



Bundesministerium
für Umwelt, Naturschutz
und Reaktorsicherheit

**German Action Plan
„Communication, Education, Public Awareness on
Wetlands“
under the Ramsar-Convention
(German Wetland CEPA Action Plan)**

This German Action Plan "Communication, Education, Public Awareness on Wetlands", in accordance with the Ramsar Convention, was compiled on the basis of a draft by

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commissioned by the Federal Agency for Nature Conservation.

The Action Plan has been agreed with the members of the national Ramsar body. Apart from the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, the Federal Agency for Nature Conservation and the supreme authorities for nature conservation in the federal länder , the following organisations are members of that body:

- Deutscher Naturschutzring e.V. (German League for Nature Conservation and Environmental Protection)
- Naturschutzbund Deutschland e.V. (German Federation for the Conservation of Nature)
- Bund für Umwelt und Naturschutz Deutschland e.V. (Friends of the Earth Germany)
- Deutscher Jagdschutzverband e.V. (German Association for Shooting and Conservation)
- Dachverband Deutscher Avifaunisten e.V. (Umbrella Association of German Avifaunists)
- Forschungsstelle für Ökologie der Wasservögel und Feuchtgebietsschutz der Universität Potsdam (University of Potsdam Research Department for Aquatic Bird Ecology and Wetland Conservation)
- Zentrale für Wasservogelforschung und Feuchtgebietsschutz in Deutschland an der Biologischen Station im Kreis Wesel e.V. (Centre for Aquatic Bird Research and Wetland Conservation at the biological station in the county of Wesel in Germany)
- Biological Station Rieselfelder Münster

The Action Plan has been submitted to the Ramsar Convention Bureau by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety which represents Germany at the Ramsar Convention and its bodies.

Bonn, 31 August 2001

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I The Need for a National Action Plan

The 7th Meeting of the Conference of the Contracting Parties to the Ramsar Convention in San José, Costa Rica from 10 - 18 May, 1999 approved with Resolution VII. 9 the Outreach Programme 1999-2002.

"The Convention's Outreach Programme 1999 - 2002 Actions to promote communication, education and public awareness to support implementation of the Convention on Wetlands (Ramsar, Iran 1971)"

The Federal Republic of Germany has an obligation to implement the resolution of the 7th Meeting of the Conference of the Contracting Parties in an appropriate manner.

The Outreach Programme 1999-2002 comprises actions to promote communication, education and public awareness to support implementation of the Convention on Wetlands in all countries and at all levels.

The Outreach Programme takes on the objectives of the Strategic Plan 1997-2002 and expressly relates to the operational objective defined therein (Resolution VII.9, p.5):

"To develop and encourage national programmes of Education and Public Awareness (EPA) on wetlands, targeted at a wide range of people, including key decision-makers, people living in and around wetlands, other wetland users, and the public at large."

With Resolution VII. 9, the Conference of the Contracting Parties urges Member States (Resolution VII. 9, Article 9-11):

- to undertake a review of national needs, capacities and opportunities
- to formulate their National Wetland CEPA Action Plans for priority activities
- consider international, national, regional and local needs in their Action Plan
- involve the respective National Ramsar Committee
- to seek to have their National Action Plans in place by 31 December 2000 and submit a copy to the Ramsar office
- to seek to develop and implement their National Wetland CEPA Action Plans as integrated components of their broader environment, biodiversity, wetland and water management policy instruments.

The Annex to the Outreach Programme contains a recommended list of contents for use in drawing up the National CEPA Action Plan. Particular importance is placed on presentation of the individual actors and the tools and frameworks for activities. The German CEPA Action Plan is based on this recommendation.

II Actors

1. Actors at Government Level and Involved Internationally

1.1. Government Agencies and Subordinate Institutions

The following section describes government agencies and institutions who are involved both at national level and internationally in the conservation of wetlands in Germany and bordering regions. It involves the main actors of national wetland conservation at government level.

