zambia, South Africa, Tanzania, Uganda, Bangladesh, China (PR), India, Indonesia, Cambodia, Nepal, Pakistan, the Philippines, Vietnam, Bolivia, El Salvador, Honduras, Nicaragua and Peru. The group of partner countries are as follows: Armenia, Azerbaijan, Kyrgyzstan, Uzbekistan, Kazakhstan, Algeria, Jordan, Mauritania, Tunisia, Côte d'Ivoire, Guinea, Lesotho, Madagascar, Burundi, Nigeria, Niger, Senegal, Chad, Laos, Mongolia, Sri Lanka, Thailand, East Timor, Brazil, Costa Rica, Chile, the Dominican Republic, Ecuador, Guatemala, Colombia, Cuba, Mexico and Paraguay. Added to this is a group of "potential cooperation countries". See also under **Status**.

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CHAPTER 2: INTERNATIONAL COOPERATION TO ACCELERATE SUSTAINABLE DEVELOPMENT IN DEVELOPING COUNTRIES AND RELATED DOMESTIC POLICIES - TRADE

Decision-Making: No information available.

Programmes and Projects: No information available.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

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CHAPTER 3: COMBATING POVERTY

Decision-Making: The Bundessozialhilfegesetz (Federal Social Assistance Law) is the relevant legislation in force. The German poverty alleviation strategy is based on the idea of participation and self-help. In addition to providing a minimum social standard through Social Assistance, the German government pursues a broad range of activities in order to prevent poverty (e.g. measures to fight unemployment, such as JUMP, programmes to combat long-term unemployment, integration into the labour market of people with disabilities, a socially oriented housing policy, and compensation of family commitments). Often, elderly people in particular do not claim social assistance they are entitled to because they fear that their children would be made liable for their maintenance. Therefore, the Act concerning need-oriented pensions in the event of old age and invalidity (GsiG) was adopted in the context of the pension reform. When this Act enters into force on 1 January 2003, it will contribute to breaking the pattern of hidden poverty, as it does not provide for liability to provide maintenance for children and parents, thus making it easier for elderly persons and invalids to assert their claim to a guaranteed livelihood. Poverty and social exclusion present a particular challenge for German government policy-making. The position of people in Germany who are threatened by poverty differs vastly from the complex of problems that may be found in the countries of the Third World.

Since 1998, combating poverty and social exclusion has been one of the priorities in Federal government policy-making. In April 2001, the government submitted a report titled "Living situations in Germany - first report on poverty and wealth". The report gives a comprehensive description of the social situation in Germany and presents a differentiated picture in terms of equal opportunities and social participation as well as the distribution of income and property. The report is based on a differentiated concept of poverty, defining poverty as a living situation. According to this concept, persons, families and groups of persons are considered poor if their material, cultural and social resources are so limited that they are excluded from the ordinary way of life. In this pluralist concept of poverty, situations of deprivation are considered from different angles such as relative income poverty, health impairments, disrupted family relationships, social problem areas in large cities, homelessness or over-indebtedness.

Programmes and Projects: Since 2001, the Federal government has been sponsoring a total of 30 innovative pilot projects to improve cooperation between job centres and social assistance agencies (MoZArT). The pilot projects are distributed across Germany. Their funding and evaluation is based on the Act to improve cooperation between job centres and social assistance agencies of 20 November 2000. On the basis of experimental clauses, new ways to improve cooperation between job centres and social assistance agencies are being explored beyond the existing legal framework, with the aim of increasing the number of people finding employment, making assistance for integration into employment more effective and simplifying the administrative procedure.

Status: It may be assumed that, in general, "absolute poverty" (defined as a situation in which survival is uncertain) no longer occurs in Germany. In Germany, this type of material poverty (extreme/absolute poverty) is prevented by the existing social security systems. Within the system of social security, social assistance constitutes the ultimate safety net for all those who do not have sufficient income or assets. In Germany, therefore, extreme poverty (resulting, perhaps, from a failure to claim the social assistance benefits to which one is entitled) is to be found only in exceptional cases. However, if one applies a broader definition of poverty, those living under particularly difficult circumstances must also be taken into account. Unemployment, homelessness, and a heavy burden of private debt or problems of addiction may bring about these difficult circumstances.

Capacity-Building, Education, Training and Awareness-Raising: Germany considers poverty as one of the main causes for production and living conditions, which are non-sustainable and cause damage to the environment. In this context, the importance of promoting opportunities through education is recognized. Therefore, education is freely accessible to all in Germany in order to avoid disadvantages and social exclusion. Discrimination of the poor is not an issue, at least as far as education is concerned. In the state of North Rhine-Westphalia, for example, the

state government has created special programmes such as “Stadtteile mit besonderem Erneuerungsbedarf” (urban neighbourhoods in special need of renewal) for disadvantaged neighbourhoods. In the state of Saxony, Art. 1 of Saxony’s School Act lays down that the task of the schools to provide education is determined by the right of all young people to an education corresponding to their capabilities and interests, regardless of their background or economic situation.

Information: In October 2001, the German Bundestag decided to have regular reporting on poverty and wealth and requested the government to submit a poverty and wealth report in the middle of each legislative period. Moreover, information is provided in the framework of regular reporting on social issues to the parliament and the general public on the part of the German government. The Social Budget drawn up together with the Social Report provides an overview of the quantitative dimension of social policy broken down by functions and institutions. In addition to this, the German government provides information to the parliament and the general public through a series of individual reports on specific living situations of its citizens.

Research and Technologies: Research projects conducted in the context of poverty and wealth reporting are aimed at improving the data and knowledge about the living situation of certain disadvantaged groups. The projects are concerned with people in extreme or hidden poverty, with lone parents and with observing social assistance recipients over a longer period of time. Other projects focusing on fundamental issues of poverty measurement and poverty definition are aimed at a more specific description and delimitation of the problem of poverty exceeding the context of material resources.

Financing: In 2000, a net amount of some DM 40.8 billion (gross: 45.6 billion) was spent on those social assistance benefits that are financed from the general tax revenue of the federal states. Of this, a net amount of around DM 17 billion (gross: 19 billion) was spent on regular cost-of-living assistance and a net amount of around DM 23.7 billion (gross: 26.5 billion) on assistance in special circumstances (care assistance, integration assistance for the disabled, assistance for the sick). The concept of Public-Private Partnerships (PPPs), which was developed in the 1990s, aims to promote cooperation between private companies and official development cooperation, in order to make sustainable development possible through joint action.

Cooperation: For the German government, poverty reduction is an important element of its overall policy, which is guided by the principle of sustainable development. This is also reflected in Germany’s international development policy and cooperation. Poverty alleviation as an overarching framework is sought in all sectors and areas of assistance. The German government supports the target adopted by the UN of halving the proportion of people living in extreme poverty, who must struggle to exist on less than US\$ 1 per day, by the year 2015. In response to an initiative from Federal Chancellor Schröder, the German government therefore adopted a Programme of Action, which sets out the priority areas on which the German government intends to concentrate its efforts, under which a total of 75 actions are listed, describing concrete intended measures. The priority areas are:

- Boosting the economy and enhancing the active participation of the poor (e.g. the German government is supporting economic reforms in its partner countries);
- Realizing the right to food and implementing agrarian reform (e.g. the German government is supporting measures aimed at the rapid removal of protectionism in the agricultural sector at the European and international levels);
- Creating fair trade opportunities for the developing countries (e.g. within the EU the German government is advocating an improvement of the EU’s generalized system of trade preferences);
- Reducing debt – financing development (e.g. the German government advocates measures to strengthen the international financial architecture and supports the development of strong financial systems in developing countries);
- Guaranteeing basic social services – strengthening social protection (e.g. the German government supports social sector reform programmes, the fight against HIV/AIDS and measures to improve developing countries’ access to essential drugs);

- Ensuring access to vital resources – fostering an intact environment (e.g. the German government supports sustainable, pro-poor water resource management and also energy supplies on the basis of renewable energy sources for poor rural areas that are remote from the national grid);
- Realizing human rights – respecting core labour standards (e.g. the German government is giving increased support to its partner governments and to civil society players in their efforts to realize human rights and is supporting a functional complaints procedure for economic, social and cultural rights);
- Fostering gender equality (e.g. the German government is giving increased support to girls and women and to efforts to combat trafficking in women, forced prostitution and child prostitution);
- Ensuring the participation of the poor – strengthening good governance (e.g. the German government is giving support for the elaboration of national poverty reduction strategies in cooperation with civil society and for democratization processes in its partner countries with a view to improving political participation);
- Resolving conflicts peacefully – fostering human security and disarmament (e.g. the German government intends to promote crisis prevention, peaceful conflict settlement and the consolidation of peace as a priority area of its development cooperation with a number of interested countries); and
- Disaster preparedness – promoting disaster reduction (With its action framework on disaster prevention, the German government is contributing to the shaping and formulation of UN policy in this area, and through it is promoting projects to provide greater protection to people in countries and regions that are particularly susceptible to disasters).

Further information regarding Germany's bilateral and multilateral cooperation policy can be obtained in **Chapter 2**, while general insights into Germany's contribution to financing sustainable development can be obtained in **Chapter 33**.

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CHAPTER 4: CHANGING CONSUMPTION PATTERNS

Decision Making: The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) is in charge of the issue of ‘sustainability of consumption production patterns’. Given the cross-sectoral nature of this issue, individual areas of activity have been entrusted to other federal institutions with the mandate to promote sustainable consumption and production patterns (e.g. Federal Ministry of Economics (BMWi); Federal Ministry for Transport, Building and Housing (BMVBW); Federal Ministry for Consumer Protection, Food and Agriculture (BMVEL); and Federal Ministry of Education and Research (BMBF)). At the level of the federal states, responsibility falls to the respective environment ministries, while at town and municipality level the task falls to the administrative offices responsible for environment protection. Promotion of sustainable patterns of consumption and production is a focal point of environmental policy-making in Germany. As it gains importance in the public debate on sustainable policy structures, it highlights the fact that – apart from legislation to create suitable framework conditions – the main challenge faced by German policy-makers when it comes to sustainability is the economic instruments and self-regulation standards needed to enhance actors’ sense of responsibility in promoting sustainable patterns of consumption and production. Special significance is placed, for example, on the promotion of suitable service-focused informational approaches/instruments (e.g. environment management systems, eco-design, life-cycle assessments, environmental controlling) and on demand-focused informational approaches/instruments (e.g. eco-labels, consumer protection/consumer education, environmental consulting, sustainable development education). Various actors in politics, business and society at federal, state and municipal levels have conducted a wide range of initiatives, projects, measures and activities.

Programmes and Projects: Since the UN Conference on Environment and Development (UNCED) in 1992, the promotion of sustainable patterns of consumption and production has played an increasingly important role in environmental policy-making in Germany. This includes a variety of programmes and projects in the following categories:

- (Social) science-based underpinning of the subject matter;
- Implementation of national information processes to promote sustainable consumption;
- Implementation of informational initiatives/sustainable consumption as both a challenge and an opportunity in environmental education;
- Instruments and strategies for the promotion of sustainable patterns of consumption (e.g. in conjunction with integrated product policy); and
- Implementation of model projects through grants for environmental groups, environmental consulting/environmental education and knowledge transfer.

Apart from the improved scientific footing of the subject matter achieved through appropriate demand and cross-sector research programmes (e.g. BMBF projects under the heading Sustainable Business: Opportunities and Limitations of New Production Strategies), a considerable component of the promotion strategy implemented by the BMU and the Federal Environment Agency (UBA) is evident in the way informational activities have anchored the subject among the general public. Another important factor is that of promoting dialogue between stakeholders with the objective of establishing – in the medium-term – “a sustainable consumption” platform in Germany. On the one hand, this means dissemination of the matter among large groups of society and on the other, anchoring the subject matter with specific actors and in society-related lobbies, improved transfer of the required knowledge and the development of suitable forms of cooperation.

Promotion of sustainable consumption and production patterns is also gaining in importance in Germany’s current debate on integrated product policy. Both federal and private business initiatives focus on the further development of instruments to underpin product-integrated and product-oriented environmental protection.

A variety of initiatives have been introduced in the various demand sectors at state and municipal level, particularly as part of associated promotional programmes and Local Agenda 21 processes.

Status: A comparative study of environmental pollution caused by private consumption in households over the past 10 years has shown an increase in the number of households (+7%), rising consumption levels (+11%) and a reduction in water consumption (-8.5%) and waste water (-4.5%). Despite increasing energy consumption (+12%), CO₂ output fell (-4%), while there were slight increases in household waste and land use (around +4%).

Capacity-Building, Education, Training and Awareness-Raising: Since the late 1980s, the Federal Environment Ministry has, as part of its environment education programmes, funded projects conducted by social actors and lobby groups on the promotion of sustainable consumption and production patterns, with the objective of anchoring the subject matter in large groups of society through measures that enhance general awareness. In addition, a large number of consulting and education projects were implemented to enhance individual players' effectiveness in these areas of activity.

Information: Germany publishes a wide range of informational material on the promotion of sustainable consumption and production patterns. Apart from subject-specific environment reporting, the majority of available information is based on the work of the Federal Statistics Office and the above-mentioned research programmes. The general public also has access to diverse information on a variety of issues and instruments such as life-cycle assessments, product-related eco-labelling and substance databases. Consumer protection agencies (e.g. Stiftung Warentest) are another reliable source of information on this subject.

Research and Technologies: A large number of research programmes on the promotion of sustainable patterns of consumption and production have been conducted in Germany, particularly by the BMBF. These mainly involve needs-oriented and cross-sectoral research programmes aimed at analyzing technological, scientific, socio-economic, societal and cultural principles and issues to enable the development and testing of models to develop the knowledge required for innovative processes in diverse areas of activity aimed at promoting sustainable business.

Financing: No information available.

Cooperation: There are numerous partnerships and networks in this area of activity at national, European and international level. These include cooperation on standardization and eco-labelling, which includes pan-European research.

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CHAPTER 4: CHANGING CONSUMPTION AND PRODUCTION PATTERNS - ENERGY

Decision-Making: The main elements of the German national energy strategy for sustainable development and especially its efforts to encourage sustainable consumption and production practices are part of the new national climate change programme, which was adopted by the Federal government in October 2000. It defines emission reduction tasks and responsibilities in all relevant areas: private households; industry and trade; transport; and energy sector. It is geared towards both the reduction of CO₂ emissions and the reduction of other greenhouse gases. The main means in focus are energy conservation and energy efficiency as well as renewable energies.

The Federal government has set ambitious targets:

- to reduce emissions of CO₂ by 25 % by 2005 compared with 1990 levels, and
- to reduce emissions of the six greenhouse gases cited in the Kyoto Protocol by 21 % between 2008 and 2012, within the context of EU burden-sharing. The 1990 are the base year for CO₂, CH₄ and N₂O, and 1995 for H-CFC, CFC and SF₆.

Furthermore, for the first time the Federal government has also set specific targets relating to technology and energy resources. These are:

- doubling the proportion of renewable energy sources by 2010 compared with current levels;
- expanding combined heat and power generation, aimed at cutting CO₂ emissions by an additional 10 million tons by 2005, and by 23 million tons by 2010;
- a significant increase in energy productivity over the next years; and
- phasing out nuclear power by about 2020.

Important laws and regulations are:

- Ecological Tax Reform Act on Renewable Energies and Combined Heat and Power Generation Energy Saving Ordinance of 1 February 2002, replacing the former Ordinances on Thermal Insulation and Heating Systems;
- Energy Consumption Labelling Act and Ordinances based on this act; and
- Act on Phasing out Nuclear Power.

Programmes and Projects: Regulations, incentive mechanisms etc. that promote sustainable energy use and environmentally sound supply and demand patterns are:

- The ecological tax reform, which envisages a gradual increase in energy prices in all areas, in order to create incentives for the development and market launch of new technologies. Revenue from the eco-tax is returned to employees and employers by reducing the rates for pension insurance contributions.
- Reduced rates for local public transport and all rail transport.
- The Act on Renewable Energies with feed-in guarantees for electricity generated from renewable energy sources at guaranteed minimum feed-in tariffs.
- The Market Launch Programme for Renewable Energies, promoting use of geothermal, biomass and solar energy as well as small hydropower through grants or low-interest investment loans.
- The “100,000 roofs solar electricity” programme, with low interest investment loans for photovoltaic systems.
- The promotion of low-sulphur and sulphur-free fuels through tax differentiation also helps to achieve a breakthrough in fuel-efficient, low-emission engine technology.
- Emission-based motor vehicle tax: the tax is differentiated (up to three years tax exemption) for different standards of emission reduction. An extra bonus is granted to so-called “3-litre cars” (petrol consumption per 100km).
- Favourable framework conditions for gas-powered vehicles: the mineral oil tax for natural and liquid petroleum gas was lowered to the EU minimum tax rate and set until 2009. Criteria for a Blue Angel

environment label for low-noise gas-powered commercial vehicles and buses were adopted. Different grant/loan programmes can subsidize investment into and commercial use of gas powered vehicles.

- Low interest loan programmes for energy saving renovation of building stock .

The ecological tax reform includes tax exemptions or rate reductions for efficient energy technologies. Mineral oil and gas used for cogeneration of power and heat enjoys a lower tax rate, if the efficiency rate is at least 60 %. If an efficiency rate of at least 70% is achieved, even this tax is not charged. Mineral oil and gas used in combined cycle gas turbines (CCGT) with an efficiency rate of at least 57.5% will be exempt from the mineral oil tax under certain conditions:

- Motor vehicle tax exemption for buses used in public transport;
- Reduced turnover tax for short-range passenger transport;
- Motor vehicle tax reductions and exemptions as mentioned;
- Different incentives for installation of specified energy-saving equipment and designs in existing buildings up to the end of year 2002; and
- Act on the Income Tax Law, where the fiscal provision favoring commuting by car was replaced by a commuting allowance solely based on distance to workplace, encouraging bicycle and public transportation use.

Status: Domestic emissions of Kyoto Protocol greenhouse gases were reduced between 1990 and 2000 by more than 18%.

Capacity-Building, Education, Training and Awareness-Raising: There are numerous initiatives of the Federal government, the governments of the federal states and the local authorities as well as all relevant stakeholders.

On September 29, 2000, the *German Energy Agency* (Deutsche Energie-Agentur, dena) was set up as a national competence and information centre on energy efficiency and renewable energies. Dena is not a subordinate administrative body under the ministries but a limited liability corporation (GmbH). The current proprietors of dena (holding 50% each) are Kreditanstalt für Wiederaufbau (KfW) and the Federal Republic of Germany, represented by the Federal Ministry of Economics, and, soon, the Federal Ministry of Transport, Building and Housing and the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.

Dena is intended to provide support, through flexible projects, to specific activities of the German government in the areas of efficient energy use, renewable energy sources and climate protection. It is meant to pass on information working with municipal and regional energy agencies, but also consumer protection agencies. Another goal is to provide even better and smoother access to required information for people in private households, companies, organizations and authorities. One further important task of the agency will be to engage in international activities in the form of an exchange of experience and joint projects with foreign partners and to provide relevant advice to the German government.

Just a short time after its establishment, the agency already launched several extensive projects. In April 2001, it set up a call centre to provide information on efficient energy use and renewable energy sources which can be reached at a single toll-free number throughout Germany. The agency is conducting a campaign on efficient pneumatic systems for industry, working with a research institute and industrial partners and it is holding a successful series of lectures on the new energy conservation regulation relating to buildings, working with the German chamber of architects and engineers and with the energy agencies of the federal states. Among other things, it is envisaged to hold a nation-wide campaign to reduce standby losses in electric and electronic equipment.

In order to fulfil one assignment within the new national climate change programme, the Federal Environment Ministry started a national campaign on "Climate Protection in Households and in Small Consumption". The intention is to increase public awareness about the necessity to protect the climate and the possible ways of achieving this task and in particular to reduce the energy demand of buildings (improved thermal insulation, heating

and air conditioning) and promote increased use of renewable energy, the use of efficient household, information and communication appliances, change in consumption patterns, etc.

Information: There are a wide variety of measures for gathering the required information about energy and energy-related issues. These include:

- Special energy statistic related to the Federal Statistic Law; (a draft of new legislation on energy statistics is in parliamentary debate);
- The Energy Audit for Germany is undertaken by a private organization, the AG Energiebilanzen, in which research institutes, energy industry organizations and official statistic organizations are working together;
- Industry's progress in fulfilling its voluntary commitment is monitored by the Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI);
- National Greenhouse Gas Inventory;
- Additional working party on "emission inventories" under the umbrella of the interministerial working group on CO₂ reduction, reporting to the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, to co-ordinate the methodological/statistical requirements of emissions reporting as a result of international reporting obligations; and
- Regular analysis of primary energy consumption by the German Institute for Economic Research (Deutsches Institut für Wirtschaftsforschung).

On the national level, information about energy and energy-related issues is disseminated and shared by the responsible ministries of the Federal and the state governments as well as by the local authorities. Also, most relevant stakeholders, environmental associations, companies etc. distribute information and are available for consultation. On the international level, the requirements of the various institutions (e.g. OECD) and organizations (e.g. UN) are being fulfilled on a regular basis. In addition, information on energy and energy-related issues is made available to the public on the Internet, on web sites such as:

<http://www.bmwi.de>; <http://www.ag-energiebilanzen.de>; <http://www.bmu.de>; <http://www.uba.de>; and <http://www.diw.de>.

Research and Technologies: In order to reduce greenhouse gas emissions and to promote cleaner production, efforts are being made to develop: alternative fuelled vehicles; fuel cells; photovoltaic generated electricity; wind technologies; biomass; advanced fuel technologies associated with natural gas as well as oil and coal; building systems – windows, insulation, appliance equipment; new transport technologies e.g. for railways, and etc..

Financing: In addition to the above examples of financial sources from the Federal government, there are also financial sources from the German state governments as well as from the local authorities and the private sector.

Cooperation: Germany has an export-oriented industry. The respective efforts of the German energy industry have been supported by the Federal government and the governments of the German federal states. The Federal Ministry for Economic Cooperation and Development in particular supports the developing countries by granting every year around €250 million for climate change protection in developing countries. Priority areas are renewable energy and sustainable forest management. Germany supports the implementation of the CDM of the Kyoto Protocol as a means of North-South cooperation and for modernizing the energy sector in developing countries.

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CHAPTER 4: CHANGING CONSUMPTION PATTERNS - TRANSPORT

Decision-Making: The Federal government has decided to pursue an integrated regional planning, urban development and transport policy. The integrative character refers primarily to getting decision-makers to focus more attention on the causes and consequences of the sustained growth in traffic.

Today's transport problems cannot be solved by simply building more transport infrastructure. Tight constraints on public funding are not the only obstacle to the unlimited expansion of transport infrastructure. Another obstacle is the limited availability of space in a densely populated country such as the Federal Republic of Germany. Nevertheless, investment in infrastructure - and thus in particular federal transport infrastructure planning - is of outstanding importance. However, there is also an increasing requirement for measures to be taken at the formative stage of transport policy, measures that make mobility possible but also reduce the volume of traffic.

Germany's concept for a mobile future envisages ten fields of action, which, by acting in combination, will help solve current, transport problems and ensure sustainable mobility. The selection of the fields of action is based on the realization that only a cluster of dovetailed measures can bring about a perceptible improvement of the transport system. The components of an integrated transport, regional planning and urban development policy are:

- strengthening European transport policy;
- continuing the programme of recovery in eastern Germany;
- merging regional and transport planning;
- providing efficient transport infrastructure;
- interconnecting the individual modes of transport;
- creating fair conditions of competition;
- enhancing transport safety;
- improving environmental protection;
- promoting innovative technologies; and
- supporting mobility research.

Programmes and Projects: See under **Financing**.

Status: In order to have a less polluting and safer transport system, the establishment of mass transit systems and the impacts on the environment and safety have been addressed comprehensively (a structural reform of the railway structures was undertaken after the 1992 United Nations Conference on Environment and Development (UNCED)). The relative cost-effectiveness of alternative systems and transportation technologies has been addressed in part. In spring 1995, the German automobile industry made a voluntary commitment to the Federal government regarding further reductions in the average fuel consumption of automobiles. According to this commitment, the average fuel consumption of automobiles sold in the year 2005 would be 25% lower than average automobile fuel consumption in 1990.

Capacity-Building, Education, Training and Awareness-Raising: Germany has an excellent transport system with respect to both environmental impact and safety. A further extension of alternative transport systems is under consideration. The transport sector is one of numerous examples where the Federal government has used brochures and advertising campaigns to inform people and educate them on how to behave in an environmentally aware fashion. The campaigns draw attention to the need for changes in consumer behavior by providing, for example, tips on buying low-emission vehicles and promoting the use of bicycles and public transport.

Information: Information is available to potential users at <http://www.bmmbw.de>.

Research and Technologies: Methods for identifying threshold levels of atmospheric greenhouse gas concentrations have not been developed, but in the area of environment and transport, observations of emissions are

comprehensive and systematic. High priority is given to the use of safe technologies in transport, research and development relating to appropriate transport methodologies, and awareness-raising in the general area of energy and fuel efficiency.

Financing: The German government has undertaken a review of current energy supply mixes, and there is a mineral oil tax and a motor vehicle tax.

The Federal government is ensuring that there will be a high level of investment for transport infrastructure in the future. On the basis of current financial planning, Germany has brought together in the 1999-2002 Investment Programme all ongoing projects plus all fundable projects in the road, rail and waterway sectors that can be started by 2002. With investment totaling DM 67.4 billion, this programme will cover the period until a new Federal Transport Infrastructure Plan is published and will provide a sound basis for planning by the federal states, the regions affected and the construction industry. With its programme of investments for the future, the Federal government has once again underlined the high level of priority given to investment in infrastructure. This programme will provide an additional DM 8.7 billion for investment in roads and railways over the next three years. In addition to the standard programme as of 2003, the Federal government has adopted an anti-congestion programme (2003 to 2007) with investment totaling DM 7.4 billion to remove the most serious bottlenecks in our transport network.

Cooperation: No information available.

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CHAPTER 5: DEMOGRAPHIC DYNAMICS AND SUSTAINABILITY

Decision-Making: In Germany, the Federal Ministry of the Interior (BMI) is the ministry most directly concerned with demographic issues. The Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (BMFSFJ) is responsible as the leading Ministry for the following laws concerned with equal opportunities. The new Act on the Implementation of Equal Opportunities Applicable to the Federal Administration and the Federal Courts (Bundesgleichstellungsgesetz (BGleiG) - Equal Opportunities Act), which entered into force on 5 December 2001, is guided by the general social situation in the Federal Republic of Germany, where some 51 percent of the population is female (data from 31 December 1997) and its aim is for this to be reflected in the number of women employed in all areas of federal administration and in the federal courts. The 1994 Bundesgremienbesetzungsgesetz (Law on Appointments to Federal Bodies) also has the legal aim of ensuring that the Federal government and others involved in the process of appointing members of official bodies act in accordance with what is laid down in this law so that equal participation in official bodies by women and men is achieved or maintained.

Programmes and Projects: The Competence Centre is part of the “Women and Work Programme” which was launched by the German government in 1999 as a comprehensive strategy of the German government to improve women’s access to the labour market. The Competence Centre is supported by the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (BMFSFJ) and the Federal Ministry of Education and Research (BMBF). One of the main projects is the Idee IT initiative with the objective of improving the opportunities for women in IT and media occupations. Within the framework of the implementation of the Platform for Action, another key political issue is the fight against violence against women. Launching a broad-based National Programme of Action, the German government has awarded great importance to combating violence against women and girls.

Status: The above mentioned legislation is in force.

Capacity-Building, Education, Training and Awareness-Raising: In order to create awareness of environmental linkages, some public information activities in the context of the International Conference on Population and Development (ICPD), the Social Summit, and the Fourth World Conference on Women have been conducted by the media and some NGOs. A National Report was forwarded to ICPD in 1994. The ICPD was an important foundation for the 4th World Conference on Women in Beijing in 1995, which was a key event for national equal rights policy and in this context a milestone for environmental awareness-rising, too. Through the adoption of the Platform for Action, the Federal Republic of Germany has pledged to work together with all forces in society to elaborate National Strategies for the implementation of the adopted measures, including twelve key topics among them: “education and training of women”; “women and the environment”; and “women in positions of authority and decision-making”. At the meeting of the Special Assembly (Beijing+5) there followed a review and appraisal of progress made in the implementation of the twelve areas concerning the Platform for Action. The outcome is fundamental for the measures of our national policy in this field.

Information: No information available.

Research and Technologies: No information available.

Financing: DM 8.8 million has been provided in support of the multilateral organization International Planned Parenthood Federation (IPPF). On a smaller scale, support is also given to German NGOs but cannot be exactly quantified. The German government intends to spend around DM 3.15 billion over the next seven years for bilateral and multilateral initiatives in the area of population and sustainable development, and started in 1995 with 450 million.

Cooperation: The principles and objectives for the planning and implementation of projects in development cooperation were set out in a policy paper of the BMZ. Cooperation addresses family planning services, and the economic and social situation of the population, in particular the lives of women. It also addresses health services and the educational sector. The most important multilateral partners are the United Nations Population Fund (UNFPA) and the IPPF. German bilateral cooperation on family planning has a regional focus on Sub-Saharan Africa.

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CHAPTER 6: PROTECTING AND PROMOTING HUMAN HEALTH

Decision-Making: A fundamental facet of the German political system – and the health care system specifically – is the sharing of decision-making powers between the federal states and the Federal government, with further powers governing statutory insurance schemes being delegated to non-governmental corporatist bodies. Corporatism has several important aspects. Firstly, it hands over certain rights of the state as defined by law to corporatist self-governed institutions. Secondly, the corporatist institutions have mandatory membership and the right to raise their own financial resources under the auspices of, and regulation by, the state. Thirdly, the corporatist institutions have the right and obligation to negotiate and sign contracts with other corporatist institutions and to finance or deliver services to their members. A separate group of actors are the courts.

At the national (i.e. federal) level, the Federal Ministry for Health and the parliament are the key actors. In 1977, the Concerted Action in Health Care was created as an advisory body to the government. Its main tasks are collecting and presenting data on the medical and economic situation of the health care system with the aim of advising both the government and the corporatist institutions on improving the effectiveness and efficiency of health care. Further, the Concerted Action makes recommendations on improvements in remuneration systems, health care delivery and the structure of the health system. This committee consists of about 65 members from all relevant organizations in the German health care system plus experts in the Ministry of Health.

The federal structure is represented mainly by the 16 state governments and, to a very small extent, by the state parliaments. In 1998, 13 out of the 16 state governments had a ministry, which mentioned “health” in its name. However, none has an exclusive health department. For the statutory health insurance scheme, corporatism is represented by the (statutory health insurance-contracted) physicians’ and dentists’ legal associations on the provider side and the health insurance funds and their associations on the purchasers’ side.

As may be seen from the above, the German health care system is highly decentralized with the most striking component of it being delegation of state power to corporatist actors. While most of the legal rights and obligations of the corporatist associations of sickness funds and providers are the result of a long process, the transfer of the Federal Republic of Germany system to the former German Democratic Republic constituted a real delegation of responsibilities by the government to corporatist actors. Privatization is another important feature of the German health care system. Some health care sectors are in fact based entirely on private providers, e.g. the office-based out-patient and dental care sectors or the distribution of pharmaceuticals through private pharmacies. In other sectors, both private non-profit and for-profit providers co-exist with public providers, e.g. in the hospital sector and the social care sectors. Private insurance companies also co-exist alongside the statutory health insurance funds.

Programmes and Projects: Besides general efforts, a greater focus is being placed on preventing teenagers from smoking, reducing harm in terms of drug consumption and screening for cancer and cardiovascular diseases. The fight against discrimination of people with HIV/AIDS is emphasized. Transmission via blood and blood products has been eradicated by employing appropriate measures. Deutsche AIDS Stiftung (German AIDS Foundation) is supported by prominent personalities from politics, industry, and the cultural scene.

Status: A key feature of the health care delivery system in Germany is the clear institutional separation between the publicly provided public health services, primary and secondary out-patient care through office-based physicians and hospital care which has traditionally been confined to in-patient care.

Public health services located in 360 sites are a major responsibility of the federal states. About half of the federal states operate them themselves while the other half delegate responsibility to local governments. The public health tasks comprise supervision of employees in health care institutions, prevention and monitoring of transmissible diseases, supervision of commercial activities involving food, pharmaceuticals and drugs, environmental hygiene, counseling, provision of community-based psychiatric services, health education and promotion and clinical examination of school children. Since the 1970s, most of the preventive measures, such as screening programmes and health check-ups for both children and adults, have been included in the health funds’ benefits package and thus are carried out by office-based physicians. A last amendment in 1989 was the introduction of health promotion

as a mandatory task for health funds (abolished in 1996). Legally, immunizations and the support of self-help groups were also considered a health promotion activity (until 1996; since 1997 the respective article has been headed “disease prevention”). After health promotion and prevention was lost by the public health service, it became even less visible to the public and much smaller in size and most of all less important for protecting and promoting health. The shift in responsibilities for immunizations has had the result that immunization rates in Germany are rather low by international comparison.

Capacity-Building, Education, Training and Awareness-Raising: The Federal Centre for Health Education (BZgA) has the objective of maintaining and promoting human health. National information campaigns are run by the BZgA as well as by the federal states, local and regional initiatives. NGOs play a major role in educational programmes for institutions, e.g. schools, or population groups, e.g. drug dependent individuals.

Information: No information available.

Research and Technologies: Most of the research in the field of public health is performed by the university schools of public health, which are mostly funded by public sources or NGOs.

There are considerable inconsistencies in different health care sectors regarding the regulation of health technologies in Germany as well as the licensing, coverage and management of diffusion and use of technologies. In general, the out-patient sector is much more heavily regulated than the hospital sector in terms of coverage decisions and diffusion and use of technologies. Licensing, as a prerequisite for providing services to be reimbursed by the statutory health insurance, applies to pharmaceuticals and medical devices (independently of the health care sector in which they are used). While almost all licensed pharmaceuticals are covered by the statutory health insurance, coverage decisions for medical and surgical procedures in the out-patient care sector are made explicitly through a joint commission of health insurance funds and physicians. Explicit coverage decisions are currently non-existent for the hospital sector regarding medical and surgical procedures. This is due to the fact that coverage of medical devices and expensive medical equipment falls under budget negotiations at hospital level and hospital plans at state level. Services provided by non-physician professionals, such as physiotherapy, are explicitly excluded by law or are covered through collective contracts.

Financing: Financing depends on the level or sector.

Cooperation: The Federal government currently supports numerous bilateral projects in the health and population sector, aiming primarily to empower in-country partner organisations to develop sustainable health systems. Therefore, Health System Development and Reform, Disease Control and Health Promotion, as well as Reproductive Health are the priorities of German development cooperation in the health sector. Key activities in the field of health system development include:

- Strengthening national and district health systems;
- Improving public health services, including training and research;
- Developing health and management information systems;
- Developing and testing health financing systems and health insurance schemes;
- Developing technical management and maintenance systems, including orthopaedic services as a specialized area;
- Developing pharmaceutical services including tendering, logistics, cost recovery and quality control; and
- Strengthening quality management of development programmes

Germany aims to introduce reproductive health services as an integrated package within district health services, covering several fields of intervention, such as family planning and the control of STDs. Germany's disease control programmes focus mainly on TB, HIV/STDs, malaria, and cholera. The planning and implementation of HIV/STDs prevention and control projects in many countries in sub-Saharan Africa, Asia, Latin America and the Caribbean continue to be of major importance.

The German government has reacted with increased vigour to the rapidly growing threat posed to developing countries by the HIV/AIDS pandemic, the impact of which extends far beyond the health sector. In 2000, over DM 140 million was committed for bilateral AIDS projects and AIDS-related components of projects operating in other sectors. The fight against HIV/AIDS has been defined as a cross-sectoral issue for all of Germany's development cooperation programmes. The German government has committed itself to promoting public-private partnerships in the health sector, for instance through cooperation with the pharmaceutical industry in the area of PMTCT (Prevention of Mother-To-Child-Transmission of HIV) in several African countries.

Germany also supports the WHO and UNAIDS with funds-in-trust in their world-wide fight against HIV/AIDS. In addition, it actively supports health promotion and protection programmes of the European Union in the fields of HIV/AIDS control, tobacco control, drug dependence and cancer prevention.

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CHAPTER 7: PROMOTING SUSTAINABLE HUMAN SETTLEMENT DEVELOPMENT

Decision-Making: The Federal government, the federal states, and local authorities are responsible for promoting sustainable human settlement. Germany has made considerable efforts to reduce current housing bottlenecks and provide adequate shelter not only for the resident population but also for the people who have immigrated into the country. Settlement development must be carried out on the basis of carefully worked out and co-ordinated urban building plans. Formal planning is regulated by urban planning legislation. In Germany its legal basis is the Federal Building Code (BauGB). The Federal Building Code of 1998 took urban land use planning a step further with the aim of securing holistic solutions that integrate urban planning and nature conservation. Sustainable urban development has become a central theme in Germany in the 1990s at all levels of government. At the Federal level, an amendment to the building law means that the demands of sustainable urban development have been made part of the general planning goals of the Federal Building Code, making it clear that sustainable development is a model for all areas of life and an obligation for urban planning to meet as well. New types of civic engagement have developed in recent years primarily in the implementation of the “Local Agenda”. The objective of the Agenda process is to develop a concerted route towards sustainable development in the cities as well as concrete ideas for action in further local development. This is based on a new culture of communication among administration, councils, citizens, associations, trade and industry, initiatives, churches, etc.

Programmes and Projects: A total of 1,651 local governments have passed Local Agenda resolutions in the Federal Republic of Germany (as per September 2000). In addition, approximately 110 rural districts have made Agenda 21 resolutions on the principle of sustainability. Besides the information and the promotional policies of the Federal government and the federal states, important contributions towards promoting local activities through campaigns and informative events are made by many foundations and other non-governmental organizations which are involved in environmental and development policy, as well as by research institutes. The new regulations for the promotion of home ownership through the introduction of a bonus for owner-occupiers on 1 January 1996 represented the implementation of one of the key projects of housing policy reform. The aim of the reformed assistance for owner-occupiers is above all to help middle-income households and families with children in particular. Basing its activities on the positive experience gained with integrated action and promotional strategies in some federal states, in 1999 the Federal government began a nation-wide concerted initiative together with the federal states, which was intended to improve living conditions in urban neighbourhoods that are disadvantaged and which in many cases disadvantage their inhabitants. The promotion of urban renewal was supplemented by the new programme run jointly by the Federation and the federal states on “Urban Neighbourhoods with Special Development Needs - The Social City” (Stadtteile mit besonderem Entwicklungsbedarf – “Die Soziale Stadt”). The aim of this new programme is to use integrated approaches and the involvement of all social groups to contribute towards renewing, maintaining and improving the quality of life in cities. The concept is implemented as a social project, which makes justice, involvement, solidarity and innovation accessible. On 15 August 2001 the Federal government decided to launch a new programme on urban renewal in eastern Germany (“Stadtumbau Ost”) aimed at increasing the attractiveness of the new federal states as a residential and economic location. Municipalities that have a future-oriented urban planning concept receive financial aid for the urban development required, the housing economy receives support for the demolition of empty buildings and for upgrading. Urban renewal supports building industry and trade as well.

Status: Various activities in the field of housing policy have brought about a noticeable improvement in the quantity and quality of housing. In the old federal states in the west, the key challenge was initially to overcome the serious bottlenecks in the housing market as a result of very strong demand, due in particular to high levels of migration. In the new federal states in the east, the quantity and quality of the housing available in the early 1990s was completely inadequate. The distinct nation-wide expansion in the housing market and the rehabilitation and modernization of the housing stock in the new federal states, which was supported particularly intensively by the state, meant that it was rapidly possible to close the gap between the old and the new federal states, albeit not

completely. The infrastructure for drinking water supply, waste water removal, and refuse disposal is of a high standard in Germany.

Capacity-Building, Education, Training and Awareness-Raising: In recent years numerous contests have been held regarding the diverse topical fields of sustainable development. They have promoted projects and improved publicity for the overall concept of sustainability. In addition to Federal and state institutions, a number of foundations and other institutions and organizations have held contests. The following is a selection of European-wide, national and state contests.

The urban renewal competition: Integrated urban development concepts are a precondition for a sound urban renewal. In order to stimulate this planning process, the Federal government will organize the competition on urban renewal in eastern Germany ("Stadtumbau Ost"). Many congresses, conferences, workshop discussions and exhibitions have been held in recent years in Germany dealing with the topic of sustainable settlements development. One objective of the events was to provide content for the idea of sustainability or give it publicity, another was to serve towards pooling experience or drawing up new approaches for attaining sustainable development.

Information: *URBAN 21 - project forum* (<http://www.urban21.de>): The URBAN 21 project forum and the URBAN 21 presentations are part of the website managed by the Federal Office for Building and Regional Planning on the "URBAN 21 - Global Conference on the Urban Future", which was held in Berlin on 4 to 6 July 2000. Particularly in the preparatory stages of the Conference, the project forum served as an open platform for examples of sustainable urban development.

Werkstatt Stadt (Urban Workshop) (<http://www.werkstatt-stadt.de/html/main-beispiele.html>): This compilation of "good examples" is the result of experience gathered in the past ten years by the national programme "Experimental Housing Construction and Urban Development".

Städte der Zukunft (Cities of the Future) <http://www.staedte-der-zukunft.de>: The aim of the website is to report on the activities carried out within the scope of the Experimental Housing Construction and Urban Development field of research "Cities of the Future" on a regular basis, thus reflecting the progress of the work. The emphasis is being placed on the topics "indicator-based performance monitoring of sustainable urban development" and "examples of best practice as models for the future of towns and cities".

Research and Technologies: The research programme of the Federal Ministry of Transport, Building and Housing covers different forms of research. The programmes "Demonstration Projects of Spatial Planning" and "Experimental Housing Construction and Urban Development" examine spatial planning as well as housing and urban development issues in the framework of applied research. The classic research provides scientifically sound knowledge to prepare political decisions in the policy areas of transport, building and housing. In addition to this, comprehensive research on sustainable settlements development issues is carried out at research institutes and universities.

Financing: There are now a large number of assistance programmes, which can help to successfully implement the Habitat Agenda. The funding database "Nachhaltige Regionalentwicklung" (<http://www.iclei.org/europe/bbr>) contains a variety of promotional programmes for sustainable measures and projects. In addition, the funding database of the Federal Ministry of Economics offers a complete and up-to-date overview of all Federal, state and European Union assistance programmes (<http://www.bmwi.de>).

Cooperation: To enhance its own efficiency, German development cooperation promotes in partner countries closer involvement of the private sector and organizations of civil society in the process of Habitat Agenda implementation. Innovative forms of participation by the people create the prerequisites for needs-appropriate, sustainable solutions. All development cooperation activities are backstopped by instruments of monitoring and evaluation in order to obtain information on project progress, to reflect on project experiences, and to extract joint

learning experiences from the results. Future cooperation in the field of urban development will continue to focus on the broad spectrum of service facilities (health and educational services, primarily in addition to public advisory services, community centres and markets) and infrastructure (chiefly water, sanitation, waste management, electricity and transport). Special importance will be attached to establishing and strengthening the capacities of municipal service providers (utility model). Cooperation between municipal administrations and the private sector (public-private partnership) will gain added significance in that area, too, and capacity building among the public bodies responsible for supervision and quality management will need to be engaged in at the same time. From 4 to 6 July 2000, Germany hosted the Global Conference on the Urban Future - URBAN 21, Berlin. URBAN 21 constitute the embodiment of a pivotal point of the Global Initiative for Sustainable Development and the continuation of its dialogue. In December 1999, Germany hosted the opening event of the Cities Alliance, a multilateral initiative conceived as a learning network for the exchange of views, experience, concepts and strategies for implementing the Habitat Agenda. That initiative will help improve the efficiency and effectiveness of development activities in urban areas. Germany is a partner of the Cities Alliance and a member of the consultative group.

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CHAPTER 8: INTEGRATING ENVIRONMENT AND DEVELOPMENT IN DECISION-MAKING

Decision-Making: The Federal government consists of the Federal Chancellor and the Federal Ministries, the former determining the general policy guidelines. On the federal level the Federal Ministry for Environment, Nature Conservation and Nuclear Safety as well as the Federal Ministry for Cooperation and Development are jointly in charge of co-ordinating the Rio follow-up process. On the local level, over 2,000 municipalities, including almost all major cities, have introduced local Agenda 21 processes. In its Basic Law, Germany has enshrined the protection of vital natural resources as a state objective – in terms of responsibility for both present and future generations. The German government's ministries and departments co-operate closely. Integration of development in decision-making has been developed further in recent years: The Ministry for Cooperation and Development is now a member of the Federal Security Council that decides, among other things, on arms exports. In addition, all new German laws will be examined in future in terms of whether they touch upon development policy concerns; this includes their relevance for poverty reduction. For certain fields of sustainable development, special inter-ministerial bodies have been established, examples of which include the national climate protection programme and the national sustainable development strategy. The latter concentrates on three pilot projects from the fields of sustainable energy consumption and climate protection, sustainable transport and sustainable agriculture. In addition, there is highly developed planning legislation in Germany that also prescribes the rational use of land and soil as well as consideration of nature conservation concerns. In addition, Environmental Impact Assessments (EIA) is required for all projects with particular environmental relevance.