Federal Ministry for Environment, Nature Conservation and Nuclear Safety

The **Federal Ministry for Environment, Nature Conservation and Nuclear Safety** (BMU) is responsible for all policy issues concerning the Ramsar Convention at both national and international level. In particular, the BMU informs other Federal ministries, the Federal Government, parliament, the *Länder* (states) and nation-wide nature conservation organisations of the requirements and developments of the Ramsar Convention and international and national wetland conservation.

The BMU initiates and finances reports and scientific studies on developments in the implementation and application of the Ramsar Convention in Germany (e.g. ZWFD 1993, MITLACHER 1997). The German edition of the Ramsar Handbook was published in 1996 (DAVIS 1996). Publication of the German-language Ramsar Newsletter is financed by the BMU.

Conservation of wetlands and waterbodies is covered in the BMU's general public relations work and reporting. Various media have been published for different target groups, e.g. for the general public, the Press, the various associations and for school children.

The BMU is responsible for designating Governmental and Non-Governmental Focal Points for Wetland Communication, Education and Public Awareness (CEPA); these are

Governmental CEPA Focal Point

Mr. Hanno Henke
Federal Agency for Nature Conservation
Konstantinstr. 110
D - 53179 Bonn

Non-governmental CEPA Focal Point

Mr. J. Mooij
Biologische Station im Kreis Wesel e.V.
Freybergweg 9
D - 46483 Wesel

National Ramsar Committee

The **National Ramsar Committee** of the Federal Environment Ministry serves in advising, discussing and coordinating Ramsar activities in Germany. The National Ramsar Committee does not conduct public relations work in its own right.

The following institutions and organisations are represented in the National Ramsar Committee:

<p>Government and <i>Länder</i> Agencies</p> <p>Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (BMU) (Federal Ministry for Environment, Nature Conservation and Nuclear Safety)</p> <p>Ministerium Ländlicher Raum Baden-Württemberg Baden-Württemberg (Baden-Württemberg State Ministry of Rural Areas)</p> <p>Bayerisches Staatsministerium für Landesentwicklung und Umweltfragen (Bavarian Ministry for Regional Development and Environmental Affairs)</p> <p>Senator für Bau und Umwelt der Freien Hansestadt Bremen (Free Hansiatic City of Bremen Senator for Building and Environment)</p> <p>Senatsverwaltung für Stadtentwicklung, Umweltschutz und Technologie von Berlin (Senate Departments for Urban Development, Environmental Protection and Technology)</p> <p>Freie und Hansestadt Hamburg (Free Hansiatic City of Hamburg)</p> <p>Ministerium für Umwelt, Naturschutz und Raumordnung des Landes Brandenburg (Brandenburg Ministry for Environment, Nature Conservation and Regional Planning)</p> <p>Hessisches Ministerium für Umwelt, Landwirtschaft und Forsten (Hessian Ministry for Environment, Agriculture and Forestry)</p> <p>Umweltministerium des Landes Mecklenburg-Vorpommern (Mecklenburg-West Pommerania Ministry for Environment)</p> <p>Sächsisches Staatsministerium für Umwelt und Landwirtschaft (Saxony Ministry for Environment and Agriculture)</p> <p>Niedersächsisches Umweltministerium (Lower Saxony Ministry for Environment)</p> <p>Ministerium für Raumordnung, Landwirtschaft und Umwelt des Landes Sachsen-Anhalt (Sachsen-Anhalt Ministry for Regional Planning, Agriculture and Environment)</p> <p>Ministerium für Umwelt und Naturschutz, Landwirtschaft und Verbraucherschutz des Landes Nordrhein-Westfalen (North Rhine-Westphalia Ministry for Environment and Nature Conservation, Agriculture and Consumer Protection)</p> <p>Ministerium für Natur, Umwelt und Forsten des Landes Schleswig-Holstein (Schleswig-Holstein Ministry for Nature, Environment and Forestry)</p> <p>Ministerium für Umwelt und Forsten des Landes Rheinland-Pfalz (Rhineland-Palatinate Ministry for Environment and Forestry)</p> <p>Thüringer Ministerium für Landwirtschaft, Naturschutz und Umwelt (Thuringia Ministry for Agriculture, Nature Conservation and Environment)</p> <p>Ministerium für Umwelt, Energie und Verkehr des Saarlandes (Saarland Ministry for Environment, Energy and Transport)</p> <p>Bundesamt für Naturschutz (Federal Agency for Nature Conservation)</p>
<p>Associations</p> <p>Bund für Umwelt und Naturschutz Deutschland e.V. (Friends of the Earth Germany)</p> <p>Dachverband Deutscher Avifaunisten e.V. (Umbrella Association of German Avifaunists)</p> <p>Deutscher Jagdschutzverband e.V. (German Association for Shooting and Conservation)</p> <p>Deutscher Naturschutzring e.V. (German League for Nature Conservation and Environment Protection)</p> <p>Forschungsstelle für Ökologie der Wasservögel und Feuchtgebietsschutz der Universität Potsdam (University of Potsdam Research Department for Aquatic Bird Ecology and Wetland Conservation)</p> <p>Naturschutzbund Deutschland e.V. (German Federation for the Conservation of Nature)</p> <p>Zentrale für Wasservogelforschung und Feuchtgebietsschutz in Deutschland e.V. (Centre for Aquatic Bird Research and Wetland Conservation in Germany)</p>