The German government is in the process of elaborating a national sustainability strategy. The State Secretaries' Committee for Sustainable Development ("Green Cabinet"), which comprises state secretaries from 10 ministries, was commissioned with the task of developing this strategy. A national Council for Sustainable Development advises the German government and promotes the dialogue within the society on the goals and measures of sustainable development.

Current measures for integrating environmental protection and development policy concerns into other policy areas include:

Ecological tax reform started on 1 April 1999, introducing an eco-tax on energy and fuel consumption, the revenue of which is used to decrease social security contributions.

A new direction in energy policy with the phase-out of nuclear power and the introduction of increased use of renewable energies.

Advancing the national climate protection programme, which covers climate-relevant measures from the thermal insulation of buildings to motorway user charges for trucks.

A new direction in agricultural and fishery policies towards healthy, environmentally sound, sustainable agricultural and fishery production.

The Programme of Action 2015 – The German Government's Contribution Towards Halving Extreme Poverty Worldwide - approved by the cabinet in 2001 – making poverty reduction an important element of the total policy of the German government.

In addition, the Federal government supports networking the Agenda municipalities.

Programmes and Projects: See under **Decision-Making**.

Status: The first draft of the national sustainability strategy, in the elaboration of which civil society played a great part, was published on 19 December 2001. The second phase of the dialogue process with stakeholders and individuals will last until spring 2002. The cabinet is planning to complete the strategy by the autumn of 2002.

Capacity-Building, Education, Training and Awareness-Raising: The German government attaches particular importance to strengthening civil society. This is reflected in improved environmental information, increased financial support for environmental associations - from 1998 to 2002 the relevant funding has been raised by 60% -

and an extension of the possibilities for legal proceedings by non-governmental organizations. Furthermore, in the field of development cooperation the budget for developmental education and awareness raising has been increased considerably (by 66% from 1998 to 2001). Most of this is directed towards relevant work on the part of non-governmental organizations. At local level, supplementary forms of participation going beyond legal participation are cultivated with the instrument of Local Agenda 21 in more than 2,000 municipalities, including almost all large towns and cities.

Information: Information about integrating environment and development in decision-making is available at the following web sites: <http://www.bundesregierung.de>; <http://www.nachhaltigkeitsrat.de>; and <http://www.dialog-nachhaltigkeit.de>.

Research and Technologies: Research policy in the environmental sector is characterized by an increased focus on socio-ecological research, a sustainable economy and innovations in the field of construction and housing, food, agriculture, mobility and energy.

Financing: The Federal government has put together and financed a wide variety of programmes and projects so as to support sustainability initiatives, which have led to innovations in key industries, such as in the energy supply sector. The ecological tax reform, the Act on Renewable Energies and supportive programmes has helped producers of renewable energies to tap new markets and contribute to sustainable energy supplies.

Cooperation: In the field of development cooperation, the Federal government has, through its call for and promotion of the HIPC II Initiative that was launched at the G8 Summit in Cologne 1999, through its support of the Clean Development Mechanism (CDM) under the Kyoto Protocol and through public private partnerships, promoted and supported new initiatives providing for additional financial resources for sustainable development in developing countries.

Germany actively contributes to the ongoing discussion on the reform of the UN system. The German government has started to check all its instruments and fields of work under development cooperation as to their relevance for achieving the objectives of sustainable development and to shape them accordingly. Through a number of supraregional and bilateral projects, the Federal Ministry for Economic Cooperation and Development supports developing countries in implementing the Rio Conventions and poverty reduction strategy papers and in enhancing the coherence and synergies between these planning processes through supporting sustainable development strategies. The Federal Republic of Germany belongs (inter alia) to the following regional or sub-regional organizations: Bonn Agreement for Cooperation in Dealing with Pollution of the North Sea by Oil and other Harmful Substances; Council of the Baltic Sea States (CBSS); Council of Europe; European Bank for Reconstruction and Development (EBRD); European Union (EU); Helsinki Commission (HELCOM); North Atlantic Treaty Organisation (NATO); Organisation for Security and Cooperation in Europe (OSCE); OSPAR Commission (OSPAR); UN Economic Commission for Europe (ECE); and Western European Union (WEU).

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CHAPTER 9: PROTECTION OF THE ATMOSPHERE

Decision-Making: The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety in Bonn is a fully-fledged member of the National Co-ordination Mechanism for Sustainable Development and is responsible for the protection of the atmosphere. Germany ratified the Montreal Protocol in 1992. The latest report to the Montreal Protocol Secretariat was prepared in 1996. The United Nations Framework Convention on Climate Change (UNFCCC) was ratified on 9 December 1993. The first report to the UNFCCC Secretariat was submitted in 1994. Two supplementary reports on projections of greenhouse gases and a greenhouse gas inventory were submitted in 1996 and in 2001. After the agreements reached in Bonn and Marrakech on the regulatory framework for implementing the Kyoto Protocol, Germany is now in the process of ratification with a view to bringing the Protocol into force by the World Summit for Sustainable Development in Johannesburg in September 2002. The German government formally adopted the draft law on ratification on 5 December 2001. It is expected that the German parliament will pass the law by May 2002. In order to achieve the national CO₂ target and the Kyoto target, the government adopted the National Climate Protection Programme on 18 October 2000 and implemented many measures to combat climate change. Germany is a signatory to the 1979 United Nations Economic Commission for Europe (ECE) Geneva Convention on Long Range Transboundary Air Pollution (LRTAP) and its protocols.

The government promotes policies and programmes in the fields of: energy saving and efficiency; renewables; environmentally sound and efficient transportation; and industrial pollution control, among others. Non-governmental organizations, the private sector, and other major groups have supported activities to strengthen the scientific basis for decision-making and promote sustainable development, prevent stratospheric ozone depletion, and reduce transboundary atmospheric pollution. As part of its precautionary environmental policy, the Federal government has, in cooperation with German industry, embarked on a new approach to exploiting the potential for reductions in greenhouse gas emissions in the industry sector.

Programmes and Projects: There are Support Programmes for Renewable Energies under the Federal Ministry of Economics (capital subsidies in the form of investment grants for the purchase and installation of renewable energy systems): The Market Launch Programme for Renewable Energies, promoting the use of geothermal, biomass and solar energy as well as small hydropower through grants or low-interest investment loans; and the “100,000 roofs solar electricity” programme, with low interest investment loans for photovoltaic systems.

KfW (Kreditanstalt für Wiederaufbau) supports programmes to save energy in old buildings (programme to subsidise energy renovation of building stock via loans from the KfW at subsidized interest rates). Additionally, it supports the renovation of energy-inefficient multi-family buildings as identified by “heating surveys”. The Federal government will spend DM 2 billion in the years 2001 – 2005 to reduce CO₂ emissions by 40 kg per square meter and year in buildings constructed before 1979. See also under **Cooperation**.

Status: The following legislation and actions have been undertaken to protect the atmosphere:

- The ecological tax reform, which envisages a gradual, economically and socially acceptable increase in energy prices in all segments in order to create incentives for the development and market launch of new technologies, coupled with the rational and economical use of energy (reduced rates apply for local public transport and for the manufacturing industry to prevent disadvantages in international competition and for all rail transport);
- Act on Protection and Extension of Combined Heat and Power Generation;
- Act on Phasing out Nuclear Power within the next 20 years;
- The Act on Renewable Energies with feed-in guarantees for electricity generated from renewable energy sources at guaranteed minimum feed-in tariffs;
- Energy Saving Act, which sets new energy efficiency standards for buildings based on primary energy consumption;
- Energy Consumption Labelling Ordinance, which requires the labelling of the energy consumption of cars and household appliances;

- The promotion of low-sulphur and sulphur-free fuels through a tax differentiation also helps to achieve a breakthrough in fuel-efficient, low-emission engine technology;
- Emission-based motor vehicle tax: The motor vehicle tax has taken greater account of pollutant emissions. In addition, so-called 5-litre consuming cars will receive a one-off tax exemption of DM 500 if registered for the first time before 1 January 2000, whilst so-called 3-litres consuming cars will receive tax exemption of DM 1000, irrespective of first-time registration;
- Favourable framework conditions for gas-powered vehicles to be launched on the market: the mineral oil tax for natural and liquid petroleum gas was lowered to the EU minimum tax rate and set until 2009. Criteria for a Blue Angel environment label for low-noise gas-powered commercial vehicles and buses were adopted. In the area of commercial business, all types of gas-powered vehicles and gas filling stations are being subsidized with favorable loan terms;
- In individual cases, tax law provides incentives to purchase environmentally friendly products and thus reinforces demand for products that lower pollution and save resources. Examples of tax benefits related to energy include the following:
 - Mineral oil and gas used for cogeneration of power and heat with an efficiency rate of at least 60 % enjoys a lower petroleum tax rate; if an efficiency rate of at least 70% is achieved, even this tax is not charged;
 - Mineral oil and gas used in combined cycle gas turbines (CCGT) with an efficiency rate of at least 57.5% will be exempt from the entire mineral oil tax under certain conditions to provide for a level playing field with coal and nuclear fired plants;
 - Lower petroleum tax rate for unleaded petrol;
 - Motor vehicle tax exemption for buses used in public transport;
 - Reduced turnover tax for short-range passenger transport and lower petroleum tax rates on natural gas and liquefied gas for public transport vehicles;
 - Exemption from motor vehicle tax - during the first five years - for electrically powered vehicles;
 - Graduated motor vehicle tax rates for low-polluting and non-low-polluting passenger cars and trucks; and
 - Tax incentives for installation and thus manufacture of energy-saving equipment and designs.

Act on the Income Tax Law, where the fiscal provision favoring commuting by car was replaced by a level playing field for all means of transport, a distance-related allowance. In principle this gives incentives to switch from the use of private cars to means of public transport.

Furthermore, in response to the increased world oil prices, a single heat cost grant was paid in the winter 2000/2001 for low-income households.

In March 1995, German industry presented a declaration on global warming, which was further specified in March 1996. Industry thereby undertakes special efforts to reduce its specific CO₂ emissions by 20 percent by the year 2005 against the reference year 1990. At the same time, a comprehensive monitoring system was drawn up. The pledge means that over 71 percent of industry's final energy consumption, more than 99 percent of public electricity supplies and part of the private households and small-scale users are now covered by the industry declaration of voluntary agreement. According to industry estimates, an absolute CO₂ reduction potential of 120 million tons will be achieved in manufacturing industry, in the electricity supply industry and in the district-heating sector over the period 1990 to 2005. On top of this come the contributions of the gas and mineral oil industries, which primarily derive from improvements in the private household and small-scale user sectors and should add up to approx. 50 million tons of CO₂ by the year 2005 (base 1990). Industry's progress in fulfilling its voluntary agreement is monitored by the Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI). According to the first monitoring report, the CO₂ emissions of the participating enterprises were lowered by 42 million tons between 1990 and 1996. This indicates that the agreement has started out successfully. In 2000, the Federal government reached joint agreement with industry on the further reduction of specific CO₂ emissions by 28% by 2005 and of the reduction of specific greenhouse gas emissions by 35% by 2008-2012. This implies an additional absolute reduction of 10 million tons by 2005 and a further 10 million tons by 2008-12. The climate change agreement was signed by federations of industry and Federal government on 9 November 2000. According to the fourth monitoring report, the CO₂ emissions of the participating industries were reduced by 78 million tons between 1990 and 1999. The rehabilitation and modernization of power systems has very high priority. High priority is given to the use of

safe technologies in industry, transport, and energy production; research and development relating to appropriate methodologies in industry, transport, and energy production; development of new and renewable energy systems; use of endogenous technologies; awareness raising in the general area of energy and fuel efficiency; product labelling aimed at informing about energy and fuel efficiency; the use of Environmental Impact Assessments (EIA); and life cycle analysis of products; and environmental audits.

Chlorofluorocarbon (CFC) production ceased in May 1994. The government has strengthened early warning systems and response mechanisms for transboundary air pollution resulting from industrial accidents. Warnings reaching the centre of the Federal Ministry of the Interior are transmitted to the stand-by service of the Ministry for the Environment, Nature Conservation and Nuclear Safety and the responsible institutions of the federal states.

Capacity-Building, Education, Training and Awareness-Raising: See under **Status**.

Information: See under **Status**.

Research and Technologies: The government and the scientific community have carried out studies on likely and possible measures to combat climate change. They have also carried out studies on health effects resulting from air pollution and depletion of the ozone layer. Examples of the most important studies can be found in: Results of the Fourth Session of the Status Colloquium of the Project "Environment and Health"; and MAK and BAT-Werte Liste 1995 to examine substances that are harmful to health.

Financing: See under **Programmes and Projects** and **Status**.

Cooperation: Germany participated in the Baltic Marine Environment Protection Commission (HELCOM) Workshop "Transport and Environment" in January 1995 and contributed to the Economic Commission for Europe (ECE) Regional Conference on Transport and Environment in November 1997. To enable developing countries like China and India to observe the rules of the Montreal Protocol, bilateral support for phasing out CFCs is provided by using the environmentally advanced hydrocarbon technology on a model basis. The government has also agreed to participate in the Co-operative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) and the OSPAR Conventions for the Protection of the Marine Environment of the North-East Atlantic and ECE Conventions. The German government participates in strengthening the Global Climate Observing System (GCOS) at the national level. Three German institutions are operating and contributing to GCOS: the German Weather Service; the German Federal Environmental Agency; and the Alfred Wegener Institute.

The Federal Ministry for Economic Cooperation and Development contributes with targeted programmes to the implementation of strategies to combat the warming of the earth's atmosphere in developing countries and has earmarked special funds for this purpose (€100 million per year for renewable energies and €125 million per year for forest conservation). The German government has been particularly active regarding the establishment of the Global Environment Facility (GEF) and is its third largest contributor. The GEF is jointly administered by the World Bank, the United Nations Development Programme and the United Nations Environment Programme. It serves to finance additional costs, which accrue to the developing countries in connection with environmental protection measures of global benefit. The German government advocates the GEF being used in future as the central financing mechanism for the UNFCCC. Since its inception, the GEF has invested US\$ 1.3 billion in climate change activities. Germany has made the following financial contribution to international ozone funds: Interim Multilateral Ozone Fund US\$ 26.45 million 1991-1993; Multilateral Ozone Fund US\$ 46.73 million 1994-1996; Vienna Trust Fund US\$ 54,551 1995; and Montreal Trust Fund US\$ 306,238 1995.

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CHAPTER 10: INTEGRATED APPROACH TO THE PLANNING AND MANAGEMENT OF LAND RESOURCES

Decision-Making: Implementation of land management is mainly under the authority of the state governments and local authorities. Activities at the national level are limited to the setting of a normative and legal framework. In addition, the Federal government is also involved in financing integrated approaches of rural development, primarily within the framework of the Joint Task of the federal and state level to improve agricultural structures and coastal protection. Policies have been developed in cooperation with state governments. German policy-makers have traditionally had at their disposal a sophisticated range of instruments for the planning of land resources and the development of sustainable, environmentally friendly land and settlement structures. The task of urban and regional planning is to weigh up in a reasonable manner the natural functions of land and the manifold claims on the use of limited space. The Federal Regional Planning Act (Bundesraumordnungsgesetz), the Land Consolidation Act (Flurbereinigungsgesetz), the Federal Nature Conservation Act (Bundesnaturschutzgesetz) and the various corresponding state laws form the legal basis for these goals.

Favourable development conditions for the multifaceted rural areas can only be achieved if individual projects are pooled to form a development approach combining all disciplines. This is why structural policy measures in the field of agriculture must, for instance, be closely linked to regional industrial and transport policies and to environmental and employment policies to form a regional strategic concept. It is only with the help of such an independent, integrated and sound policy that success in rural development can be achieved. Preparatory structural development planning in agriculture is a particularly suitable introduction into regional and community activities, as it identifies the interconnection between plans and measures. In addition to this, these plans can also be drawn up in connection with regional development schemes, regional conferences and town networks. If they are handled freely and flexibly synergy effects can be used, frictional losses can be avoided and thus investment can be made at the right time and in the right place.

Agricultural policy involves a number of measures for the benefit of individual farms and farming communities that, taken together, amount to a major effort to strengthen the development of rural areas, to maintain the historical landscape and to foster structural change in agriculture. Efficient farming cannot guarantee the functioning of rural areas. It is equally important to provide an efficient infrastructure and to create the prerequisites for more employment opportunities outside farming, e.g. in the field of nature conservation and tourism. This demands the close co-ordination of regional economic, transport, planning, infrastructural and agricultural policies. Policy is now more than ever concerned with the major problem regions, i.e. those marginalized rural areas characterized by weak structures and low incomes. It is there that agriculture still constitutes a crucial economic factor, helping people living in these regions to maintain their local and regional economy and community.

German law on regional planning and land and urban development provides for extensive participation by the people and institutions concerned (publication of drafts, hearings, and right to formally raise objections). The Federal Land Consolidation Act, for example, includes instructions for the parties concerned as well as consultation and information bodies representing public interests. Before a decision on land consolidation can take effect, the envisaged land consolidation procedure and the prospective cost must be explained exhaustively and in an appropriate manner to the landowners who are likely to be affected.

Programmes and Projects: Methods of good agricultural practice are seen as being essential for environmentally sound and resource-efficient production methods. But it should be kept in mind that profitability is essential for staying in business and complying with responsibilities in terms of sustainable development. In the interests of supporting efficient, competitive, market-oriented and environmentally sound agriculture and forestry, Germany promotes, for example, attempts to overcome structural deficits, the use of farmland for non-food renewable commodities and methods of good agricultural practice and organic farming. Furthermore, programmes have been launched to foster the economic and social development of disadvantaged rural areas, especially those located in the

eastern part of Germany, through: improved infrastructure; promotion of economically viable farms; job procurement schemes; and farm-income combinations, e.g. direct marketing, rural tourism, off-farm employment opportunities.

Status: Land consolidation, land organization in the new federal states and village renewal are all highly suitable instruments for implementing the principle of sustainability as stipulated in Agenda 21. They give equal consideration to economic, ecological, social and cultural aspects. Part of their task of promoting regional culture is to preserve the functioning of the natural balance and to restore semi-natural habitats and landscape structures. In the interest of a lasting stabilisation of ecosystems, we must make sure that projects in the fields of environmental protection, nature conservation and landscape management are carried out area-wide, taking into account the interests of owners and users and the need to secure their existence on a permanent basis.

Capacity-Building, Education, Training and Awareness-Raising: Universities and research institutions provide training in integrated approaches to the planning and management of land resources and have implemented pilot projects.

Information: Information on integrated land management and sustainable use of land are available to potential users at <http://www.landentwicklung.de>. Land resource information systems are traditionally well developed. It is planned to establish soil information systems. A procedure is in place for the planning of dumping grounds, which provides for publication of plans, comments from concerned agencies, hearings, and public discussion.

Research and Technologies: Farm production is supposed to take account of the expectations and concerns of consumers regarding the quality and safety of food products and environmentally friendly production techniques including farm-animal welfare. Scientific understanding of land resource systems is mainly covered by universities and research institutions.

Financing: Making better use of scarce financial resources is important. Rural development measures entail financial benefits for all stakeholders, in particular in times of limited resources. The institutions responsible for these measures often do not have the funds to carry on their projects. The pooling of funding opportunities from different sources in combined project execution allows deficits to be taken care of. This secures and creates jobs in rural areas. At the same time private follow-up investment is boosted.

Cooperation: Bilateral cooperation in the context of land management takes place with Germany's immediate neighbors, the countries of Central and Eastern Europe, the Commonwealth of Independent States (CIS), and with developing countries in the context of development cooperation. Joint commissions have been established with several neighboring countries to co-ordinate individual regional development plans and to even develop joint land use plans. In the countries of Central and Eastern Europe and the CIS, numerous projects for local and regional development have been developed, aimed at promoting democratic and participatory regional planning structures. An ecologically oriented land use planning project is at present being implemented at Lake Baikal in Siberia in the Russian Federation. The concept of participatory land use planning has been incorporated into German development cooperation since the late 1980s. Land use planning is an important instrument of bilateral development cooperation and is frequently combined with other instruments, such as geographical information systems, regional outline planning and participatory rural appraisal. Successful participatory land use planning and management programmes have been supported in the Philippines, Burkina Faso, Colombia, Zambia, and other countries. Land use planning is also an important issue in national environmental and/or forestry programmes supported by Germany.

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CHAPTER 11: COMBATING DEFORESTATION

Decision-Making: In Germany, primary responsibility for the forestry sector lies with the federal states. At the federal level the Ministry of Consumer Protection, Food and Agriculture (BMVEL) is responsible for co-ordination. The Ministry is a member of the National Sustainable Development Co-ordination Mechanism. It co-ordinates and provides a framework, mainly in the field of forest legislation and promotion. The tasks of the regional forest authorities include: regional legislation; defining and setting goals for regional forest policy; supervision of implementation; contributing to planning procedures; giving advice, care and assistance for privately owned forests; and managing state-owned forests.

To further develop the sound management of forests and to meet the various interests in the use of forests in future, a National Forest Programme (NFP) is being elaborated in its second phase in Germany at present. The national forest programme concept calls for deep assessment of the current situation of forests and forestry and expected future needs and demands of German society as well. Furthermore, it calls for integrated, intersectoral and dynamic approaches and ongoing dialogue among all stakeholders in the forest sector. The mechanisms applied at national and regional levels guarantee close cooperation between ministries and services of different sectors as well.

In Germany, certification has become an important forest and environmental policy issue. At present, two certification initiatives have developed at the national level: the Forest Stewardship Council (FSC) and the Pan-European Forest Certificate (PEFC). Both labels are being introduced onto the market. In both cases the standards exceed the legal requirements (Federal Forest Act, forest laws of the federal states). Certification as a voluntary market instrument primarily concerns the private sector. The Ministry plays an indirect role as a facilitator between different interest groups. Recent policies and programmes at federal level are, among others: National Forest Plan of 1994; Forest Policy Concept of 1996; National Forest Programme 1999/2000; Federal Forest Report 2001; and a variety of forest-related programmes in specific areas, such as the reduction of airborne pollution and the conservation of genetic resources or promotion of renewable resources. Due to the federal structure in Germany, strategies and concepts to support sustainable forest management were developed and applied at both national and regional level.

Sustainable forest management and afforestation of agricultural land are financially supported by the Federal government and the federal states within the “Joint Task for the Improvement of Agricultural Structures and Coastal Protection”. The range of measures of EU structural policy also encompasses the support for the forest sector as well as accompanying measures.