Federal Agency for Nature Conservation

The **Federal Agency for Nature Conservation** (BfN) is the German government's central scientific agency for national and international nature conservation and is headquartered in Bonn. It is an arm of the Federal Environment Ministry (BMU). Within the framework of its public relations work, the BfN provides information on nature conservation in Germany by means of brochures, flyers, posters and films. Since the start of international wetland conservation in the 70s, the BfN has informed Germany's experts and decision-makers on the objectives and responsibilities of the Ramsar Convention and on wetland conservation in various forms. In the main, this is done through:

- a series of publications on nature conservation and landscape management
- the magazine *Natur und Landschaft*
- publications on large nature conservation projects, research efforts such as developmental and experimental activities in relation to wetland conservation
- publication of bibliographies on wetlands
- publication of *Daten zur Natur* (Data on Nature)
- the provision of books and magazines in one of Europe's largest wetlands libraries
- events at the Vilm Island International Nature Conservation Academy.

The BfN supports educational programmes in wetlands of national and international importance by financing information and education centres, e.g. Watten Sea information centres in Wilhelmshaven (Lower Saxony), Tönning (Schleswig-Holstein) and Jasmund-Haus on the island of Rügen (Mecklenburg-Western Pommerania).

The BfN is the National Focal Point of the Ramsar Convention Scientific and Technical Review Panel.

Federal Environmental Agency

The **Federal Environmental Agency** (UBA) is the Government's central environment agency and is an arm of the Ministry for Environment, Nature Conservation and Nuclear Safety. The UBA is the first point of contact for inquiries concerning environment protection. The Federal Environmental Agency has three functions:

- scientific support of the Government in issues of environment protection
- collation and provision of environmental data
- informing the general public on issues of environment protection.

The Department for Environment and Health handles inquiries concerning water management, sustainable water usage, water quality, water hygiene and the ecology of still and flowing waters and seas (www.umweltbundesamt.de).

The results of research studies, expert reports, specialist seminars and conferences are regularly published in various series and magazines. The UBA's Internet site *Wasser im Netz* (Water on the Web) offers numerous links to national and international institutions, associations and topics of interest. Particular focus is placed on the area of behaviour and education in using water and water conservation.