Programmes and Projects: There are a variety of forest-related programmes in specific areas, such as reduction of airborne pollution, conservation of genetic resources or promotion of renewable resources. In 1983, the Federal government initiated a “Save the Forest” campaign to combat new types of forest damage. It involved the reduction of harmful emissions. Through these measures, the emissions of several pollutants have been noticeably reduced. The National Programme on the Conservation of Forest Genetic Resources has been revised. The focal point of the programme is in-situ conservation through natural regeneration and protection of important resources. A proven, wide and diverse body of legislation exists in this area. It has gradually developed over the last few decades, taking into account the experience of a long history of German forestry.

Support to developing countries regarding forest conservation and related aspects has always been and continues to be a major part of Germany’s development cooperation programme in developing countries. Germany is presently supporting the implementation of around 310 projects to combat deforestation and promote sustainable forest management in 66 countries. Germany is one of the most relevant donors in this sector.

Status: Combating deforestation is not relevant in Germany. All kinds of forest owners have to conserve their forests and manage them sustainably. The principle of sustainability is accepted by all forest owners and the public. Where required and appropriate, forest cover is to be expanded. Since 1960, the total forest cover in Germany has increased by about 500,000 ha, promoted by granting subsidies and financial incentives from the government and

the EU. On the basis of both improved legislation, particularly embodying best practices of forestry, and many years of experience, “close to nature forestry” is becoming the leading management principle for an increasing number of forest enterprises in Germany.

Capacity-Building, Education, Training and Awareness-Raising: The federal states conduct various activities, programmes and campaigns for different target groups. These include, inter alia: professional education and training at forest and agricultural schools and universities; information campaigns conducted by local forest services for primary and secondary schools; and special information/education programmes at forest youth hostels.

Information: A Federal Forest Inventory was drawn up in 1987. Since it covers only the former West Germany, both regional and Federal governments are currently implementing a second Federal Forest Inventory to cover the whole country for 2002. The Federal government and the federal states report regularly on the state of their forests and their sustainable management. Information can be accessed via the Internet, e.g. from the Federal Ministry of Consumer Protection, Food and Agriculture (<http://www.verbraucherministerium.de>) and the German Centre for Documentation and Information in Agriculture (<http://www.dainet.de/forstforum>). Based on the UNCED decisions, the European countries agreed on an up-to-date international definition of sustainability in forestry at the 1993 Ministerial Conference on the Protection of Forests in Europe in Helsinki. Since then, 6 criteria and 20 indicators have been agreed upon and the signatory states have committed themselves to apply them to their forest policy. Germany has been an active partner in this Pan-European process of assessing the above criteria at the national level and reported on the results. Moreover, Germany takes account - as far as possible - of the criteria and indicators for sustainable forest management in national survey and monitoring programmes. The ecological benefits of timber use in particular can be proved and documented. This aspect is also attracting increasing public awareness. The Federal Ministry of Consumer Protection, Food and Agriculture has established a specific focus of work at the Federal Research Centre for Forestry and Forest Products in Hamburg dealing with questions of natural resource accounting systems in the fields of forestry and the forest and paper industries.

Research and Technologies: In order to improve the general economic conditions for wood and wood products, the government provides funding for research and development for new environmentally compatible wood processing techniques, ecological audits, etc. and supports standardization at national and international levels. The utilization of residual wood and recovered wood plays an important role in the German forest and paper industries. In particleboard production, for example, the share of residual and recovered wood has for years exceeded that of raw wood. The tendency is further increasing. Recycled paper is the most important material used by the paper industry. At 61%, the rate of the use of recycled paper reached a new peak in 1998. In view of the increasing importance of secondary raw materials, the classification of the basic material is of great importance. What is important is to keep harmful substances away from recycling. Energy recovery using varied assortments of wood, for example, also plays an important role in the forest and paper industries. As residual wood is available in different stages of conversion, it is difficult to record the volume in detail.

Financing: Germany grants its private (and communal) forest owners various kinds of assistance and financial incentives for the sustainable management of their forests. Within the framework of the “Joint Task for the Improvement of Agricultural Structures” the following objectives are co-financed by the Federal government and the federal states: Improved production; labour and living conditions by improving the competitiveness of forestry; processing and marketing; and promotion of environmentally sound production methods. Financial support in the forest sector focuses inter alia on: silvicultural measures; measures due to the new types of forest damage; forestry groupings; and reforestation and afforestation of farmland. For development cooperation, see under **Programmes and Projects**.

Cooperation: Germany has signed the International Tropical Timber Agreement. It supports the introduction of a carbon dioxide (CO₂) energy tax at the European level. The government is also in favor of world-wide harmonized standards for a sustainable form of forest management and supports initiatives that strive for internationally recognized, independent certificates for wood and wood products from sustainable production. This would help

remove competition distortions in the international timber market. Within its international development cooperation, including support to multilateral programmes, the Federal government encourages and helps partner countries to develop and implement strategies and programmes that make an effective contribution to halting the destruction of forests and make the best use of national forest resources for sustainable development. Bilateral development cooperation in this field focuses on comprehensive and integrated approaches (national forest programmes) to combat deforestation and promote sound forest sector development, with due attention to external causes and effective application of relevant planning instruments such as Environmental Impact Assessments (EIA). Within its bilateral development cooperation Germany has for the last 10 years been committing around DM 250 million annually for forest-related programmes and projects. About DM 500 million were contributed to the Pilot Programme to Conserve the Brazilian Rain Forest (PPG7), carried out by Brazil with the support of the World Bank, the European Union and other G7 countries. Germany is also a major contributor to the Global Environment Facility (GEF) and the European Development Fund. Germany has been collaborating intensively with the international forest community and is working – in line with the European Union – towards an international agreement on the management, conservation and sustainable development of all types of forests. In 1998, Germany, together with Finland, Honduras, Indonesia, Uganda and the United Kingdom, undertook the government-led Six-Country Initiative “Putting the IPF Proposals for Action into Practice at the National Level”. The objectives of this initiative of countries from the North and the South were to enhance implementation of the IPF Proposals for Action at the national level and to develop guidance for consideration by the IPF partner countries. The Six-Country Initiative culminated in an International Expert Consultation (Baden-Baden/Germany, 29 June - 3 July 1998) and led to the elaboration of a practitioner’s guide for the implementation of the IPF Proposals for Action. Germany uses the national forest programme concept and the findings of the Six-Country Initiative for reviewing and, as appropriate, realigning German cooperation programmes in selected partner countries.

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CHAPTER 12: MANAGING FRAGILE ECOSYSTEMS: COMBATING DESERTIFICATION AND DROUGHT

Decision-Making: Due to the temperate climate of Germany, combating desertification and drought is not an area of concern within Germany. However, it is recognized as an important issue of Germany's development cooperation. Germany has recently focused its official development cooperation on 70 countries, about half of which are seen as "priority countries" with 3 sectors of cooperation, with the other half being seen as "partner countries" with one sector of cooperation. The priority sectors of intervention are agreed upon through dialogue with the partner governments. Partner countries' efforts in combating desertification can be supported if both governments have chosen the "protection and sustainable management of natural resources" as a priority sector of cooperation. Projects and programmes are proposed by the partner countries in the course of government negotiations. Besides, the implementation of the three "Rio Conventions" (UNFCCC, CBD, UNCCD) is being supported directly through respective sectoral projects under technical cooperation, which facilitate policy advice and some practical field measures. For more information concerning official development cooperation, see **Programmes and Projects and Cooperation**.

In 1993, German NGOs supporting development work in arid zones and/or working on relevant global issues formed the "Working Group Desertification", to provide advice to German NGOs contributing to the implementation processes of the CCD and National Action Programmes (NAPs). This network comprises some 30 German-speaking organizations, associations and individuals from the environment, development and academic communities. The network is engaged in dialogue at both the national municipal level and the European and international level with the Réseau International d'ONG sur la Désertification (RIOD).

One focus of German NGOs' activities in arid zone development is on the field of integrated rural development. Another priority area is capacity building for civil society participation and empowerment e.g. for land user groups e.g. women, indigenous groups, representative structures (including labour unions), NGOs, and service providers (public/private). Other important fields of action are the support of a conducive legal framework, for instance in order to achieve legal certainty as regards access to land (land reform), but also the defusing of conflicts, including armed environmental conflicts within countries or across borders (e.g. in East Africa or in Brazil). A pilot programme in four regions of Africa provides specific support to NGOs involved in CCD/NAP processes.

Programmes and Projects: Since the beginning of the 1980s, support to resource management in arid zones and desertification control have played an important role within the framework of German development cooperation. Since the middle of the 1990s, this sector has become even more significant thanks to the UNCCD, which raised awareness, not only in Africa but also among the Latin American and Asian public and development policymakers, of the growing threat to natural resources in arid zones. German technical and financial cooperation currently supports around 250 projects accounting for a total volume of commitments of about DM 2.9 billion. Some 60% of the projects supported are being carried out in 25 African countries (the focus region of the UNCCD), with 25% in Asia and 15% in Latin America. Germany hosts the Secretariat of the UNCCD, which is located in Bonn, its former capital.

Status: Although combating desertification and drought is not relevant in German ecosystems, it is an important issue in German development cooperation. Germany is lending intensive support to CCD implementation, as it believes that the CCD is in the process of becoming an important strategic framework for sustainable development in the countries and regions threatened or affected by desertification. As a "development convention", the UNCCD is closely linked to other urgent problems such as: land degradation; diminishing water resources; declining biodiversity; growing poverty; and the conflicts resulting from these causes. The German side therefore feels that the UNCCD, as a potential regulatory framework for the resolution of problems at the national, regional and international levels, deserves energetic support both from donors and from developing countries.

Capacity-Building, Education, Training and Awareness-Raising: The Federal government is aware that the impact of desertification on developing countries will also have repercussions on industrialized countries. Therefore continuous efforts are needed for CCD mainstreaming into the policy-making process and to gain recognition of the significance of the CCD and the other environmental conventions as a potential strategic framework for sustainable resource management. On the German side, too, there is still additional potential for integrating the CCD process into the framework of bilateral and multilateral development cooperation. By providing informative material and guidance on mainstreaming the CCD, the Federal Ministry for Economic Cooperation and Development (BMZ) is continually involved in creating greater awareness of the significance of the CCD among implementing organizations of development cooperation. This includes the integration of CCD implementation into relevant Country Strategies and Key Cooperation Sector Strategies. A number of publications are available to inform the German public of the significance and the fields of action of the Convention to Combat Desertification. Publicity programmes on desertification control and the CCD were part of the global exposition EXPO 2000 in Hanover, Germany.

Within the preparatory process of the World Summit on Sustainable Development in New York, Germany pledges to pay stronger attention to land degradation within the context of the CCD.

Information: Further information regarding German initiatives to combat desertification can be obtained at various websites, for example:

- <http://www.gtz.de/desert/>- (GTZ);
- <http://www3.gtz.de/desert/links/links.html>- (GTZ);
- <http://www.desertnet.de>; and
- <http://www.riod.de>- German NGO network on desertification.

Germany is supporting an initiative for exchanging information on, and mainstreaming of, issues related to desertification control and natural resource management, through the “UNCCD network”, which was created in 1994. This network unites the representatives of German development cooperation relevant in the context of the UNCCD: government (BMZ); implementing agencies GTZ and KfW (headquarters as well as project staff working in the affected countries on behalf of the agencies); NGOs and international organizations (e.g., Club du Sahel, UNESCO); and the UNCCD Secretariat.

In addition to the electronic dissemination of reports there is an annual network meeting to facilitate intensive dialogue on experience and challenges related to UNCCD implementation, enable discussion about future relevant issues and, ultimately, to foster cooperation. See <http://www.gtz.de/desert/> and <http://www.desertnet.de>.

Research and Technologies: German scientists engaged in desertification-related research have formed a network and want to contribute actively to the process of CCD implementation.

There is a university partnership programme between the GTZ, the University of Vienna and the University of La Rioja in Argentina - aimed at gaining more in-depth insights into desertification control and the significance of the environmental conventions.

Financing: German technical and financial cooperation currently supports around 250 projects in development cooperation accounting for a total volume of commitments of about DM 2.9 billion.

One of the first instruments that the German government created early in 1995 was a Special Fund for the implementation of the UNCCD in Africa. Originally endowed with some DM 6 million, that Special Fund has already assisted a wide range of mainly African countries in drawing up their national action programmes. In the future, the Special Fund is to be enlarged and used for UNCCD implementation in other countries and regions as well.

Through an additional contribution of DM 1 million to the UNCCD budget (“Bonn Fund”), Germany supports events organized by the UNCCD Secretariat on issues such as interregional interchange and cooperation. In addition to its bilateral projects and programmes, Germany provides a considerable share of the funding for multilateral institutions which are involved in CCD implementation, namely to the EU (about 24% of all EU contributions), UNDP/UNSO, UNEP, the World Bank, GEF and FAO.

Cooperation: After the entry into force of the UNCCD, German development cooperation especially provides assistance for the implementation of National Action Programmes to combat desertification and financial and technical support for appropriate programmes and projects. In Africa, Germany is supporting the NAP processes in Benin, Burkina Faso, the Gambia, Mauritania, Morocco, Namibia, Senegal, South Africa, Tunisia and Mali. See also under **Programmes and Projects**.

In South America, our partner countries have consciously and visibly established links between a number of these projects and their national action programmes and the process of CCD implementation. Presently, Germany is providing financial and technical support to the following 10 Latin American countries: Argentina, Bolivia, Brazil, Chile, Cuba, Dominican Republic, Ecuador, Colombia, Paraguay and Peru. Within a new project in Cuba, the National Action Programme and watershed management are being supported.

In Asia, Germany is supporting natural resource management and anti-desertification measures in 14 countries: Bhutan, India, Indonesia, Israel, Jordan, Lebanon, Nepal, Pakistan, Sri Lanka, Syria, Turkmenistan, Turkey, China and Mongolia. There are only a few exceptional cases in which Germany's Asian partner countries have consciously linked new projects in the field of resource management to the CCD. However, in the Central Asian and Caucasian transition countries there is growing interest in the CCD. The German government supports the countries in resolving cross-border conflict over resources including through capacity building, exchange of information, biodiversity protection, and water and land management.

The German government is aware that, in ratifying the CCD, it has assumed an obligation to do everything within its power to foster its implementation. In order to be able to do that, the German government is continuously investing efforts into mainstreaming the CCD into bilateral and multilateral development cooperation. For this purpose, a permanent Focal Point was established within GTZ (1994), and the Convention Project to Combat Desertification ("CCD Project") was created (1997) to support the co-ordination of public and private, German and multilateral actors engaged in combating desertification.

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CHAPTER 13: MANAGING FRAGILE ECOSYSTEMS: SUSTAINABLE MOUNTAIN DEVELOPMENT

Decision-Making: Several Bavarian State Ministries are responsible for sustainable development in the Alpine Region of Germany, especially: the Ministry for Regional Development and Environmental Affairs; the Ministry of Economy and Transport; the Ministry of Consumer Protection, Food and Agriculture; and the Ministry of the Interior. They co-operate closely with local governments. Germany is a party to: the Convention on the Protection of the Alps (Alpine Convention, 1991); the Alpine Convention Protocols on Mountain Farming, Regional Planning and Development, Nature Conservation and Landscape Management; and the Mountain Forest Protocol (1996). Legislation was revised in 1994, when the Ordinance on the Bavarian State Development Programme was passed. The following laws are also relevant to sustainable mountain development: the Regulation on the Alpine and National Park Berchtesgaden (1978); the Law on the Protection of Alpine Pastures (1932, amended 1982); the Bavarian Forest Law (1975); and the Law on Forest Rights (1958).

The following NGOs are involved in mountain development: the German Alpine Association; the Commission Internationale pour la Protection des Alpes (CIPRA); the Nature Conservation League; the Mountain Rescue Service; the Association for Hill Farming Problems; and the Alpine Farming Association. The Bavarian government and NGOs have carried out numerous activities in nature and National Park management, waste management, air quality control, and the implementation of the Noise and Vibration Act. State subsidies so far amount to DM 16.4 million. NGOs are undertaking activities to inform the public on environmental issues in mountain areas.

Programmes and Projects: The Bavarian State Forest Administration has been implementing a rehabilitation programme for protective forests since 1986 in close cooperation with the water management authorities. This programme is aimed at the rehabilitation of ill-functioning protective forests. It is intended to last for some 25 years and covers a financial contribution of approximately DM 520 million from the State Forest Administration and DM 300 million from the Water Management Administration. The programme also provides for the reduction of excessive game populations and the settlement of harmful forest pasture rights. In addition, the owners of agricultural and forestry land receive substantial financial support in the form of government subsidies. The programme for the conservation of forest genetic resources and the programme for the conservation of biological diversity also apply to mountain areas.

Status: The German Alpine Region, including the foothill area, covers 11,153 km² and is located in the federal state of Bavaria (the area of the German Alpine region proper is 5,300 km²). The most important rivers in the mountain area are the Inn, Isar, Lech, and Iller. The nature and intensity of utilization of the Alpine Region (increasing volume and concentration of traffic, tourist activities, progressive settlement) have resulted in considerable loss of conservation-worthy landscape elements, biotopes, and species over the past few decades.

Capacity-Building, Education, Training and Awareness-Raising: The Federal government has initiated a programme to inform the public about environmental issues in mountain areas, and there are various incentive schemes available for the preservation and sustainable use of mountain areas (for example, the management of protected forests, alpine landscapes, ecological farming practices, and infrastructure development). Ten years after the United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro in June 1992, the United Nations declared 2002 the International Year of Mountains. This Year provides an opportunity to express the specific concerns of mountain areas within individual nations as well as in the context of global developments, showing, introducing and implementing solutions for the future. In Germany, the Federal Ministry of Consumer Protection, Food and Agriculture is preparing the activities of the Federal government for the International Year of Mountains in close cooperation with other Federal Ministries, representatives from the Ministries of the federal states, scientists and numerous interested associations.

The activities, which took place on 15 February 2002, included a great national start-up event in Munich, which addressed the broad public. Immediately after that event a two-day technical meeting at the German Foundation for

International Development (Deutsche Gesellschaft für internationale Entwicklung DSE) was held in Feldafing. Numerous events are being planned in 2002, to be organized by associations, universities, research institutes etc. The events in the context of the International Year of Mountains are designed to focus the attention in particular of the inhabitants and managers of mountain areas, the great number of mountain and hiking club members or members of environmental associations as well as all people seeking recreation in the mountains. All of them and last but not least decision-makers are called upon to advocate sustainable mountain development. In the view of the Federal government, a major prerequisite for the success of the International Year of Mountains is the ratification of the first eight Alpine Convention Protocols by all contracting parties by 2002. The German ratification act is presently being prepared by the Federal Ministry for the Environment, Nature Conservation and Reactor Safety.

Information: No information available.

Research and Technologies: By mandate of the German Federal Environment Agency, the Alpine Research Institute Garmisch-Partenkirchen investigates aspects of sustainable development in the region.

Financing: From 1985 to 1994, the Bavarian State Ministry for Regional Development and Environmental Affairs spent DM 30 million to investigate the causes of forest damage in the Alpine Region. The annual expenditure for wild torrent and avalanche control schemes is DM 35 to 40 million. The Bavarian State Ministry of Food, Agriculture and Forestry spends DM 15 to 20 million annually on forest-related measures in the Alpine Region.

Cooperation: As one of the seven Alpine countries, Germany actively co-operates with the other signatories to the Alpine Convention in the interests of sustainable development in the Alpine Region.

In 1994, a draft study was presented which defined sustainable development in the Alpine Region and included proposals for further action. The Alpine-Adriatic Working Group conducted a symposium on "Distribution and Effects of Photo-oxidants in the Alpine Region" (1988) and on "Input of Substances from the Atmosphere and Damage to Forest Soils in the Countries of the Alpine-Adriatic Working Group" (1993). Forest damage in the Alpine Region is rated significant/serious (damage levels 2-4 according to the United Nations Economic Commission for Europe classification). Mountain forests are endangered through atmospheric pollutants, abiotic factors (wind, storm, snow, ice, frost, fires), biotic factors (insect pests, fungal damage, wildlife browsing), and stresses due to forestry and recreation uses. The work performed by farmers and forest owners as well as the services of the water and forest administrators in terms of the care and preservation of the mountain forests and watersheds as well as the protection against harmful effects of snow movements are crucial for the sustainable development in the Bavarian Alpine region. It is this approach that allows the long-term settlement of mountain zones. The Federal government participates in the United Nations Food and Agriculture Organisation/Economic Commission for Europe (FAO/ECE) Working Group on the Management of Mountain Watersheds and in the Ministerial Conference for the Protection of Forests in Europe, which deals with mountain development.

Sustainable mountain development is addressed within Germany's bilateral and multilateral development cooperation in a wide range of projects dealing with: land use planning; watershed management; afforestation; forest conservation and management; as well as rural development projects in mountain regions. Relevant regional institutions such as the International Centre for Integrated Mountain Development (ICIMOD/Nepal) and the Tropical Agronomic Centre for Research and Education (CATIE/Costa Rica) are also supported.

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CHAPTER 14: PROMOTING SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT

Decision-Making: In Germany, the Federal Ministry of Consumer Protection, Food and Agriculture (BMVEL) are responsible for sustainable agriculture. BMVEL is a member of the National Co-ordination Mechanism for Sustainable Development. The responsibility for implementing coherent measures lies with the federal states. The rules and principles of “good agricultural practice” have been incorporated into agricultural law, such as the Federal Fertilizer Act and the Federal Plant Protection Act and environmental law, such as the Soil Protection Act. The Closed Substance Cycle and Waste Management Act introduced the use of sewage sludge and biowaste as organic fertilizers. Besides national legislation, there are also many European Union regulations and directives related to agriculture and environmental protection. The main instruments for addressing environmental concerns are public regulations such as laws and ordinances. Many environmental aspects have been implemented through agricultural legislation, and this has been harmonized at EU level on a large scale. In addition, the German federal states in particular offer some economic incentives for implementing environmental protection and nature conservation measures which go beyond “common good agricultural practice”. The principles and objectives for sustainable agriculture were already being taken into account by German authorities and the European Community prior to UNCED.

The model of German agricultural policy is the farm enterprise managed in a sustainable way with respect to ecological, economic and social aspects. Strategies are being implemented to reduce fertilizer application rates by means of extension programmes, and through the new Ordinance on Fertilization of 1996. The requirements of good professional practice in plant protection were formulated for the first time as a basic strategy in plant protection in 1998. Great stress was also laid on the fact that integrated pest management involves higher requirements and serves as a model with which practical plant protection is to be gradually aligned. The precautionary principle, the polluter-pays principle, and the cooperation principle form an integral part of German water policy.

The German Farmers’ Association (DBV) is the leading agricultural association within Germany serving as an umbrella organization for 18 state farmers’ unions and various agricultural related interest groups at the national level. More than 90% of all 500,000 German farmers are members of the DBV. The rural youth organizations are amongst the most important social groups in rural areas. The four rural youth organizations in Germany work together on fundamental issues. The German countrywomen’s association (DLV), as a lobby for farmers’ wives and women in rural areas, also feels responsible for the future of rural areas. The German NGO Forum on Environment and Development has set up a working group on sustainable agriculture, involving environmental groups, development and farmers’ organizations and representatives of the rural population.

The decisions taken by the Planning Committee for Agricultural Structures and Coastal Protection (PLANAK) on the support principles of GAK 2002 initiated decisive measures to reorient the support for agricultural structures with a view to orienting it more closely to the sustainability principle. This applies especially to:

- the expansion of support for conversion to organic farming;
- the expansion of support in the fields of processing and marketing of organically and regionally produced goods;
- tying individual farm support more strongly to a particularly welfare-oriented and land-related type of livestock farming;
- gearing compensatory allowances in less-favored areas more strongly to sustainable and site-adapted land management;
- expanding agri-environmental support, inter alia, by including support for multiple crop rotation with a minimum share of protein crops; and
- increased support for income alternatives.

In 2002, federal funds amounting to around €72 million will be available for GAK measures. The Federal government co-finances 60% of support within the framework of GAK (70% for the support field of coastal protection). The federal states will accordingly provide a total of €70 million in 2002.

Programmes and Projects: The EU exerts some influence on the contents of rural development programmes and makes additional funding available. In the 2000-2006 period, around €18 billion will be provided for rural development measures in Germany, of which around €8.7 billion comes from the EU. These funds can be subdivided as follows:

- 40% for general rural development measures;
- 35% for agri-environmental measures; and
- 25% for investment support for the production and processing of agricultural products.

Since October 1998, Germany has been developing and implementing a National Programme for Genetic Resources for Food and Agriculture. The following measures are to be incorporated into the programme: improvement of co-ordination between all governmental organizations at federal and state levels by establishing an overall advisory body and technical committees for specific areas of genetic resources for food and agriculture; and specific programmes for plant, animal, forest, aquatic and microbial genetic resources comprising different measures, including research work and conservation activities. The national programme for forest genetic resources was published in 2000 (<http://www.genres.de/fgrdeu/concept/>). The plant genetic resources programme was drafted in 2001 and will be published in 2002. It includes activities, inter alia, for in situ conservation, on farm management and ex situ conservation and will focus on the identification, inventorying and monitoring of genetic resources and on enhancing the use of crop plant diversity by, inter alia, increasing the characterization of the resources, developing core collections and establishing a national evaluation programme. The animal genetic resources programme will be finalized in 2002; it will include the national report for the FAO's First State of the World Report on Animal Genetic Resources. The Federal government has launched a "concept for the promotion of research, development and demonstration projects 1996 – 2000 in the field of renewable resources", for which BMVEL is responsible, administrated by the "Fachagentur für Nachwachsende Rohstoffe" (Agency of Renewable Resources). The promotion of bioenergy concerns is one of the most important objectives of this programme. The Market Launch Programme for Renewable Energies of the Federal Ministry of Economics is designed to promote, among other things, renewable energy sources - investments in biomass combustion plants and biogas facilities for power supply both through grants and low-interest investment loans.

Status: More than 80% of Germany's land surface is devoted to agriculture and forestry, and 54% of the total area is agricultural land. Around 21% of all jobs in Germany are to be found in agriculture and related economic areas. Thus agriculture plays a crucial role for sustainable development and contributes significantly to the economic viability of rural areas. In view of the high intensity levels in crop and animal production (in terms of mechanization and chemical inputs), and of output-oriented and yield-oriented practices, much had and has to be done to bring about better harmony between the agricultural sector and environmental protection, nature conservation, consumers' nutritional and health demands, and animal welfare.

Freedom of choice is the paramount principle of consumer policies in Germany. Clear labelling schemes are required to allow consumers to support, e.g., sustainable production patterns, improved product quality and social objectives.

In order to promote the market for organic products, a label ("Biosiegel") has been developed for products, which are produced in accordance with the EU Regulation on Organic Agriculture. A campaign, which will promote the publicity of the "Biosiegel", has just started.

In order to promote the above-mentioned goals through non-organic production methods as well, all important stakeholders of the food chain in Germany – farmers, feed industry, food industry, retailers, consumers – are preparing a label for non-organic agricultural production.

To take particular account of human health and environmental protection in the application of biotechnology, the requirements regarding the cultivation and marketing of genetically modified organisms (GMOs) were considerably tightened at Community level. In addition, GMO products should be clearly labelled at all stages of production and trade. Guided by the precautionary principle, the Federal government further expanded its support for research into biosafety. This is intended to lay the foundations for the responsible use of genetic engineering, also in the farming sector.

Capacity-Building, Education, Training and Awareness-Raising: In Germany, farmers are invited to participate in special programmes on the part of the federal states for the agricultural sector which combine both environmental concerns and economic requirements. The assistance of official or private extension services that give advice to farmers has a long tradition in Germany and is generally accepted. The combination of economic incentives and voluntary efforts guarantees an environmental surplus, the conservation of natural resources and sustainable agricultural development. The provision of training in ecologically sound agricultural and forestry production geared to the principles of sustainability is an integral part of all regulations on training and education in agriculture, home economics and forestry in Germany. All those involved in the German education system show great commitment to that issue and co-operate closely with each other in this respect. Federal states, chambers, professional and trade union establishments on the one hand, and non-governmental environmental organizations, environmental foundations and institutions on the other, offer a wide range of environmental education to staff and senior staff engaged in agricultural, forestry and home economics activities as well as for entrepreneurial extension.

Information: Information about issues of sustainable agriculture in the fields of education, advanced education and extension is provided by the Federal Ministry of Consumer Protection, Food and Agriculture through publications and press releases (<http://www.verbraucherministerium.de>) and in the Agricultural Information Network (<http://www.dainet.de>). At the federal level, the Evaluation and Information Service of German Agriculture offers a wide range of information in all media (e.g. <http://www.aid.de>). Moreover, all institutions of the federal states, the professional groups and the trade unions concerned with education and extension issues have their own information and Internet services. The German Centre for Documentation and Information in Agriculture (ZADI) is the main scientific information institution at the federal level. The Information Centre for Biological Diversity (IGR) at ZADI is responsible for collecting, processing and disseminating information on the conservation and sustainable use of genetic resources for food, agriculture, forestry and fisheries. The information system GENRES (<http://www.genres.de>) provides information on activities, institutions and other measures related to the conservation and utilization of plant, animal, forest, aquatic and microbial genetic resources. Additional information on genetic resources collections is available from the XGRDEU information platform of the national inventories (<http://www.genres.de/xgrdeu>). The Federal Information System on Genetic Resources (BIG) is a distributed database (<http://www.big-flora.de>) holding data, inter alia, of German gene banks, botanical gardens and in situ areas.

Research and Technologies: The principles of good professional practice for agricultural soil use involves the following issues: soil cultivation; soil structure; soil compaction; and soil erosion. The biological activity of soils is preserved and/or fostered, and the site-typical humus content of soils is preserved. Computer-assisted forecast and decision models are becoming increasingly important for the well-timed use of plant protection measures. In Germany, several extensive forecast systems either exist or will be established soon. Through these instruments, the amount of chemicals being used for plant protection could be reduced significantly without increasing plant cultivation risks. In order to promote environmentally sound livestock farming, management techniques are being developed to reduce nitrogen and phosphorus emissions, and new technologies have been developed for the storage and placement of liquid manure.

Financing: The Agriculture Investment Promotion Programme (APF) promotes individual investment (to make use of additional income sources). A number of federal states also provide financial aid for integrated production. A sewage sludge compensation fund was established to provide for residual risks resulting from agricultural utilization of sewage sludge.

Cooperation: Development cooperation to promote sustainable agriculture covers a broad spectrum and embraces all sub-sectors of agriculture and rural development. It aims at creating an incentive-based political framework through policy advice and works at the institutional level through capacity building on input and output markets.

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CHAPTER 15: CONSERVATION OF BIOLOGICAL DIVERSITY

Decision-Making: At the national level, matters of nature conservation and landscape management, as well as the conservation of biological diversity, fall under the responsibility of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety. The Ministry has substantial scientific support from the Federal Agency for Nature Conservation and the Federal Environmental Agency.

The Federal Nature Conservation Act is a major legal basis for the conservation of nature and landscape. This is a government framework law that the federal states execute, specify and make binding in their nature conservation statutes. In 2001, the German government revised the Federal Nature Conservation Act with the approval of Parliament. This amendment reformulated the government's nature conservation law and geared it to the requirements for the conservation of biological diversity in a modern industrialized country.

Some of the provisions of the Federal Nature Conservation Act have direct force of law. These include the regulations on *direct protection of species*, governing trade with plants and animal species, keeping them and removing them from the wild and measures concerning disturbances in nature. The Federal Ordinance on the Conservation of Species implements international and European species protection commitments, and also places nationally or regionally endangered native species under particular protection. The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety is in charge of nature conservation in the following areas:

- development of basic concepts, political incentives, strategies and their implementation as practical examples; at present, for example, a strategy on the conservation of diversity is being developed for COP 6 of the Convention on Biological Diversity;
- ensuring that nature conservation objectives are appropriately considered in other policies, legal and administrative sectors (agriculture, housing, transport, industry, water body protection, air pollution control and soil protection);
- informing the public, promoting nature conservation awareness;
- promoting nature conservation associations;
- coordinating the activities of the federal states; and
- promoting research and developing a system for observing the status of biological diversity.

It is primarily the federal states that are responsible for placing areas and objects under protection. An important instrument for this is landscape design, which is now being undertaken nationwide by the federal states and municipalities. The Federal government is also responsible for the extensive area of nature conservation work connected with international cooperation. Germany is actively involved in international conventions and international panels. Germany is a party to various nature conservation conventions, which also relate to the conservation of biological diversity:

- Convention on Biological Diversity (CBD);
- Convention on International Trade in Endangered Species (CITES);
- Ramsar Convention;
- Bonn Convention (CMS);
- Bern Convention; and
- UNESCO World Heritage Convention.

Germany is the third major contributor to the Global Environment Facility and is furthermore an active participant in the interdisciplinary UNESCO Programme "Man and the Biosphere" (MAB), which is especially aimed at implementing Agenda 21.

Biological diversity in Germany cannot be preserved solely by designating protected areas. In a densely populated and highly industrialized country, it is particularly important to use all land in a sustainable way. The legal regulations developed under the supervision of the Federal Ministry of Consumer Protection, Food and Agriculture

(BMVEL) play a fundamental role in this. These regulations include the Federal Forestry Act, the Federal Hunting Act, the Plant Protection Act, the Fertilizer Act and fisheries provisions. In the forestry sector there are numerous national and state management regulations for ecological forest management. In January 2000, the BMVEL published a strategy entitled “Biological Diversity of the Forest, its Conservation and Sustainable Use” (“Die biologische Vielfalt des Waldes, ihre Erhaltung und nachhaltige Nutzung”).

With regard to existing international commitments at a national level, the municipalities share a key role with government and federal states in the implementation of Agenda 21. In Germany’s municipalities and districts, ‘Local Agenda 21’ increasingly represents a springboard for a continually growing number of projects on the conservation of biodiversity.

Non-governmental organizations in Germany, such as: the Naturschutzbund Deutschlands (NABU); the Bund für Umwelt und Naturschutz (BUND); the Deutsche Naturschutzring (DNR); Greenpeace; and the Environment and Development Forum’s Working Group “Biodiversity”, play an important role in implementing Agenda 21 and the above conventions.

Programmes and Projects: BMVL is working on a national forest programme within the framework of a socio-political dialogue. A similar programme is to be initiated for horticulture and ornamental plant cultivation. BMVEL has developed and published a National Concept for Genetic Resources for Food and Agriculture. It encompasses a National Programme with sectoral programmes for the conservation and sustainable utilization of plant, animal, forest, aquatic and microbial genetic resources (see **Chapter 14**).

Apart from the support programmes of the federal states (including the meadow breeding programme, the wetland meadows programme, the field margin programme and others), the government has been making its own contribution to the permanent conservation of large areas of landscape since 1979 with its assistance programme dealing with the establishment and securing of nature and landscape areas, which are worthy of protection and which have a representative significance for the country as a whole. The aim is to permanently protect natural and semi-natural landscapes and the wild plants and animal species occurring therein. With government funding of around DM 400 million in the past 20 years, financial assistance has been provided for 50 projects. Twenty-two have already been concluded, and 28 are currently being implemented. The programme is also helping to create a European ecological network “Natura 2000”, and is playing a role in forming an interlinked national biotope, which is still to be developed. Further programmes concentrating on the sustainable use of biological diversity include:

- management guidelines for the federal forests (efficient forestry);
- agri-environment programmes run by the federal states in the framework of the implementation of Regulation EC No. 2078/92 and the Ordinance on promoting the development of rural areas through the European Agricultural Guidance and Guarantee Fund (EAGGF);
- expansion of the Community task of improving the agricultural structure and coastal protection;
- various contract-based nature conservation programmes of the federal states; and
- assistance programme for ecological farming practices.

Status: The pollution of nature in Germany has been significantly reduced in recent years by means of air and water quality control measures. However, nature and the countryside are still subject to different dangers. Both qualitative causes (intensified use and types of use, cutting up and diminishing habitats, etc.) and quantitative causes (loss of land due to settlements, traffic routes, depletion of raw materials, disposal of landscape elements, etc.) contribute to the threat to native species and biotopes. In Germany, the so-called “Red Lists” show endangered plants (1996), animals (1998) and biotopes (1994), together with their endangered status and the causes of this status.

Capacity-Building, Education, Training and Awareness-Raising: As part of the CBD process, Germany has organized numerous workshops and conferences to contribute to the further development of the Convention on Biological Diversity and thus to the implementation of Agenda 21, including capacity-building. A particularly important aspect in this context is the setting-up and further development of the Clearing House Mechanism, where

Germany provided targeted support, for example to Cameroon and Columbia, in setting up national centres for this mechanism through German technical cooperation, funded by the BMZ.

In addition, Germany organized workshops on elaborating guidelines for sustainable tourism; an ad-hoc working group held in Bonn in October 2001 with around 350 participants (government representatives from 90 countries, representatives of international organizations and 30 NGOs) elaborated guidelines on access to genetic resources and benefit-sharing, accompanied by two preparatory meetings for indigenous peoples and the Global Biodiversity Forum (funded by the BMZ).

The issue of conserving biological diversity is becoming increasingly important in Germany in the context of environmental education. In Germany this is the responsibility of the federal states. General awareness-raising also plays a key role. In the knowledge that improvement was needed in the general awareness of the ecological and economic significance of biological diversity, the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety elaborated a strategy for improving acceptance for nature conservation as a medium-term working programme. This strategy comprises a package of measures, inter alia to improve the analysis of the importance of lifestyles and communication with associations for nature conservation and nature use, as well as to develop and try out a new form of public dialogue and public relations measures. Components of this strategy include the second nature conservation competition "spots for nature" in 2001 and a widespread biodiversity campaign, "life needs diversity" in 2002. This campaign will involve diverse public relations work inter alia by the government, the federal states, non-governmental organizations (nature conservation associations, user associations, development-oriented associations), foundations, museums, zoological and botanical gardens and economic enterprises, in order to highlight the importance of biodiversity for everyday life and the general standard of living (<http://www.biologischevielfalt.de>, German-language site only).

There are considerable activities with regard to environmental education beyond schools, for example the Federal government and the federal states have been promoting projects run by nature conservation associations for many years, which provide nature conservation education, including projects geared towards achieving the specific goals of the Convention on Biological Diversity and the implementation of Agenda 21. Furthermore, there are some educational establishments in national parks in Germany, in particular in the UNESCO biosphere reserves.

Germany launched a special Biosafety Capacity Building Initiative for developing countries with regard to the implementation of the Cartagena Protocol (funded by the BMZ and executed by the GTZ).

Information: Collecting and forwarding information plays a significant role in Germany. The following publications are important in the field of reporting: "Daten zur Natur" (Federal Agency for Nature Conservation, 1999); "Data on the Environment" (Federal Environmental Agency, 1999); the second national report on the implementation of Article 26 of the CBD (July 2001). Information on diversity can be found in the German Clearing House Mechanism at <http://www.biodiv-chm.de>. The Information Centre Genetic Resources (IGR) at the Centre for Documentation and Information in Agriculture (ZADI) is responsible for collecting, processing and distributing information on national and international measures for the conservation and sustainable use of genetic resources for food and agriculture. The "GENRES" information system provides information on plant, animal, forest, aquatic and microbial genetic resources at <http://www.genres.de>. National inventories of genetic resources collections are available at <http://www.genres.de/xgrdeu>. Biodiversity in German Development Cooperation, (BMZ / GTZ) gives an overview of all activities in the field of bilateral assistance for the implementation of the CBD <http://www.gtz.de/biodiv>.

Research and Technologies: The support programme of the Federal Ministry of Education and Research (BMBF) gives increasing consideration to the objectives of the Convention and Agenda 21. The focal point of biodiversity research, which started with state-funded research institutions, is promoted, e.g. the programmes BIOLOG and BIOTEAM. The central register of biological research collections in Germany (ZEFOD <http://www.genres.de/zefod>) - which is funded by the BMBF and co-ordinated by the Information Centre Genetic Resources (IGR) at ZADI - is closely linked to this.

The Federal Agency for Nature Conservation and the Federal Environmental Agency has a number of research and development projects. For the implementation of local Agenda 21 in the area of nature conservation, the Federal Agency for Nature Conservation commissioned a two-year research project that was completed in December 2001. This project contains a variety of practical references and proposals for action on how suitable projects can be set up in respective regions, ranging from nature conservation to man-nature relations and contact with nature. Furthermore, suitable nature conservation measures for implementing Agenda 21 and projects that have already proven to be a success are described in detail.

Financing: Germany played an active role in setting up the financial mechanism of the Convention on Biological Diversity, and is greatly involved in supporting the trust fund of the GEF. Germany's contribution in the pilot phase was US\$ 200 million, US\$ 240 million for GEF-1 and DM 389.2 million plus an additional voluntary contribution of DM 28.1 million for GEF-2. The BMZ is in charge. In addition, there are a range of economic incentives in Germany (fiscal measures, support instruments funded by charges) for the protection and sustainable use of biospheres. However, there is a need for funding, in particular for creating and conserving nature conservation areas. In Germany there are various financing mechanisms for this. Furthermore, Germany provides considerable funding for international measures and workshops within the framework of the Convention on Biological Diversity.

Cooperation: Germany attaches great importance to cooperation both with other contracting parties to the CDB and competent international organizations for the protection of biodiversity at bilateral, regional and international level. Thus within the framework of bilateral cooperation, which is co-ordinated by the BMZ, with developing countries, Germany makes available approx. €75 to 100 million per annum for projects promoting the protection and sustainable use of biodiversity. In addition, approx. DM 45 million is made available annually via the GEF. Since 1994, the BMZ also supports a special programme, dedicated to CBD, "Implementing the Biodiversity Convention", executed by the GTZ. As part of development cooperation, various projects are supported that directly target the promotion of traditional knowledge, especially in Latin America (Ecuador, Amazon countries, etc.). Cooperation exists within China and the Russian Federation within the framework of the UNESCO MAB programme. See also under **Decision-Making**.

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CHAPTER 16 AND 34: ENVIRONMENTALLY SOUND MANAGEMENT OF BIOTECHNOLOGY AND TRANSFER OF ENVIRONMENTALLY SOUND TECHNOLOGY, COOPERATION AND CAPACITY-BUILDING

Decision-Making:

Technology: On the basis of the European Economic Community (EEC) Council Regulation No. 1836/93 allowing voluntary participation by companies in a community eco-management and audit scheme, Germany has enacted an Act concerning the accreditation of environmental verifiers and environmental verification organisations and the registration of eco-audited sites. The Act was implemented on 15 December 1995. To date, 120 environmental verifiers and environmental verification organisations have been accredited, and approximately 410 participating sites have been registered. In addition, Germany is preparing for the implementation of the International Standards Organisation (ISO) 14000 series concerning environmental management systems. The Energy Research Programme (ERP) grant loans at favourable conditions for commercial investment projects aimed at lowering or avoiding pollution. The German government's policy on cooperation in science and technology with developing countries is concentrated on areas such as tropical ecology, renewable energies, biotechnology or the protection of the marine environment.

Biotechnology: In Germany, several ministries are involved in the issue of biotechnology, including: the Federal Ministry of Health; the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety; the Federal Ministry of Food, Agriculture and Forestry; the Federal Ministry of Economics; the Federal Ministry of Education and Research; the Federal Ministry for Economic Cooperation and Development; as well as Federal departmental agencies and Ministries in the federal states. Support is provided by a scientific advisory body known as the Central Commission for Biological Safety (Zentrale Kommission fuer die Biologische Sicherheit - ZKBS). The Act Regulating Genetic Engineering came into effect in 1990 and was amended in 1993. The law and its regulations lay down the administrative procedures and safety measures for the use, deliberate release, and placing on the market of genetically modified organisms (GMOs). The Act has been adapted to scientific and technical progress by reducing administrative requirements without affecting safety levels. Public participation procedures are integrated in the decision-making procedures of the competent authorities in the case of: a) applications for the construction of certain industrial installations, and b) applications for deliberate releases of GMOs. Major groups involved in biotechnology include: National Research Centres, such as the Gesellschaft für Biotechnologische Forschung (GBF); government departmental research agencies, like the Institut für Pflanzengenetik und Kulturpflanzenforschung (IPK); and other major organizations and companies, such as the Deutsche Gesellschaft für Chemisches Apparatewesen, Chemische Technik und Biotechnologie (DECHEMA), Deutsche Industrievereinigung Biotechnologie (DIB), Bayer, BASF, and Hoechst, among others.

Programmes and Projects:

Technology: To improve the transfer of technology to developing countries, the International Centre for Transfer of Environment Technology (ITUT) was established in Leipzig. In addition to this, a special project is under preparation to assist small and medium-sized enterprises with the introduction of environmentally oriented management methods. The ERP Environmental and Energy Conservation Programme grants loans at favourable conditions for commercial investment projects. These projects are related to the following fields: waste management (avoidance, use, and disposal of waste and measures to clean up pollution from the past); sewage treatment (water treatment, protection of water resources, avoidance of sewage and hazardous waste transport, purification and treatment of sewage); clean air measures (avoidance or considerable reduction of emissions, fuel gas purification and the filtering of emissions, as well as the reduction of noise, odours, and vibrations); and energy conservation (conservation and efficient use of energy and investments in the use of renewable energies). An Energy Research Programme has also been developed out of the Strategy, geared toward reducing consumption of fossil fuel and upgrading the efficiency of energy conversion. The National Climate Protection programme of the German government envisages a 25% reduction of CO₂ emissions by the year 2005.