Federal Institute for Hydrology

The **Federal Institute for Hydrology** (BfG), located in Koblenz, is a Superior Federal Authority and an arm of the Federal Ministry for Transport, Building and Housing. The BfG is the scientific institute responsible for research in the areas of hydrology, water management and waterbody conservation in national waterways (Rhine, Main, Neckar, Donau, Elbe, Havel, Weser, Ems) and advises federal ministries and their subordinate agencies. Apart from hydrological, chemical and physiological studies, its work also includes the issues of vegetation and fauna in river ecosystems. Its publications are mainly of a scientific nature (www.bafg.de).

Federal Environment Foundation

The **Federal Environment Foundation** (DBU) has as its main objective the protection of the environment and the promotion of SMEs. The foundation's key issue is the promotion of sustainable development. In supporting projects involving the communication of environmental issues, it has financed day courses and workshops for children on the topic of water, which are designed to foster sustainable thinking and action.

The promotion of environmental education institutes is one of the foundation's main activities. Such institutes also exist in wetland areas: for example, the foundation supports the Ostsee-Informationszentrum (Baltic Sea Information Centre) in Rostock and the National Park Laboratory at the German-Polish Lower Oder Valley National Park (www.dbu.de).

International Commission for the Protection of the Rhine

The **International Commission for the Protection of the Rhine** (ICPR) was founded in Basle, Switzerland in 1950. Following an initiative of the Netherlands, the countries of the Rhine region – Switzerland, France, Luxembourg, Germany and the Netherlands, established this forum to discuss and seek joint solutions to the problems of pollution and the rehabilitation of the Rhine. The Commission's objectives are:

- the sustainable development of the entire ecosystem of the river Rhine
- securing use of Rhine water for the extraction of drinking water
- holistic flood prevention and environment-friendly flood defence systems
- reduction of pollution flowing from the Rhine into the North Sea.

With over 100 publications, the ICPR has documented the status and success of efforts to rehabilitate the Rhine river ecosystem (www.iksr.de).

International Commission for the Protection of the River Elbe

In 1990, the Federal Republic of Germany, the Czech Republic and the European Union signed an agreement on the **International Commission for the Protection of the River Elbe** (ICPE). Its main objectives include:

- the achievement of an appropriately biodiverse natural ecosystem
- sustain reductions in the burdens to the North Sea as regards pollution from the Elbe river basin.

The general public is informed about the rehabilitation of the river ecosystem by means of symposiums and publications on the condition of the waterways, action programmes and research results (www.bafg.de/ikse - in German).

International Commission on the Protection of the Odra (IKSO)

The "Convention on the International Commission for Protection of the Odra River against Pollution" (Federal Law Gazette 1996 II, p. 1708) came into force on April 28, 1999. Contracting parties are Germany, the Republic of Poland, the Czech Republic and the European Union.

The IKSO has adopted a program of urgent measures concerned with the protection of the Odra River against pollution for 1997 - 2002. The program includes the construction or modernization of 86 municipal and 52 industrial waste water treatment plants. In 2000 IKSO adopted its first interim report on the status of implementation of the program of urgent measures. The report shows that so far the results have been satisfying, however, the ambitious goals of the program need further support in order to complete some of the remaining measures.

1.2. National Nature Conservation Organisations

German League for Nature Conservation and Environmental Protection

The **German League for Nature Conservation and Environmental Protection (DNR)** is the umbrella organisation for German nature conservation and environment NGOs whose publications concern mainly policy statements and reports. It puts out a nation-wide newsletter with reports on current issues concerning the Ramsar Convention and wetland conservation.

Friends of the Earth Germany

Friends of the Earth Germany (BUND) devotes much of its public relations work to nature and environment protection in connection with wetland and waterbody conservation. This includes political statements, e.g. World Water Day 2000, with reports on the dangers to groundwater (title theme in the BUND magazine 3/98) and also in the form of long-term campaigns and projects (www.bund.net).

In its efforts to achieve a higher level of public awareness, the BUND's Elbe project for example takes on areas of conflict such as the expansion of waterways, conservation in the form of biosphere reserves and flood defence.

BUND Youth, with some 600 children's and youth groups and 40,000 members, is one of the largest youth environment associations in Germany. Numerous seminars and activities are offered on a variety of topics involving nature and environment conservation. BUND Youth puts out informational material for children's activities which help children's groups in getting to know their local woods and lakes.

German Association for Shooting and Conservation

In its PR work, the German Association for Shooting and Conservation (Deutscher Jagdschutz-Verband / DJV) also focuses on wetland conservation and water pollution control and the sustainable use of waterfowl (www.jagd-online.de). For this purpose, information material such as the proceedings of two international conference by the Baltic Sea states (1993 and 1995), the results of waterfowl research and also some position papers have been published.

The DJV shows strong commitment in the field of nature and environmental education outside the classroom. As early as in 1991 the DJV founded the national initiative "Lernort Natur" (classroom nature) (www.lernort-natur.de). In an experiential learning situation (education via the experience of nature) young people are shown the hunting district and are brought into close contact with flora and fauna in order to gain first insights into environmental issues.

Greenpeace Germany

Greenpeace works within the framework of national and international campaigns, conducting spectacular actions to win the attention of the general public. Its main goal in Germany as regards wetland conservation is the improvement of ecological conditions in the North Sea and the Elbe, Rhine and Weser rivers. The conservation of drinking water at national and European level is also a focal point of its lobby campaign Water - The Cycle of Life. Its aims are the reduction of water consumption and water contamination by industry and private households (www.greenpeace.de).

German Federation for the Conservation of Nature

The **German Federation for the Conservation of Nature** (NABU) operates a multi-faceted public relations and education service on the topic of wetland conservation. Traditionally, wetlands play an important role in NABU's political and practical nature conservation activities (www.nabu.de). Its wide range of activities include:

- Publication of political requirements, e.g. conservation of the riverine landscape of the river Elbe
- Dissemination of information on wetlands of international, national and regional importance such as the Watten Sea, the North and Baltic seas, lakes, moorlands and pond areas
- Information and education centres in areas with protected wetlands: Academy Gut Sunder (Lower Saxony), Zentrum Blumberge Mühle (Brandenburg), Weissstorch-Zentrum Bergenhusen (Schleswig-Holstein)
- Nature experience activities in pond areas (Meissendorf ponds in Lower Saxony, Blumberg ponds in Brandenburg, Wallnau on Fehmarn)
- The Institute for Fields and Wetlands in the Eider-Treene-Sorge Valley in Schleswig-Holstein, with regional, supra-regional and international activities on white stork protection and wetland conservation
- A nation-wide expert working group on the protection of aquatic water birds and wetland conservation, with its own publishing body (BUCEPHALA)
- Campaigns for the protection of endangered wetland bird species with the Bird of the Year campaign: Kingfisher (1973), Golden Plover (1975), Curlew (1982), White Stork (1984), Reed Warbler (1989), Little Ringed Plover (1993), Great Crested Grebe (2001):

- Publication of special educational material entitled *Natürlich lernen* (learning naturally) in cooperation with the Bavarian Bird Protection Association (LBV).

Youth for Nature (NAJU - NABU's youth section) is Germany's largest youth organisation for nature conservation and boasts 52,000 members, with 1,500 children's and youth groups. Its activities are wide-ranging and include regular publications and campaigns involving wetland conservation. One of their foremost projects is *Erlebter Frühling* (Experiencing Spring) which is financed by the Federal Ministry for Environment, Nature Conservation and Nuclear Safety (www.nabu.de, www.naju.de).

WWF Germany

WWF Germany has made wetland conservation a focal point of its national nature conservation activities. Eight project offices oversee wetlands of special importance in Germany: the North Sea and its Watten Sea, the Baltic Sea and coastal areas, and the rivers Oder, Elbe, Rhine and Weser (Wümmewiesen near Bremen).