Biotechnology: Under the new framework programme on biotechnology, which the German government has been running since January 2001, the continuation of the funding scheme for sustainable bio-production has been confirmed. Furthermore, the new biotechnology programme extends research on biological safety. A particular focus is on research on the potential ecological impacts of GMOs and on the development of parameters for a monitoring plan required by the amended version of the European directive on the deliberate release of GMOs (2001/18/EC). The Act Regulating Genetic Engineering determines competent authorities that license and supervise the use and release of genetically modified organisms.

Status:

Technology: Most needed are Environmentally Sound Technologies (ESTs) in the economic sectors of transportation and private energy consumption. In Germany's experience, the selection, transfer and application of ESTs are mainly the task of the private sector. Environmental advice, related technology and know-how transfers are increasingly becoming an integrated part of activities of German industry and its self-governing organizations acting on an international level.

Biotechnology: Research programmes run by the German Federal and state governments as well as initiatives from private companies will make a major contribution to the development of ESTs. See also under **Programmes and Projects**.

Capacity-Building, Education, Training and Awareness-Raising:

Technology: In 1992, the government allocated a significant amount of money to the promotion of universities in developing countries. The Centre for Appropriate Technology and Development Cooperation (ARTEFACT) provides grants to students from developing countries. Germany provides funds to employ an increasing number of experts from developing countries within the framework of technical cooperation.

Biotechnology: In Germany, public understanding of science and awareness-raising is considered exceedingly important by policy-makers for education and science. Specific government programmes have been developed in the field of biotechnology and genetic engineering to increase public understanding of science, such as the mobile laboratory entitled "Science Live - Science in Dialogue", or the "Year of Life Sciences 2001" initiative of the Ministry of Education and Research, which included numerous science events and exhibitions for the public. These programmes include environmental issues of biotechnology and genetic engineering. Furthermore the Ministry of Education and Research started a communication project on biosafety this year. The aim is to communicate the results of biosafety research in terms that can easily be understood by non-scientists. A feedback and dialogue platform for science, society and public shall be established to promote informed public debate.

Information:

Technology: Providing developing countries with information on environmental technology is one goal of several bilateral agreements between the Federal government and developing countries. The question-and-answer service run by the Information and Advisory Services for the Adaptation of Technologies (ISAT) on the basis of wide-ranging documentation aims to provide information and advice on technologies. This service not only helps to mobilize existing abilities and skills and promote self-help activities by non-governmental organizations but also assists craft trades, small-scale industry and local authorities in developing countries by providing information and advice. The programme PROTRADE provides an advisory service for firms in developing countries. The chambers of industry and commerce in Germany have compiled a CD-ROM listing suppliers of environmental protection products and services nationwide.

Biotechnology: No information available.

Research and Technologies:

Technology: See **Programmes and Projects**.

Biotechnology: See **Programmes and Projects**.

Financing:

Technology: The German government has in ten cases either established credit-lines on environmental issues or contributed to environmental funds. Through the German government's Transform Advisory Programme, an annual figure of approximately DM 5.5 million is directed into advisory services.

Biotechnology: About DM 1500 million per year is spent on biotechnology research and development (project and institutional funding, including genetic engineering) in Germany.

Cooperation:

Technology: Part of Germany's development cooperation around the globe is: the establishment and expansion of scientific and technological competence; the adaptation and dissemination of technologies; and of production processes and products tailored to the particular needs and conditions of individual countries. The German Appropriate Technology Exchange (GATE) is a special working unit of the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) operating mainly in the fields of: renewable energies; environmental and resource protection; village technology; building and construction; food processing; water supply and sanitation; and organic agriculture. The Federal government promotes direct foreign investment by German enterprises through investment protection agreements, capital investment guarantees, double taxation agreements and joint ventures in developing countries. The Forum for Appropriate Technology (AT Forum) was established in mid-1993.

Biotechnology: In terms of regional and international cooperation on biotechnology, Germany sits on the European Union Committee of Competent Authorities for Regulations and on the Organisation for Economic Cooperation and Development's (OECD) National Expert Group on Biotechnology/Working Party on Biotechnology. The German government is involved in various bilateral initiatives in this sector. The Federal Ministry for Economic Cooperation and Development has supported the following: the international workshop run by the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) in October 1993 in the Philippines on "Plant Biotechnology in Technical Cooperation Programmes"; the development of the upgrading programme of DSE on "Biotechnology: Micro-propagation and related techniques for the conservation and use of plant genetic resources and the improvement of crops"; and participation in and financial assistance for upgrading events run by the International Service for the Acquisition of Agri-biotech Applications (ISAAA) in Argentina aimed at drafting legal provisions for release trials in the states of the CONASUR group (Argentina, Brazil, Bolivia, Chile, Paraguay, Uruguay). Biotechnology research projects include, among others: research programme for enhancing cold tolerance in Phaseolus beans by gene transfer at the Centro Internacional de Agricultura Tropical (CIAT) in Cali, Colombia; research programme on fusion of somatic cells in sweet potatoes at the Centro Internacional de la Papa (CIP) in Lima, Peru; development of adapted, high yielding, and disease-resistant tomato cultivars for highland regions in Africa; development and improvement of heterotically responsive maize gene pools in Eastern Africa at the International Maize and Wheat Improvement Centre (CIMMYT), Mexico; germplasm characterisation and utilisation of tuber crops at CIP, Peru; potato disease resistance mediated by antimicrobial proteins at CIP, Mexico; and refinement of cryopreservation techniques for potatoes at the International Plant Genetics Resources Institute (IPGRI), Rome.

Biosafety: The German Biosafety Capacity-Building Initiative for the Implementation of the Cartagena Protocol, launched in May 2000 by the German Federal Ministry for Economic Cooperation and Development (BMZ) and the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), includes demand-driven activities that will depend on the country's needs. The main elements are: policy advice; assistance in the formulation of biosafety legislation and implementation of existing or new regulations; institutional capacity-building (e.g. for risk assessment and management, prevention of illegal transboundary movements); assistance to the national Biosafety Clearing House focal points; and public-awareness raising. Activities involve policy-makers, government, representatives of non-governmental organizations, scientists, trainers, and teachers. The project intends to assist in defining the state-of-the-art within a given developing country; to suggest a participatory mechanism for the formulation of biosafety policy; to comment on the minimum requirements of a legal and administrative infrastructure; to provide advice on the development of risk assessment procedures, based on the precautionary principle; to enable and facilitate decision-making; to determine benefits, objectives, and limitations of monitoring procedures; and to formulate evaluation criteria for assessment of biosafety policy. Public-awareness raising

activities and involvement of non-governmental organizations constitute a vital part of the initiative. Applying countries are supported by bilateral cooperation projects of differing dimensions. The initiative involves a Biosafety Capacity Building Instrument which consists of: a document providing orientation; background information and explanations on suggested training exercises; a set of transparencies and training modules; a list of relevant electronic publications and links; and case-studies. Additionally, biosafety training courses for individuals/representatives of competent authorities are offered in Germany.

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CHAPTER 17: PROTECTION OF THE OCEANS, ALL KINDS OF SEAS, INCLUDING ENCLOSED AND SEMI-ENCLOSED SEAS, AND COASTAL AREAS AND THE PROTECTION, RATIONAL USE AND DEVELOPMENT OF THEIR LIVING RESOURCES

Decision-Making: Issue-related governmental bodies in this area are: Federal Ministry for the Environment, Nature Conservation and Nuclear Safety; Federal Ministry of Consumer Protection, Food and Agriculture; Federal Ministry of Transport, Building and Housing; and various ministries in the coastal federal states. Regulations for water resource management are exclusively a matter for the federal states and their municipalities. Nature protection, spatial planning and in some cases fisheries are the responsibility of the coastal federal states, which co-operate closely.

Germany takes due account of the EU Common Fisheries Policy and the FAO Code of Conduct. An environmental impact assessment is mandatory for certain public and private projects. Germany's national policy on oceans is integrated into the National Sustainable Development Strategy and, as far as it relates to fisheries, within the Common Fisheries Policy of the EC. It has an integrated coastal area management programme to encompass all marine activities within the Exclusive Economic Zone (EEZ). The policy addresses marine environmental protection and the sustainable use and conservation of marine living resources as well. The Trilateral Wadden Sea Cooperation (Germany, Netherlands, and Denmark) is working to protect the fragile coastal intertidal mud flats. Major groups (local authorities, NGOs, business and industry, scientific community organizations) are also involved in decision-making in this area.

Programmes and Projects: Among the major projects and activities are the following: the Trilateral Wadden Sea Plan; implementation of the reduction targets for nutrients and hazardous substances of OSPAR, HELCOM (Helsinki Commission) and the North Sea Conferences; and establishment of marine protected areas in the area of the OSPAR and Helsinki Conventions.

Status: The major uses of the coastal areas in Germany include tourism, agriculture, major population centres, industry, fishing, shipping and nature conservation areas. In 2000, agriculture, forestry and fishing together amounted to 1.2% of the GNP. The primary sources of land-based pollution are industry, agriculture and transport. The primary sources of sea-based pollution of the marine environment are legal and illegal oil discharges and dumping of contaminated dredged materials. Tourism also has an impact in some areas.

Capacity-Building, Education, Training and Awareness-Raising: Capacity building, education, training and awareness-raising are undertaken, inter alia, through workshops and round tables of the Federal government, the federal states, industry and NGOs. Other means for awareness-raising include press releases, lectures, exhibitions, symposia, and workshops.

Information: National information in this area is available for sustainable management of: fishery resources; marine pollution; living resources other than fish; and critical uncertainties. Germany uses a surveillance system to monitor implementation of relevant laws and regulations. Geographic Information Systems are also used for these purposes. Information on oceans in Germany may be accessed through the following websites: <http://www.bsh.de>; <http://www.bmu.de>; <http://www.umweltbundesamt.de>; and <http://www.dainet.de>. Germany has participated in a test run for the CSD sustainable development indicators and is working on the development of agri-environmental indicators within the OECD framework.

Research and Technologies: Among the technology issues on which Germany is working are (1) development of environmentally sound paints for ships, and (2) treatment of contaminated dredged materials. Technologies are chosen on the basis of BEP: best environmental practice (BEP), and best available technology (BAT).

Financing: Financing for programmes and activities in these areas is provided for in the national budget.

Cooperation: Germany ratified the United Nations Convention on the Law of the Sea on 14 October 1994. Germany is, among others, also a Party to the following international agreements: Convention on Biological Diversity; OSPAR Convention; Helsinki Convention; Baltic 21 for the Baltic Sea; and UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks. Other related agreements include the following: Trilateral Wadden Sea Cooperation (Germany, The Netherlands, Denmark); Bonn Agreement; the Ministerial Declarations of the International Conferences for the Protection of the North Sea; and the FAO International Code of Conduct for Responsible Fisheries.

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CHAPTER 18: PROTECTION OF THE QUALITY AND SUPPLY OF FRESHWATER RESOURCES: APPLICATION OF INTEGRATED APPROACHES TO THE DEVELOPMENT, MANAGEMENT AND USE OF WATER RESOURCES.

Decision-making: The general principle of German water policy is to manage water in such a manner that the common good is served and that every avoidable harmful impact is prevented. The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety deals with basic questions of water resources management as well as with transboundary cooperation in this field. It is responsible, inter alia, for the Federal Water Act and the Wastewater Charges Act. The revenue from wastewater charges is earmarked for measures that prevent water pollution. The Ministry is also responsible for provisions of the European Union. The most important partners of the Federal Environment Ministry are: the Federal Ministry of Consumer Protection, Food and Agriculture; the Federal Ministry for Health; the Federal Ministry of Transport, Building and Housing; the Federal Ministry of Education and Research; the Federal Ministry for Economic Cooperation and Development; and the Federal Ministry of Economics. Cooperation takes place at Federal, state and district levels.

The Federal Environment Ministry is assisted by other Federal authorities and research institutions, including: the Federal Environmental Agency in Berlin; the Federal Agency for Nature Conservation in Bonn; and the Federal Office for Radiation Protection in Salzgitter, all of which report to the Federal Environment Ministry. In addition, the Federal Institute for Hydrology at Koblenz, the Federal Institute for Navigation and Hydrography in Hamburg, the Federal Institute for Waterway Engineering in Karlsruhe and the German Meteorological Service in Offenbach report to the Federal Ministry of Transport, Building and Housing. The Federal Institute for Geosciences and Natural Resources in Hanover reports to the Federal Ministry of Economics. The Federal Biological Research Centre for Agriculture and Forestry (BBA) and the Federal Agricultural Research Centre (FAL) report to the Federal Ministry of Consumer Protection, Food and Agriculture. There are national as well as European (EC) regulations affecting water resource management issues.

As determined by the Basic Law, in the field of water policy the Federal government only has the right to enact general provisions (framework competence). Freshwater-related issues are to be decided, in principle, by state authorities or institutions. However, the principal national framework is laid out by the Federal Water Act (Wasserhaushaltsgesetz), which will be updated in the near future to implement the EC Water Framework Directive. The following instruments are used for water resource protection: effluent disposal plans; effluent load plans; surface water and groundwater protection regulations; and the designation of flood-prone areas. The federal states have their own water laws and are responsible for enforcement. They co-ordinate their efforts in the federal states' Working Group on Water Problems (LAWA). At the river basin level, the federal states have working groups; the Federal government is also involved where international river basins are concerned. The federal states are, inter alia, responsible for establishing pricing policy within the framework set by the Federal Water Act. The European (EC) Framework Directive on Water Policy was adopted by the EU Council on 23 October 2000. The Member States are urged to implement the Directive into their law by 2003 and to describe the characteristics of their river basin districts by 2004. With the help of river basin management plans (to be implemented by 2009), a good status of surface and groundwater is to be reached in 2015.

Programmes and Projects: Efforts are currently being made to implement the EC Water Framework Directive in cooperation with the other EC Member States in the EC Common Implementation Strategy.

Status: Almost all citizens have a connection to public drinking water supply. At 93%, the level of connection to public wastewater systems has also reached the limits of what makes economical sense. Nearly 100% of collected urban sewage is treated. In the new federal states, water consumption has declined sharply. Efficient utilisation of irrigation water is achieved by means of water recycling systems.

One of the major constraints with respect to freshwater is the pollution of groundwater caused by nitrates from agricultural sources. The biological water quality of rivers has continuously improved since 1975 in the old federal

states in the west and since 1990 in the new federal states in the east. The quality objective of moderate or less pollution has been reached on about 45% of the river stretches. Only 9% of the stretches were severely or excessively polluted in 1995. Among hazardous substances, the pollution with heavy metals (from agricultural soil erosion and urban storm waters) and pesticides (from agriculture) is still problematic. The intensive use of rivers for shipping and energy supply as well as the maintenance of brooks in agricultural areas created an unnatural river morphology lacking in ecologically sound living areas for water organisms.

Capacity-Building, Education, Training and Awareness-Raising: Water administration (See under **Decision-Making**), management and research are highly developed in Germany. Several universities include water-related education, oriented towards technology, urban and watershed management or toxicology. Some of the most well-known faculties are situated at the Universities of Aachen, Berlin, Darmstadt, Dresden, Hamburg, Karlsruhe and Munich.

One of the examples of awareness-raising is the Detergents and Cleaners Act of 1975. Consumers must be informed about constituents and doses of washing agents and detergents. In 1993, the ecolabel award panel “Jury Umweltzeichen” awarded the Blue Angel environmental symbol to a component-system detergent for the first time. With the implementation of the EC Water Framework Directive, public information and consultation will be further enhanced, especially in the production, review and updating of the river basin management plans.

Information: Information on water quality and quantity is summarized in reports for the Federal, state and district levels. The “Data on Environment 2000”, the brochures “Water Resources Management in Germany” (2001) and “The Water Sector in Germany” (2001) published by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and the Federal Environmental Agency as well as several publications about the state of waters by the federal states’ Working Group on Water Problems (LAWA) are examples at the federal level. Data on water level, discharge and quality as well as physiographic data, such as a digital elevation model (DEM) etc., are available electronically. LAWA efforts and publications are oriented towards implementing uniform and comparable sampling, analytical and assessment methods.

Research and Technologies: Research and technology improvement are concentrated at universities (See under **Capacity-Building, Education, Training and Awareness-Raising**), research centres and the larger water supply and wastewater treatment companies. Special research and technology improvements were brought about by amendments to the EC Directive on the Quality of Water for Human Use and the German Drinking Water Ordinance as well as the EC Urban Wastewater Directive, the German Wastewater Ordinance and the German Wastewater Charges Act.

Financing: Between 1992 and 1995, investments for the improvement and modernization of drinking water plants and networks amounting to some DM 850 million per year were made, of which DM 450 million was invested in rural municipalities and DM 400 million in towns. Investments of the same amount are to be expected at least up to the year 2005.

DM 14 billion is invested annually in wastewater disposal in Germany, approx. 70% for the construction and maintenance of sewage systems, and 30% for the construction and operation of wastewater treatment plants. Despite the high connection percentage, an average annual investment of DM 13 to 15 billion will be needed in future. The focal point of this investment will be in rural areas and in upgrading wastewater treatment plants and sewage systems in the new federal states.

Cooperation: Germany is a contracting Party to the ECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes and has signed the UN Convention on the Law of the Non-Navigational Uses of International Watercourses. Moreover, Germany is a member state of the International Commissions for the protection of the rivers Rhine, Moselle and Saar, Elbe, Oder and Danube. Bilateral Commissions for the management of the transboundary watercourses have been established with the neighboring states of the Netherlands, Austria, the Czech Republic, Poland and Denmark.

German development cooperation has an extensive water programme. Germany assists its partner countries in developing strategies and in implementing them through programmes and projects. Parallel to this, Germany supports the development projects of non-governmental organizations in these countries. The German contribution to ongoing bilateral projects and programmes in the water sector is around €3.5 billion. The political dialogue is integrated into bilateral programmes with partners on water policies and framework conditions.

Germany also supports the water programmes of international organizations such as the World Bank group, regional banks, UNDP and contributes to the EU development programmes in the water sector.

In December 2001 the Federal Ministries for Development and for the Environment jointly convened the International Conference on Freshwater in Bonn, which served as a preparatory step on freshwater issues for the World Summit on Sustainable Development in Johannesburg. The delegates from 118 states, 47 UN and other International Organizations and 73 Major Groups agreed on the “Bonn Recommendations for Action”, “The Bonn Keys” and the “Ministerial Declaration”, which was adopted by the 46 ministers attending the conference. The focal points of these documents lie on the fields “governance”, “mobilizing financial resources” and “capacity building and technology transfer”.

For the German government it is of particular interest that the following recommendations be integrated into the results of the World Summit on Sustainable Development in Johannesburg in 2002:

Water policy in the developing countries must, above all, result in improved access for the poor and be gender sensitive.

By 2015, the proportion of people lacking access to sanitation is to be halved.

Water resources should continue to be public goods, but it should be an option for private enterprises to deliver water supply and sanitation services.

Cost-covering tariffs should be introduced for water services if it is simultaneously guaranteed that the poor will be able to meet their minimum water needs.

As a prerequisite for managing water supply and sanitation professionally, decision-making structures need to be organized in a decentralized, transparent, and results-oriented manner and based on clear responsibilities.

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CHAPTER 19: ENVIRONMENTALLY SOUND MANAGEMENT OF TOXIC CHEMICALS, INCLUDING PREVENTION OF ILLEGAL INTERNATIONAL TRAFFIC IN TOXIC AND DANGEROUS PRODUCTS

Decision-Making: The German Federal government is responsible for the environmentally compatible management of toxic chemicals and the prevention of illegal international trade in toxic and hazardous products. The main features of the management of toxic chemicals contained in Agenda 21 describe current European Community (EC) law and regulations, which have been fully implemented in Germany. The German Chemical Law contains a procedure for notification of new substances. Substances are only permitted on the market if the manufacturer previously tests them for properties that may be hazardous to humans or the environment. A fundamental review of the European chemicals legislation is currently underway. This will, however, enhance efforts of EU member states to protect its citizens from the hazardous properties of chemicals and does not contradict chapter 19 of Agenda 21.

Programmes and Projects: For existing substances, there is an institutionalized cooperation project between science, industry and government, which has been working on a programme for existing substances since the end of the 1970s. This activity is supported by an Advisory Committee on Existing Chemicals (BUA), which consists of representatives of science, industry and government. On the international level, Germany was host to the fourth Intergovernmental Negotiating Committee of the Stockholm Convention (INC 4 POPs) in March 2000 in Bonn. Germany will also host the INC 9 of the Rotterdam Convention in October 2002.

Status: Germany had already implemented the provisions of chapter 19 of the Agenda even before the Rio conference. Since Rio 1992, Germany has ratified the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and has signed the Stockholm Convention on persistent organic pollutants.

Capacity-Building, Education, Training and Awareness-Raising: Germany has one of the world's most elaborate chemicals programmes and highly informed public stakeholders. Germany advises developing countries and countries with economies in transition on the issues of capacity-building, education, training and awareness-raising.

Information: Information is available in Germany from government bodies, industry, NGOs, political parties, academic sources, etc. on virtually any subject concerning chapter 19 of the Agenda 21.

Research and Technologies: Germany is among the world's leading countries in R&D (Research and Development) on toxic chemicals and their management. R&D is undertaken in industry, government laboratories and universities.

Financing: The Federal government provides voluntary direct financial contributions to the following organizations: DM 200,000 p.a. to the Intergovernmental Forum on Chemical Safety (IFCS); more than DM 1.1 million p.a. to the International Programme on Chemical Safety (IPCS); DM 470,000 p.a. to the Chemicals Group of the Organisation for Economic Cooperation (OECD); more than DM 300,000 p.a. to the 'UNEP POPs Club; and more than DM 1 million p.a. to the existing chemicals work of the BUA. In addition, Germany contributed more than DM 1.2 million for organizing INC 4 of the Stockholm Convention and will provide another DM 1.5 million for organizing INC 9 of the Rotterdam Convention. For the last ten years, Germany has been supporting bilateral, regional and multilateral technical assistance projects for capacity building in the field of chemical safety, with a total amount of more than DM 100 million.

Cooperation: Germany is a donor country for more than 30 technical assistance projects particularly focusing on different aspects of chemical safety in developing countries. A special pilot project on chemical safety was

launched in 1997 to co-ordinate chemical safety activities in development cooperation measures, to adapt systematic chemical management concepts to the conditions in developing countries, and to support the implementation of the Rotterdam and Stockholm Conventions in particular. Furthermore, on the international level, Germany supports the work of IPCS, which elaborates the Concise International Chemicals Assessment Documents (CICAD) as well the Environmental Health Criteria documents and the Health and Safety Guides. Germany also supports the OECD's programme for existing substances. Furthermore, Germany is committed to the programme on existing substances of the European Union. Finally, about 190 national reports for 230 existing substances are available. Most of them are translated into English to be used at the international level.