Its projects and public relations work, which include conferences, brochures, scientific studies, lobby papers, press articles and other media, focus on national parks whose status as wetlands of international importance meet with the requirements of the Ramsar Convention in many ways: Watten Sea national parks, Vorpommersche Boddenlandschaft national park, Lower Oder Valley National Park. The WWF runs the *Watten Seehaus* in Wilhelmshaven as a central information centre for the national park together with other centres along the coast of Lower Saxony (www.wwf.de).

1.3. Expert Wetland Conservation Organisations

Germany's foremost NGO organisation specifically concerned with the principles of conservation for sustaining and nurturing wetlands and aquatic and mudflat birds dependent on wetlands in respect of the Ramsar Convention is the **German Centre for Aquatic Bird Research and Wetland Conservation (ZWFD)**. Since 1989, the ZWFD has acted as the national coordination office of the International Water Bird Census under the patronage of the Umbrella Association of German Avifaunists (Dachverband Deutscher Avifaunisten e.V. (DDA)). In this role, the ZWFD cooperates with some 1,500 ornithology specialists and more than 30 state and private institutions (MOOIJ 1999).

The ZWFD is managed and staffed by the following:

- the Rieselfelder Münster biological station
- the Wesel district biological station

The voluntarily collated data on the aquatic bird count in Germany are evaluated at regular intervals. This information, together with additional data on existing and potential wetlands of international importance, were included in national reports of the Federal Republic of Germany on the implementation of the Ramsar Convention (e.g. ZWFD 1993, MITLACHER 1997). The aim of these BMU-financed publications – which are the first involving cooperation with the *Länder* of Brandenburg and North Rhine-Westphalia – was to heighten knowledge about wetlands of international importance in Germany and the level of awareness regarding the Ramsar Convention both among the general public and within public agencies and private organisations.

The ZWFD and its members make a vital contribution to communicating the goals and responsibilities of the Ramsar Convention and wetland conservation, with articles in various specialist journals and at expert meetings.

1.4. Other Actors

Numerous other public and private organisations active throughout the Federal Republic of Germany are, by virtue of their aims and orientation, associated with the topics of wetlands, water or waterbodies in one way or another. They communicate for example through sporting functions (rowing, diving, fishing), technical activities (energy production) or use-focused functions (agriculture). The requirements for wetland conservation are communicated in more or less detail to the respective target groups via various media. The following two actors are representative of this group:

Evaluation and Information Service for Food, Agriculture and Forestry (aid)

aid, financed by the Federal Ministry for Food, Agriculture and Forestry, provides information on the environment, nature and countryside. The service also includes numerous media involved with small waterbodies in the agricultural landscape, with water renaturalisation or with the vegetation alongside streams. Its aim is to provide public agencies, private organisations and agricultural operators information on and foster their initiative in wetland conservation.

German Canoe Federation

The **German Canoe Federation (DKV)** and its regional associations actively communicate detailed information on the protection and conservation of waterways as a fundamental element of the sport of canoeing. The federation and its members are encouraged to adopt a considerate and caring attitude towards nature. Canoeists are encouraged to do all they can to ensure that their sport has the least possible effect on surrounding nature.

The federation provides information on navigation rules and restrictions on waterways for reasons of nature conservation, offers tips and guidelines on attitudes towards nature, and also offers courses and educational programmes on nature-friendly canoeing (www.kanu.de).

2. Actors at *Länder* (State) Level

2.1. The Highest Nature Conservation Agencies of the Respective *Länder* (States) and Their Subordinate Institutions

The **ministries** responsible for nature conservation in the various *Länder* have adopted different approaches in implementing the goals and responsibilities of the Ramsar Convention. The measures taken as regards heightening public awareness and education on wetlands and water conservation also vary from *Land* to *Land*.