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CHAPTERS 20 TO 22: ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS, SOLID AND RADIOACTIVE WASTES

Decision-Making: *Hazardous wastes:* With regard to the Basel Convention of 30 September 1989, which entered into force in 1992, the content of the Basel agreement has been transposed into national law to the extent that this is not already covered under Council Regulation No. 259/93 of 1 February 1993, which is supervised and monitored by the European Community. The 1994 Act on the Movement of Wastes as a part of the implementation of the Basel Convention specifies the illegal, unauthorized, and impracticable nature of hazardous wastes shipments. Exporters are required to notify and must ensure financial security for their waste shipments. They must also make payments into the solidarity fund for the return of waste for each ton of waste to be exported. The solidarity fund for the return of waste pays for the return of waste from abroad whenever a solvent operator with a duty to re-import cannot be found in time. Anyone who has caused, arranged, or carried out an illegal movement of waste according to Articles 25 and 26 of the EC Regulation is obliged to re-import the waste pursuant to Section 6, paragraph 1 of the Act on the Movements of Wastes. Transactions arranging the movement of wastes are subject to official authorization pursuant to Section 12 of the Waste Management Act. Infringements against these laws shall be punished by Section 326 and 330 of the Penal Code.

Solid wastes: The objective of the German government's policy on waste is to achieve a recycling-based economy that conserves resources and the environment. The Act for Promoting Closed Substance Cycle Waste Management and Ensuring Environmentally Compatible Waste Disposal entered into force on 7 October 1996. According to this Act, the owners or generators of waste are in the first instance responsible for waste avoidance, recovery, and disposal; in order to promote this environmentally sound recycling-based economy, balance sheets for different substances and materials must be drawn up. Based on this Act, the Federal government has issued a number of statutory ordinances as well as guidelines, containing requirements for waste supervision, transport licenses, specialized waste management companies and associations, waste management concepts, waste-life-cycle analysis and requirements for the disposal and recovery of wastes. The implementation of the closed substance cycle economy is already bearing first fruits. After growing for decades, the waste volume fell significantly within the last decade. In the same period, the recovery quota rose substantially. More and more raw materials are being managed with a life cycle approach.

Radioactive wastes: The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) is primarily responsible for the final disposal of radioactive waste. Waste management steps prior to disposal are the responsibility of the operators (waste producers) under the supervision of the state governments as the regulatory body. The final disposal of radioactive waste is carried out by the Federal Office for Radiation Protection (BfS), a subordinate body of the BMU. The BfS makes use, as a third party, of the German Association for the Construction and Operation of Final Repositories for Waste Substances (Deutsche Gesellschaft zum Bau und Betrieb von Endlagern für Abfallstoffe-DBE) for operating the disposal facilities. Other waste management activities, including interim storage, are carried out by the utilities and on behalf of the utilities by the Society for Nuclear Service (Gesellschaft für Nuklear-Service - GNS). Final disposal of radioactive waste is a national responsibility. Consequently, no radioactive waste has been exported for final disposal elsewhere. The government advocates refraining from exporting radioactive waste to countries in which safe and environmentally sound management of this waste cannot be ensured. The safety standards for the transport of radioactive wastes in Germany are on a par with valid international provisions. No major accidents or failures have occurred in recent years. In order to harmonize national regulations on the transport of radioactive waste within the EU and to achieve a uniformly high standard, the government has transposed corresponding EU guidelines into national law.

Programmes and Projects:

Hazardous wastes: No information available.

Solid wastes: No information available.

Radioactive wastes: No information available.

Status: *Hazardous wastes:* No information available.

Solid wastes: Manufacturers have changed their packing habits and production of packaging materials has decreased in Germany. Secondary packaging has almost disappeared from the market. The amount of private post-consumer packaging recycled has increased to several million tons. Recovery rates are also increasing for other wastes. Despite these efforts, a certain proportion of waste still remains to be disposed of. The German government is prescribing uniformly high nationwide standards for both disposal and recovery. These standards are laid down in several ordinances and regulations, e.g. for end-of life-vehicles, batteries, waste oil, construction and demolition waste, bio wastes, and hazardous wastes.

Radioactive wastes: So as to make the decision on a final repository transparent and to enable the public to take part in the decision-making process, the Federal Minister for the Environment, Nature Conservation and Nuclear Safety established a working group on site selection procedures for repositories in 1999. For the first time, the search for a final repository is being based on a sound set of criteria; social groups such as environmental associations, churches and trade unions are being involved in the discussion on a search for a final repository. The working group has presented its first set of findings, which it discussed with the public at a workshop in the autumn of 2001.

In mid-2000, the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety established a project group, partly made up of external experts, to develop a national concept for the disposal of radioactive waste. The national plan for the disposal of radioactive waste, which is in discussion with the federal states concerned, is based on the key parameters of the nuclear phase-out and consists of three main steps:

- establishing the disposal concept, outlining the strategic and conceptual goals;
- taking stock of radioactive waste and disposal facilities and forecasting future developments in the volume of nuclear waste; and
- publishing a concrete disposal plan.

Capacity-Building, Education, Training and Awareness-Raising:

Hazardous wastes: No information available.

Solid wastes: No information available.

Radioactive wastes: No information available.

Information:

Hazardous wastes: No information available.

Solid wastes: No information available.

Radioactive wastes: No information available.

Research and Technologies:

Hazardous wastes: No information available.

Solid wastes: No information available.

Radioactive wastes: In connection with the project for the final disposal of heat-generating high-level radioactive waste (HLW) and spent fuel elements in salt formations, studies have been conducted above and below ground to determine the suitability of a site in Gorleben. The investigation is continuing. Until radioactive wastes can be disposed of in the planned repositories, it is necessary for them to be safely accommodated in suitable interim storage facilities. For this purpose, facilities have been installed at three sites (Ahaus, Gorleben and Greifswald). These storage facilities are mainly intended for radioactive waste from ongoing operations; the shutdown of nuclear power plants, and from reprocessing spent fuel elements. Reprocessing will end in 2005, therefore interim storage facilities for the spent nuclear fuels shall be built at the nuclear power plant sites.

Financing:

Hazardous wastes: No information available.

Solid wastes: No information available.

Radioactive wastes: The utilities as waste producers are obliged by law to have funds available for the future decommissioning of plants and the final disposal of waste. At present, the funds amount to approximately €35 billion.

Cooperation:

Hazardous wastes: Within its development cooperation, the German government supports a number of technical assistance projects (two at the global level, eight at the country level in Africa) to further the sound management of hazardous wastes.

Solid wastes: Within the framework of the Basel Convention, Germany developed and supports different guidelines on the environmentally sound management (ESM) of wastes. German bilateral development cooperation in the field of freshwater supply includes measures related to sanitation, and the management of wastes and sewage systems.

Radioactive wastes: The Federal Republic of Germany supports regional and international research projects dealing with the management of radioactive waste, focusing on final disposal in deep geological formations. Germany is a signatory to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (the London Agreement of 1972). As a signatory to the London Agreement, Germany has committed itself to foregoing sea burial of medium and high-level radioactive waste. For years, the German government had been actively urging a ban on the disposal of radioactive waste in the north-east Atlantic. This was achieved at the international meeting of the Oslo-Paris Commission (OSPARC) in September 1992. At the consultative meeting of the signatory states of the London Convention in 1993, the German government voted in favor of extending the ban to all of the earth's seas. The corresponding resolution was adopted with a qualified majority. The German government shares the concern regarding the disposal practices of some of the former Eastern Bloc countries that have come to light and has supported the elaboration of national plans for the safe management of radioactive waste in those countries. Therefore, the German government is a contracting party of the Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management, which entered into force in June 2001 and is expecting a great number of countries to join this Convention. It is also participating in endeavors to update and enhance the international transport regulations in the IAEA. Air transport of large quantities of radioactive materials and highly radioactive materials will require the use of highly accident-resistant packaging and is being considered within this context.

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CHAPTER 24 TO 32: STRENGTHENING THE ROLE OF MAJOR GROUPS

Women: See under **Chapter 5** of this Profile.

Children and youth: No information available.

Indigenous people: No information available.

Non-governmental organizations: No information available.

Local authorities: Decision-Making: Chapter 28 of Agenda 21 called on local authorities to enter into a consultative process with its citizens and to achieve consensus on a local Agenda 21 by the end of 1996. Since then, numerous local authorities have taken on board this task and have initiated a local Agenda 21 process. A significant increase in the development of local Agenda 21 processes can be seen in Germany since the end of the 1990s. There are currently local Agenda 21 processes in approximately 2000 local authorities, including almost all large towns and cities. In March 2001, there were decisions on Agenda 21 in 1900 local authorities nationwide, which corresponds to around 13 percent of all local authorities; in 1998, around 800 local authorities had taken a decision on a local Agenda, and in 1996 only 80¹. Local Agenda 21 processes in the Federal Republic of Germany are characterized by diverse approaches, promoted by the autonomy of local government, the process of realizing German unity and the relatively high number of local authorities. This diversity can be seen in: the method of approach and in the stages of the local Agenda 21 process; in the order of municipal policy structuring; in forms of public participation; in the process intensity and scope; as well in the approaches to important areas of action. Since most of Germany's Local Agenda 21 offices have been set up in the local Environment Agencies, the main focus was initially on ecological issues. Programmes and Projects: Projects currently underway relate primarily to the issues of: environmental protection and nature conservation; climate and energy; "One World"; children and youth; transport and mobility; and education, culture and schools. Most German local authorities see one of their goals as making a local contribution to global stability for the future. Within the past ten years, international twinning programmes between cities and towns have been cultivated, or developed, very actively. "One World" activities, or local authorities' development cooperation, constitute an important area of municipal action. Climate protection is one area, for instance, where there are many options for municipal activity at a global level. Another field that has seen a boost is support for fair trades products through public agencies and private suppliers. At the municipal level, a broad Agenda movement has emerged in Germany that has produced exemplary project activities, which, however, have not generally gone beyond a pilot or project character. For instance, only few municipalities have formulated visions or interim or final reports. They have some catching up to do with regard to professionalising Local Agenda 21 processes and putting them on a strategic basis. Status: When Local Agenda 21 processes were first launched, many municipalities were faced with the question of whether Local Agenda 21 working groups constituted a kind of parallel parliament that was competing with elected officials in municipal decision-making. It was only after time that these fears turned out to be unfounded, not least because Local Agenda 21 processes typically lack the institutional framework for taking relevant decisions in the municipality. This lack of binding character and of instruments and goals often also resulted in Agenda processes experiencing a quick loss of significance.

Workers and trade unions: No information available.

¹ In Germany, many local authorities did not see the urgent need to initiate an Agenda 21 process, since they were already very active in the field of environmental policy and since environmental policy in Germany is already seen as comparably very advanced. On the one hand this established a frontrunner role for German local authorities, on the other hand it prevented a swift and far-reaching change after the UN Conference on Environment and Development (UNCED) in Rio in 1992. Furthermore, this meant that the offer to assist the local authorities in setting up local Agendas only began very late at national and regional level in Germany.

Business and industry: No information available.

Scientific and technological community: No information available.

Farmers: See under **Chapter 14** of this Profile.

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CHAPTER 33: FINANCIAL RESOURCES AND MECHANISMS

Decision-Making: Due to the governing structure of the Federal Republic of Germany, the government, the federal states and local authorities compete for the allocation of financial resources on a vertical level as do the administrative bodies of each governing level according to the rules laid down in the basic law (Grundgesetz). This applies also to the financial resources allocated for the implementation of Agenda 21. The national and international policy line on financing aspects of sustainable development is determined by the Federal government. The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) is primarily in charge of the implementation of sustainable development practices on the national level. The task of promoting sustainable development paths in developing countries through bilateral and multilateral cooperation falls to the Federal Ministry for Economic Cooperation and Development (BMZ). In this capacity, the BMZ, for example, represents the Federal government in the Global Environmental Facility (GEF). The budget allocations of the various Federal Ministries are discussed bilaterally with the Federal Ministry of Finance (BMF) and decided upon by the cabinet and the Federal German Parliament (Bundestag).

Programmes and Projects: There are various national initiatives, which promote changes in consumer behavior to achieve progress on the path towards sustainable development. On 1 April 1999, Germany initiated an ecological tax reform, which aims at: providing incentives to speed up structural change in the German economy; mobilizing investment to conserve energy; switching to sustainable energies and transport; encouraging the introduction of environmentally friendly production processes; and the promotion of employment. Currently, various incentives directed at consumers and industries are in place, which promote sustainable energy and environmentally sound consumption patterns, thus contributing to climate protection. These include for example: subsidy programmes by the KfW in the building sector to support energy efficiency; lower petroleum tax rates for mineral oil and gas used for the cogeneration of power and heat with an efficiency that equals or exceeds 70%; and motor vehicle tax exemption for electrically powered vehicles and buses used in public transport. The Act on Renewable Energies promotes the generation of electricity from renewable energy sources by guaranteed feed-in tariffs and feed-in guarantees. Investments in photovoltaic systems are for example supported by low-interest investment loans within the "100000 roofs solar electricity programme". The Market Launch Programme for Renewable Energies under the Federal Ministry of Economics provides capital subsidies in the form of investment grants for the purchase and installation of renewable energy systems. Germany also contributes considerable resources to the financing of bilateral and multilateral initiatives, which promote progress on the path towards sustainable development in light of the objectives of Agenda 21. The government encourages the participation of the private sector in the implementation of sustainable development practices. In this context, for example, the German Ministry for Economic Cooperation and Development (BMZ) supports through its Public-Private Partnership Programme (PPP) investments by firms and enterprises in developing countries and transition economies that combine private sector interests and development policy goals.

Status: The ecological tax reform consists of five steps. A major environmental objective is to reduce the consumption of energy and thus to reduce CO₂ emissions in order to reach Germany's ambitious target of a 25 % reduction in the 1990 emissions level by 2005. To these ends, a shift of the tax burden from positive factors, such as labour, to negative factors, such as utilisation of natural resources or environmental pollution, is being implemented. The first step comprised the introduction of an electricity tax of DM 0.02 per kilowatt hour and the increase of existing taxes on mineral oils (diesel and petrol by DM 0.06 per litre; natural gas by DM 0.0032 per kilowatt hour; light heating oil by DM 0.04 per litre). Since the tax reform is revenue-neutral, all revenues are given back to citizens and to industry in the form of a 0.8 percentage points reduction in contributions to statutory pensions insurance. From 2000 to 2003, the electricity tax is being increased by DM 0.005 per kilowatt hour per year and the tax on diesel and petrol by another DM 0.06 per litre per year. To promote local public transport (buses, rail, shared taxis), only half the rate of increase must be paid. In 2002, the revenue from the eco-tax is helping to reduce pension contributions by 1.2 percentage points. Since 1999, €40 million stemming from the revenues of the ecological tax reform have been contributed to the Market Launch Programme for Renewable

Energies. The Federal government's new austerity plan incorporates the general phasing out of subsidies, including environmentally unsustainable subsidies. But so far there is no special plan for the phasing-out of environmentally unsustainable subsidies.

Germany makes considerable contributions to: the United Nations Framework Convention on Climate Change (UNFCCC); the Convention on Biological Diversity; the Capacity 21 Programme; the Consultative Group on International Agricultural Research (CGIAR); and the Centre for International Forestry Research (CIFOR). Germany is the third largest donor to the GEF, contributing 11-12 % to its budget.

Germany views development policy as a tool in making a decisive contribution towards securing our global future and supporting sustainable development. In this context, Germany considers social justice, economic performance, political stability and ecological balance as the four target dimensions for sustainable development. Within this framework the German government upholds the seven development goals of the international community as confirmed most recently by all 189 Member States at the United Nations Millennium Summit.

Coupling debt relief, poverty reduction and good governance is the central goal of the Cologne Debt Initiative for Heavily Indebted Poor Countries (HIPC), which was proposed in June 1999 by the German government and adopted at the Cologne G8 Summit. In September 1999, the G8 proposal was adopted at the Annual Meeting of the World Bank and the IMF. Subsequently the Paris Club – an informal group formed in 1956 and made up of the most important donor countries – put in place the framework for bilateral debt forgiveness. The envisaged volume of debt cancellations is US\$ 70 billion for up to 38 HIPC countries. The German share in debt relief has increased to DM 10 billion, following a decision by the German government, announced by the Federal Chancellor Schröder at the EU-Africa Summit in Cairo in April 2000, to increase to 100 % the forgiveness granted to Heavily Indebted Poor Countries in the Paris Club for commercial debts eligible for rescheduling and claims resulting from financial cooperation. The German government is also contributing DM 150 million to the trust fund being set up by the World Bank to support multilateral creditors. Furthermore, DM 500 million is provided as the German share of the EU contributions of about €1 billion.

Targeted bilateral programmes have been developed to contribute to the implementation of international strategies to combat global environment risks in developing countries and special funds have been earmarked for this purpose. Normal debt relief in the context of the Paris Club total DM 166.8 million. For "debt-for-nature swaps", DM 50 million were made available in 1993, DM 80 million in 1994, DM 110 million in 1995, and DM 200 million in 1996. Germany is also active in promoting the integration of the protection of the global climate into bilateral cooperation. In this context, Germany provides support of around DM 200 million for renewable energies and of around DM 250 million for the protection of tropical forests. The volume of projects concerned with environmental and resource protection as a proportion of official bilateral development cooperation as a whole (financial and technical cooperation) varies from year to year. Since 1992, an annual figure of between DM 800 million and about DM 1 billion, i.e. about a fifth to a quarter of total commitments, has been invested in this area.

While, if measured in absolute terms, the amount of financial resources provided for Official Development Assistance (ODA) places Germany in third place among donor countries, the overall proportion of GNP spent on Official Development Assistance has been decreasing – albeit not continuously – since 1982 to a value of 0.26 % in 1999. Preliminary calculations show that ODA as a percentage of GNP rose in 2000 to 0.27%. Recognizing the internationally agreed target of 0.7 % it is the firm intention of the German government to come closer to this goal. As stated in the Monterrey Consensus, the value of exploring innovative sources of finance is recognized.

Capacity-Building, Education, Training and Awareness-Raising: The German government provides assistance for training the next generation of managers and multipliers from the developing countries through practice-oriented programmes and the world-wide exchange of experience with executives from the fields of politics, the economy and administration. In addition to long-term measures, a great many short seminars and courses are also staged in Germany and abroad to promote dialogue and the experience both between the North, the South and the East and also amongst developing countries themselves. The BMZ has commissioned, in particular, the German Foundation for International Development (DSE) and the Carl Duisberg Society (CDG) with the implementation of individual training programmes.

Information: The protection of the natural environment and resources is a key issue in most of Germany's cooperation activities with other countries. Therefore, many institutions are involved in the financing of sustainable development and there is no single institution or web address that provides this information. In accordance with the coalition agreement of 20 October 1998 between the government coalition partners, the Social Democratic Party (SPD) of Germany and the Alliance90/The Greens, the Federal government regularly publishes a new report, the "Report on Rich and Poor". Germany also provides information on the financing of sustainable development through German development policy to the OECD as well as in the Memorandum of the Government of the Federal Republic of Germany for the DAC Aid Review 1998/99, Bonn 1999. Further details can be found at <http://www.oecd.org/dac/>.

Research and Technologies: Across the world, there is need for committed, senior-level academics that can find solutions to global structural problems. For this reason, the BMZ has a variety of programmes for cooperation in the academic and the higher education field aimed at helping to integrate developing countries into global knowledge networks and to train professionals and senior figures in the academic field in dynamic sectors of relevance to development. In 1999, a total of some DM 44 million was made available for programmes by the German Academic Exchange Service (DAAD), the Alexander von Humboldt Foundation (AvH) and the German Research Foundation. For further information on the promotion of science of relevance to global environmental change and sustainable development. See also under **Chapters 24, 32 and 35** of this Profile.

Cooperation: With its departmental budget, the BMZ finances and co-ordinates financial cooperation and technical cooperation in the narrower sense. This includes the implementation of bilateral development programmes, the promotion of development cooperation through non-governmental agencies (churches, political foundations, non-governmental organizations), and German involvement in the multilateral development banks and funds, in the European Development Fund (EDF), in the UN organizations and other international organizations. Please, refer to the **Status** for further details.

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CHAPTER 35: SCIENCE FOR SUSTAINABLE DEVELOPMENT

Decision-Making: Research on global change and sustainability in Germany is undertaken with the support of the Federal Ministry of Education, Science, Research and Technology (BMBF) and the German Research Association (Deutsche Forschungsgemeinschaft - DFG). In addition, some research institutions and projects receive funding from other Ministries such as: the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU); via the Federal Environmental Protection Agency (UBA) and the Federal Ministry of Transport (BMV); and via the German Meteorological Service (DWD), among others. Sustainability of agriculture, forestry and fishery is among the main aims of research of the Federal Ministry of Consumer Protection, Food and Agriculture (BMVEL). The departmental research conducted by the BMVEL with its ten federal research centres, the Centre for Documentation and Information in Agriculture (Zentralstelle für Agrardokumentation und Information - ZADI) and the Federal Institute for Health Protection of Consumers and Veterinary Medicine (Bundesinstitut für gesundheitlichen Verbraucherschutz und Veterinärmedizin - BgVV) is, in a variety of research activities, engaged in analyzing ecological, economical and social aspects of sustainability. This is done not only within the German or EU framework but also within a global framework. The Institute of Agricultural Development in Central and Eastern Europe (Institut für Agrarentwicklung in Mittel- und Osteuropa - IAMO), one of the six institutions of the Wissenschaftsgemeinschaft (Scientific Association) Gottfried Wilhelm Leibniz (WGL) within the scope of the BMVEL, was founded to deal with the consequences of structural changes in the agro-food sector in that region. It is of global interest that these changes be successfully mastered.

The federal states (in some cases in cooperation with the Federal government) also support research projects and research establishments dealing with global change and sustainability. The National Committee for Global Change Research facilitates dialogue among the scientific community, the government and the public at large with respect to issues related to sustainable development. Science is incorporated into decision-making for sustainable development, in both institutionalized and ad hoc ways.

Programmes and Projects: The Federal Ministry of Education, Science, Research and Technology and the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety initiated a new research strategy on sustainable production, which was issued in 1997 as part of the National Environmental Research Programme. In this concept on "Modellprojekte Nachhaltiges Wirtschaften" (Model projects of sustainable economic activity) national research policy pays special attention to three core themes: to local and regional initiatives, to sustainability in special fields of basic needs (housing, tourism, nutrition), and to new consumption patterns.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: Research grants are intended to fund studies on existing pioneering examples of sustainable consumption in an industrial society, to analyze their ecological compatibility and the prerequisites for their success. They are also intended to analyze the limiting aspects, and to find ways to apply the experience of small pioneering groups to broader parts of the population. A demonstration programme ("Demonstrationsvorhaben zur Fundierung und Evaluierung nachhaltiger Konsummuster und Verhaltensethik 1997 - 1999") was launched in 1997 as part of the UFO Plan (Environmental Research Plan). It consists of four parts: Instruments and strategies for the promotion of sustainable consumption; study into households; priorities and trends of environment-related consumption patterns; and discussion among relevant social groups with the aim of establishing a consensus about principles and steps for the promotion of sustainable consumption patterns.

Information: Several panels of experts have been set up to define the current state of the art and the research priorities in connection with global change and sustainability. In the past, there were the "Enquete Commission of the German Bundestag on Protecting the Earth's Atmosphere" and the Climate Advisory Council. The German Advisory Council of Environmental Experts (within the purview of BMU) publishes a report at two-yearly intervals. Of particular relevance to the topic of global change and sustainability are the annual reports of the

German Advisory Council on Global Change (WBGU). These reports have in recent years been entitled: “Ways towards Global Environmental Solutions” (1995), “The Threat to Soils” (1994), and “Basic Structure of Global Human Environment Interactions” (1993). The implications of the problem of global change for German science is the subject of the WBGU’s annual report for 1996, which is entitled “The Research Challenge”.

Research and Technologies: Research on more sustainable consumption patterns has been incorporated into studies on urban ecology, especially on sustainable mobility in cities. Citizens in selected urban districts are interviewed on their social and economic status, their household patterns and preferences for mobility types. Researchers look for ways to provide the desired mobility in a way that is more compatible both with ecological goals and with users’ preferences. Special attention is given to ensuring mobility for private household purposes and to the situation of women. Support for innovative environmental protection technologies pursues the goal of developing methods and processes designed to avoid future environmental damage from the outset by means of integrated technologies, or to reduce contamination by means of integrated technologies. The relevant funding concept on clean production (PIUS) was presented in 1994. Other research activities deal, for example, with the avoidance and utilisation of waste (for example in construction and paper-making) and the rehabilitation of abandoned hazardous sites. Climate and atmospheric research in Germany is particularly concerned with the problems of global change. The focus has so far been on the investigation of the physical basis of climate change, and less on climate research. Climate impact research currently focuses on only a few research activities for the purpose of testing methodological approaches and clarifying newly emerging issues of interdisciplinary cooperation. The pilot project undertaken jointly by BMBF and the five German coastal federal states (“Climate change and the coast”) studies the German coastal regions for possible climate impacts, including potential socio-economic consequences.

Financing: Federal government R&D expenditure on environmental and climate research amounted to DM 1,030 million in 1994, of which DM 435 million went to ecological research, DM 345 million to support innovative environmental protection technologies, and 249 million to climate and atmospheric research. Research is funded at the level of individual projects and within larger programmes, mainly by the German Research Foundation (DFG) and the BMBF. Sources of funding for the research are either state funding or funding from foundations. Research findings are published and used as a basis for political decisions.

Cooperation: Within the North Atlantic Treaty Organization’s (NATO) Committee on the Challenges for Modern Society, Germany is a pilot country together with the United States of America for a study on “Environment and Security in an International Context”. This project examines the interrelationship between environmental degradation (pollution, resource scarcity) and military conflict, with the aim of developing recommendations for security and environmental policy.

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CHAPTER 36: PROMOTING EDUCATION, PUBLIC AWARENESS AND TRAINING

Decision-Making: Because of the federal structure of the Federal Republic of Germany, it is mainly the ministries of education and science of the federal states that are responsible for the individual areas of education and only in part the Federal government. Within the Federal government, the Federal Ministry of Education, Science, Research and Technology (BMBF) is the lead ministry for the field of education for sustainable development. The Federal government and the federal states work together within the framework of the Bund-Länder Commission for Educational Planning and Research Promotion (BLK) on the further development of the education system. Education for sustainable development is also part of activities and initiatives at many levels, which are not the responsibility of the government; they are carried out by industry, associations, organizations, the churches, foundations and non-governmental organizations from the fields of the environment, development, social issues, culture and economics.

With the adoption of the orientation framework for education for sustainable development in 1998, the Federal government, together with the federal states, created within the BLK a programme-based foundation for the further development of an education policy for the future for the federal and the state governments in the field of education for sustainable development. The orientation framework contains central elements of an education programme for sustainable development in nursery schools, schools, vocational training, higher education and general further education, and out-of-school training. It describes measures at the organizational and innovative level and at the transfer level. From the framework, key qualifications are derived, which are to be taught in the various areas of education. At the end of 2001, the BLK presented the heads of government of the federal and state governments with a first report on the implementation of the orientation framework, which takes a positive view of progress so far and identifies the prospects for future work.

In parallel with this, the Federal government report on education for sustainable development, submitted at the end of 2001, gives an overview of the measures undertaken by the Federal government to assist in firmly establishing education for sustainable development in the individual areas of education, taking into account the progress report presented by the federal states in the BLK report. During each legislative period, the Federal government has to present the German parliament with a report on education for sustainable development as a further development of the First Environmental Education Report of 1997, as was decided by the German parliament in a significant decision in 2000.

Programmes and Projects: In all areas of education, programme work has been done to put the guiding principle of sustainable development into practice and a number of projects have been promoted. The measures implemented by the federal states and the non-governmental players are supported and flanked by the Federal government through model projects and research projects. The BLK model programme “21 – Education for Sustainable Development”, for example, which is being promoted by the BMBF, is of particular significance here. This programme, which is designed for five years (1999-2004), has fifteen of the federal states participating in it with some 180 schools in all. Of similar importance is the BLK Congress “Learning for and Shaping the Future – Education for Sustainable Development”, likewise supported by the BMBF, which is operating throughout the country. At this congress, comprehensive examples of best practice from all fields of education were presented, among other things.

Through various initiatives by the Federal government, networking is being promoted between the various actors in the field of education for sustainable development (schools, associations, administration, science, the economy, industry, youth and other important groups in society) and is being further developed in conceptual terms. The Federal Ministry for the Environment, Nature Protection and Nuclear Safety (BMU) and the Federal Environmental Agency (UBA) supplement and support these efforts through socio-scientific environmental research, e.g. on questions relating to environmental awareness, on sustainable patterns of consumption and

environmental debate. Moreover, the BMU supports projects for environmental debate and for out-of-school education for sustainable development.

Status: Implementation is on schedule.

Information: Comprehensive information on individual measures and initiatives can be found on the homepages of the various actors and specialized portals maintained by the individual institutions. For example, the BLK model programme “21” has its own website for the participating schools to exchange information and communicate with one another and with other interested experts (<http://www.service-umweltbildung.de>). An overview of the relevant internet addresses for the topic of education for sustainable development can be found in the aforementioned Federal government report. Information provided by the Federal Ministry of Education and Research is available at the following internet address: <http://www.bmbf.de>. Information on the Environmental Management and Training Courses for experts from developing countries (organized by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, UNEP, and UNESCO) is provided on the Internet at <http://www.tu-dresden.de/cipsem>. Further networking of the activities and initiatives using appropriate methods of communication is planned.

Research and Technologies: The Federal government promotes research projects that contribute directly and indirectly towards designing educational measures. Furthermore, it supports the transfer of findings from research and development to the various areas of education, with the aim of ensuring a supply of appropriately qualified experts. In the field of research, the BMBF is promoting, inter alia, projects in the following priority areas with reference to education for sustainable development:

- socio-ecological research;
- construction and housing;
- sustainable management, integrated environmental technology;
- sustainable bio-production;
- new materials for key technologies of the 21st century;
- chemical research and development;
- research on global change and viable development; and
- International Human Dimensions Programme.

The BMU is also promoting various projects within the framework of the environmental research plan that are directly or indirectly linked to environmental education and education for sustainable development and thus in the wider sense also fall under environmental education research. For example, besides the regular, representative surveys on environmental awareness in Germany carried out by the Federal Ministry of the Environment and the Federal Environmental Agency, new ways of fostering education and awareness are being investigated. Current research projects are socio-scientific analyses on possible means of altering sustainable patterns of consumption, on means of improving information strategies in the field of environmental protection, on improving the transfer of knowledge between the social sciences and the environment policy players, on further developing out-of-school environmental education within the framework of a communication strategy for sustainable development and on further developing the sustainability debate on the redefinition of mobility from the cultural policy perspective.

Financing: Most of the activities carried out by the Federal government and the federal states in the individual areas of education are an integral part of the regular provisions for education, so that it is not possible to list the financing for these activities separately. The BLK model programme “21” for example has a total budget of about €13 million, half of which is funded by the Federal government and half by the federal states.

The BMU provides funds of about €3,800,000 for projects by environmental associations in order to provide direct and indirect support for communication and education for sustainable development in the field of out-of-school education. Furthermore, since 1992, every two years a special postage stamp has been issued, with the revenue from it being used to finance national and international environmental education projects. The topic of the next

special issue stamp is the International Year of Mountains. The revenue, which is estimated at about €650,000, can then be used to support corresponding education projects at home and abroad.

Cooperation: The broad range of programmes, initiatives and players in the field of education for sustainable development requires comprehensive cooperation and networking beyond the immediate limits of organizations and communication networks with the focus on:

- dialogue for the implementation of innovations;
- the transfer of research findings on issues of sustainability into the field of education;
- improving cooperation among players in the field; and
- developing and deepening European and international cooperation and programmes.

The various players are already co-operating at various levels and to varying degrees. On the part of the Federal government, further improvements in co-ordination are being sought by networking the centres of competence and supporting the creation of resource structures making use of the new media.

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CHAPTER 37: NATIONAL MECHANISMS AND INTERNATIONAL COOPERATION FOR CAPACITY-BUILDING IN DEVELOPING COUNTRIES

This issue has been covered either under Chapter 2 or under the heading **Cooperation** in the various chapters of this Profile.

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CHAPTER 38: INTERNATIONAL INSTITUTIONAL ARRANGEMENTS

This issue deals mainly with activities undertaken by the UN system.

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CHAPTER 39: INTERNATIONAL LEGAL INSTRUMENTS AND MECHANISMS

This issue has been covered under **Cooperation** in the various chapters of this Profile.

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CHAPTER 40: INFORMATION FOR DECISION-MAKING

Decision-Making: As part of the elaboration of a national sustainability strategy, approx. 20 indicators are currently being developed for a comprehensive system of key indicators for sustainable development. These indicators serve for the review and assessment of the achieved level of sustainable development, and a pertinent indicator report is to be produced every two years. A government draft has been drawn up and will be open for public discussion in the first half of 2002.

In addition, as part of an R&D project, the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety is currently developing a complex system of sustainability indicators in which diverse aspects of sustainable development are presented in greater detail than in the above-mentioned key indicator system. Interim results of this R&D work have been incorporated into the key indicator system. An inter-ministerial working group has been set up to elaborate these indicators. The results of the CSD testing phase for sustainability indicators, in which Germany participated as a pilot country, are an important basis of this work. Moreover, the application of a so-called “environmental barometer” with six key indicators for the environmental sector is continuing. The system is being further developed in light of national and international work on indicators.

Programmes and Projects: A focal point of future work is to improve the coherence of existing indicator systems and systems currently under development at the national and international levels. Furthermore, options are to be created for increased aggregation of indicator systems. This includes greater consideration of data and indicator work in industry and at the municipal level. In addition, options for improving the communicability of indicators and indicator systems using modern communication means and media are to be examined.

Status: No information available.

Capacity-Building, Education, Training, and Awareness-Raising: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: At CSD 9, Germany voiced its strong support for continuing the work on sustainability indicators as part of UN activities. Germany will participate in this work. Furthermore, Germany is also involved in varied activities in the field of indicator systems within the OECD and the European Union.

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CHAPTER: INDUSTRY

Decision-Making: The German government sees the implementation of sustainable development as a cross-departmental task involving all policy areas. The sale of environmentally sound products has been encouraged in Germany by a system of product labelling since 1978. Today 4,300 products from 920 manufacturers in Germany bear the environment symbol “Blue Angel” (“Blauer Engel”), which is awarded by an independent jury in accordance with strict and regularly updated criteria. The criteria for awarding this environmental label have been drawn up for about 77 different product groups, ranging from energy-saving washing machines to environmentally acceptable workstation computers. According to a survey conducted in spring 1996, about half of all consumers look for products labelled with the “Blue Angel” symbol when out shopping.

A new Closed Substance Cycle and Waste Management Act, along with supplementary subsidiary regulations, came into force in 1996. This new waste management legislation places increased emphasis on waste avoidance and represents a real beginning for closed substance cycle waste management in Germany. It also initiates major changes in trends in the consumption of raw materials. Basically, whoever produces, markets and consumes goods is responsible for the avoidance, recovery and environmentally-sound disposal of the wastes occurring. Thus, the Act represents the consistent implementation of the polluter-pays principle in the field of waste. The 1991 Packaging Ordinance (Verpackungsverordnung) is a prototype for legislation designed to close substance cycles. The Packaging Ordinance generally requires manufacturers and distributors to take back packaging and to re-use it or recycle its constituent materials.

The economic agents affected (producers and distributors) have come together to set up a “Dual Disposal System”, which operates alongside the existing public waste disposal arrangements. The Duales System Deutschland GmbH (DSD) organizes the curbside collection of waste packaging directly from private households, the sorting of this waste into material groups, and the recycling of these materials. The levying of charges, on a scale related to the type of packaging material used, is documented by the license label, the “Green Dot” (“Grüner Punkt”), which is printed on products. Since the introduction of the Green Dot System in 1993, more than 20 million tons of used packaging have been brought to recycling and the consumption of packaging per year has been reduced by about 1.3 million tons compared to 1991 levels. In 1995, the Federal government, in cooperation with industry, embarked on a new approach to exploit the potential for reductions in greenhouse gas emissions in the industrial sector. At that time, industry agreed to voluntarily reduce its specific CO₂ emissions by 20 percent by the year 2005 against the reference year 1990. In 2000, the Federal government and German industry signed an agreement (“Vereinbarung zur Klimavorsorge”) under which German industry committed itself to reduce its specific emissions of the six Kyoto greenhouse gases by 35 percent by the year 2012 compared to 1990 levels. Furthermore, German industry agreed to undertake additional efforts resulting in the reduction of its specific CO₂ emissions by 28 percent by 2005 against the reference year 1990.

Programmes and Projects: See under **Decision-Making**.

Status: A study published in 2001 concludes that, in Germany about 1,300,000 people were working in the field of environmental protection in 1998 (updated calculation of employment in Germany generated by environmental protection, final report by the project group IFO, DIW, ISI, Karlsruhe, 2001). That represents approximately 3.6 % of the economically active population and corresponds roughly to the employment level in the road vehicle construction sector. Some 1,276,500 persons are directly employed in the production of environmental goods and services. The overall picture clearly shows that employment has increased far more markedly in environmental protection than in other fields. Environmental protection creates and secures employment for the future in a whole range of branches of industry.

Capacity-Building, Education, Training and Awareness-Raising: Management structures in Germany have traditionally not been geared to the optimization of ecological quality in production and product design. Remaining

shortcomings can be overcome by adopting environmental management systems on a larger scale. A central prerequisite is that all staff be actively involved and kept informed about all relevant aspects of environmental protection.

Information: A dense network of 83 chambers of industry and commerce is officially responsible for providing information to member firms on environmental matters. The information available concerns new environmental protection requirements, assistance in the field of environmental protection, and acts with the responsible agencies. Information on external and freelance consultants may also be obtained from the chambers. Industry's progress in fulfilling its voluntary commitment to reduce CO₂ emissions is monitored by the Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI). According to the fourth monitoring report, the CO₂ emissions of the participating enterprises were reduced by 78 million tons between 1990 and 1999.

Research and Technologies: The German environmental technology industry is performing very successfully against international competition. For many years, Germany led the field in terms of its share of world trade in environmental goods, but recently other industrialized countries have been catching up. In 1994, the USA, with a share of 19% of world trade, was the biggest exporter of environmental protection goods ahead of Germany with 18.5% and Japan with 14%. One reason for this change is the economic downturn affecting Germany's major trading partners. Yet, it also reflects the fact that other countries are now discovering for themselves the promising market for environmental protection goods. In order to assist small and medium-sized businesses in meeting this challenge, the International Transfer Centre for Environmental Technology (Internationales Transferzentrum für Umwelttechnik; ITUT) was established in Leipzig at the beginning of 1996, bringing together the spheres of policymaking, industry, science and public sector institutions. The Centre aims to provide the necessary backup to companies interested in finding and exchanging information and forms part of an initiative by industry and the Federal government to strengthen technology transfer to the States of Central and Eastern Europe, Asia and Latin America. In Germany, there are quite a number of fairs specializing in environmental technology. Some examples of environmental protection exhibitions to be held in 1998 are: ACHEMA - International Meeting on Chemical Engineering, Environmental Protection, and Biotechnology, Frankfurt; ENTSORGA - International Fair for Recycling and Waste Disposal, Cologne; ENVITEC - International Trade Fair for Environmental Protection and Waste Management Technologies, Düsseldorf; Hanover Fair - International Industrial Fair, including environmental technology; IFAT - International Trade Fair for Wastewater and Waste Disposal, Munich; and Terratec - Trade Fair and Congress for Environmental Innovation, Leipzig.

Financing: In 1995, German expenditure on environmental protection by industry and government amounted to DM 43 billion in the old federal states (former West Germany + Berlin) alone. For all of Germany, this figure is estimated to be above DM 60 billion. This overall expenditure covers both investment in plant and equipment as well as environmental protection services and research and development. German development cooperation also plays the role of mediator and catalyst in this sector of industry, to the benefit of both sides. The proportion of environmental protection investment is rising all the time. Today, as much as up to 25% of development aid spending commitments goes to projects dedicated to environmental protection and resource conservation.

Cooperation: The Eco-management and Audit Regulation of the European Union, which has been in force since April 1995, is giving crucial impetus to the creation of environmental management systems. These interpret the idea of environmental protection from the perspective of the company as a whole. With the Eco-management and Audit Regulation and the ensuing Environmental Audit Act being adopted in Germany, a new environmental policy perspective is de facto taking concrete shape as the legal instruments stimulate environmental activities on a voluntary basis. By the end of 1997, more than 950 sites had successfully taken part in the Environmental Audit, which is greater than the total for all other Member States of the European Union.

CHAPTER: SUSTAINABLE TOURISM

Decision-Making: Governmental bodies in charge of the issue of sustainable tourism are: the Federal Ministry for Environment, Nature Conservation and Nuclear Safety; the Federal Ministry of Economics; as well as the state Ministries for Economics; and, at the local level, municipal tourist boards. There is no national strategy for sustainable tourism, as the respective tourism plans and strategies are developed at the state level. At the federal level, the main laws that can be applied to sustainable tourism management are the federal laws for building and spatial planning, Federal Nature Conservation Act; Federal Forest Act; Federal Water Act; Closed Substance Cycle and Waste Management Act; Federal Emission Control Act and Technical Instructions on Noise Abatement; Act on the Assessment of Environmental Impacts; and EC Eco-Audit Regulation (EMAS). In addition, sustainable tourism is more and more a constituent part of local Agenda 21 processes in Germany - thus all major groups are involved. Through a number of development policy programmes and projects in developing and transition countries, the Federal Ministry for Economic Cooperation and Development is furthering international endeavors and bilateral measures in the field of sustainable tourism.

Programmes and Projects: At the regional and local level a variety of demonstration projects integrate tourism in plans and strategies for sustainable development. These projects are partially funded by the Federal government. Major programmes in order to promote sustainable tourism include the following:

The eco-label “Viabono”, introduced with the support of the Federal Environmental Ministry, informs consumers about the quality and ecological compliance of various forms of vacation. Whether a tour operator is granted a license is dependent on compliance with a stringent catalogue of criteria.

In order to promote environmentally aware tourism, the German government provides financial support to projects relating to the use of Germany’s thirteen nature conservation parks by tourists, and projects promoting cycling and hiking tourism.

The Federal Environment Ministry is supporting the introduction of the “European Charter” in pilot parks in order to promote sustainable tourism.

In addition: the promotion of projects, conferences, seminars, etc. on sustainable tourism in cooperation with all stakeholders; financial support for non-governmental organizations for information brochures, campaigns, etc. on sustainable tourism development.

Bilateral cooperation with developing and transition countries to further their capacity for sustainable tourism (e.g. larger projects in Central America and South-Eastern Europe and a number of small scale measures mostly within bilateral cooperation projects in the fields of regional development, resource management and economic development).

Status: The turnover of the German tourist industry is about DM 400 billion annually. The total of employees is approximately 3 million. The contribution of tourism to GNP is between 7 and 8 %.

Capacity-Building, Education, Training and Awareness-Raising: The Federal government provides financial assistance to the DSF, a German training institute. It also sponsors projects advising tourism associations on environmental matters and for research into conflict-solving issues between nature conservation and the demands of tourism.

Information: The federal states promote relevant information material on sustainable tourism. At the federal level indicators for sustainable tourism have been developed. Additional information on sustainable tourism products and services is available through various private initiatives. The Federal Environment Ministry has published a handbook dealing with holiday destinations and tour operators in Germany, which offer sustainable travel. The German National Tourist Office (Deutsche Zentrale für Tourismus), also primarily funded by the German government, is to publish a brochure called “Lust auf Natur” containing information on sustainable, environmentally sound forms of vacation.

Research and Technologies: Environmental management and audit systems (EMAS) are being introduced by hotels, holiday resorts, travel agencies, tour operators and coach companies.

Financing: There are no special funds; at the federal level the activities are financed mainly from the research budgets of the German government.

Cooperation: German holiday resorts are co-operating in various networks linking model destinations in several countries such as CIPRA, the network of European National Parks, ICLEI (International Council for Local Environmental Initiatives) and the Climate Alliance. In addition, Germany is sponsoring a network of model resorts that is being established and in which the mayors of these resorts exchange information and experience on outstanding projects for developing sustainable tourism in their municipalities. Germany is co-operating in the Baltic 21 process linking holiday resorts around the Baltic Sea to exchange information on model achievements in those countries. Germany is also a participant in the following co-operative programmes: *EC*: 5th Environmental Action Programme; *Council of Europe*: Expert Group on Tourism and Environment; Convention on the Protection of the Alps, tourism protocol; and BALTIC 21; *Antarctic Treaty*: Environment Protocol; and Convention on Biological Diversity. With the help of the financial support and expertise of the Federal Environment Ministry, the CBD Secretariat organized an international expert workshop in 2001. A draft Directive on the development of sustainable tourism in ecologically sensitive areas was elaborated at this workshop. With the help of the financial support of the Federal Ministry for Economic Cooperation and Development and through its implementing bodies, Germany assists its partner countries with the development of sustainable tourism, in particular with regard to poverty reduction, economic development and resource management.

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