The following *Länder* activities promote public awareness and foster communication as regards wetland conservation in general and wetlands of international importance, particularly the establishment and financing of nature conservation centres and biological stations:

- Establishment and support of information centres and educational organisations (e.g. in the Watten Sea national parks)
- Informational work via state sponsored programmes using volunteer agreements, e.g. water meadow and river bank conservation programmes of the state of Northrhine-Westphalia, and Lower Saxony's moorlands conservation and waterways programmes
- Seminars, educational and excursion offerings in cooperation with nature conservation administrations and other expert administrations (e.g. water supply industry, coastal protection, agriculture)
- Publications (flyers, brochures, conference reports, management plans, etc.) and exhibitions on wetlands of international importance
- Promotion of protected area management by rangers or young men performing compulsory community service (*Zivildienstleistende*) in wetlands of international importance.

Expert *Länder* (State) Agencies

The **expert institutions of the various *Länder*** (states) who are responsible for nature conservation and landscape management support the ministries in the implementation of goals and tasks for wetland conservation in their respective *Land* (state). Depending on existing regional and landscape conditions, the various *Länder* offices and agencies take up the issues of wetland conservation, renaturation and development with varying degrees of intensity.

The activities of the expert institutions are published regularly in annual reports or in another suitable form. This includes, for example, material on:

- the results of ecological studies on individual wetlands (flora and fauna species inventory, vegetation type, water management, etc.)
- recommendations for maintenance and development measures or renaturation (e.g. of moorlands, meadows, waterway systems)
- updating, extrapolation and analysis of species and biotope registers
- testing of integrative models for the implementation of sustainable wet meadow conservation (e.g. the PLENUM project in Baden-Württemberg)

The informational activities of other expert administrations in the various *Länder*, e.g. water management administrations, also contribute to heightening awareness in the broadest sense – particularly in matters of water conservation.

Academies of the Various *Länder* (States)

The academies of the various *Länder* who belong to the **National Working Group of State Sponsored Academies for Nature and Environment Conservation (BANU)** play a vital role in communicating nature conservation. Together with other topics, wetland conservation is an integral part of further training opportunities in the form of conferences, seminars and excursions (see Section III, 1.4.1). The results of many conferences are published by the academies.

The following education institutions belong to BANU

Akademie für Natur und Umwelt des Landes Schleswig-Holstein (Academy for Nature and Environment in the State of Schleswig-Holstein)
 Landesamt für Forsten, Naturschutz und Großschutzgebiete Mecklenburg-Vorpommern - Dez. 14 (Mecklenburg West-Pomerania State Office for Forestry, Nature Conservation and Large Conservation Areas - December 14)
 Alfred Toepfer Akademie für Naturschutz in Niedersachsen (NNA) (Alfred Toepfer Nature Academy for Nature Conservation in the State of Lower Saxony)
 Hamburger Umweltzentrum (Hamburg Environment Centre)
 Landeslehrstätte für Naturschutz und Landschaftspflege (LLN) in Brandenburg (Academy for Nature Conservation and Landscape Management in the State of Brandenburg)
 Umweltbildungszentrum "Saale-Unstrut e.V." Nebra in Sachsen-Anhalt (Environment Centre Saale-Unstrut e.V. Nebra in Sachsen-Anhalt)
 Natur- und Umweltschutz-Akademie NRW (NUA) (Academy for Nature and Environment Protection in the State of North Rhine-Westphalia)
 Sächsische Akademie für Natur und Umwelt (Academy for Nature and Environment in the State of Saxony)
 Thüringer Landesanstalt für Umwelt - Referat Umweltbildung (Thuringia Academy for Environment - Department of Environmental Education)
 Naturschutz-Zentrum Hessen - Akademie für Natur- und Umweltschutz e.V. (Hessen Nature Conservation Centre - Academy für Natur - Umweltschutz e.V.)
 Bayerische Akademie für Naturschutz und Landschaftspflege (ANL) (Academy for Nature Conservation and Landscape Management in the State of Bavaria)
 Akademie für Natur- und Umweltschutz Baden-Württemberg (Academy for Nature and Environment Protection in the State of Baden-Württemberg)
 Landeszentrale für Umweltaufklärung Rheinland-Pfalz (Rhineland-Palatinate State Office for Environmental Education)

In 1998, the academies of the various *Länder* hosted some 1,300 events with approximately 40,000 participants, and in 1999, some 1,400 events with approximately 50,000 participants (BfN: Natur und Landschaft 74. Jg. 1999, H. 5 und 75. Jg. 2000, H. 5).

2.2. Nationwide Nature Conservation Organisations

Friends of the Earth *Länder* (State) Associations

The **Friends of the Earth (BUND) *Länder* Associations** place great emphasis on wetland and water conservation, conducting numerous press activities, expert conferences, actions and projects. Some *Länder* associations (LV) operate information and education centres, offering excursions to and tours of surrounding wetlands (www.bund.net and link to the *Länder* associations). Some examples of their work include:

- Living Streams and Rivers Campaign – LV Baden-Württemberg
- Protect the Elbe Project – LV Saxon-Anhalt
- Donau 2000 Campaign - Survival of a River – Friends of the Earth Bavaria
- European Centre for Meadow Ecology, Environment Education and Visitor Information
Ökoburg Lenzen (Elbe) – LV Lower Saxony
- Protection project Diepholzer Moorniederung (Ramsar Site) – LV Lower Saxony
- Information centres in the Lower Saxony Wadden Sea National Park – LV Lower Saxony

Regional DJV groups

Concentrating on different priorities, the regional groups and subregional divisions carry out activities related to wetland conservation and the protection of endangered species (www.jagdnetz.de). Some of the projects include:

- experiential learning (implementing the "classroom nature" initiative by the DJV)
- the Friedrichskoog seal station that serves as an education centre for the Schleswig-Holstein Wadden Sea area (www.gruenesoal.de)
- project group on the protection of the white-tailed eagle in Schleswig-Holstein (www.projektgruppeseeadlerschutz.de)
- setting up the "Hohner See" centre for nature and environment in the lowlands of Eider/Treene/Sorge in Schleswig-Holstein
- Thalhamer Moos: conservation of a fen system in Isental (carried out by the Bavarian branch of the DJV)
- renaturation of bottom land in the county of Oberberg (carried out by the Northrhine-Westphalian branch of the DJV)
- project for the white-breasted dipper living in the Fichtelberg area of the upper Erzgebirge (carried out by the Saxony branch of the DJV)

NABU *Länder* (State) Associations

NABU *Länder* associations dedicate their time and energy in various degrees of intensity and scope to wetland conservation and the promotion of public awareness. Alongside numerous other topics, wetland conservation plays a key role in combination with campaigns, actions, brochures, excursions and a variety of public awareness measures. The *Länder* associations and their district groups oversee numerous wetlands and operate many nature conservation stations and/or education centres which make up the largest contribution to their information work on wetlands (www.nabu.de and links to the *Länder* associations).

Some examples of their informational activities:

- offerings at approximately 90 nature conservation stations or centres, including in wetlands of international importance as defined by the Ramsar Convention: Bodensee/Wollmatinger Ried, Rheinauen at Bingen, Unterer Niederrhein/Kranenburg, Elbtalaue, Untere Havel and Watten Sea
- campaigns with various subject-related objectives and geographical range: e.g. their A King Seeks a Kingdom campaign in Münsterland, North Rhine-Westphalia for the protection of the European tree frog and small waterbodies
- a wide range of informational material on various wetlands aimed at the general public, experts, and children and young people, e.g. Federsee (Baden-Württemberg)
- nature experience days and bird watching in wetlands for the general public, e.g. Katinger Watt (Schleswig-Holstein).

Bavarian Bird Protection Association

The **Bavarian Bird Protection Association** (LBV) works intensively to promote heightened public awareness of wetlands. It conducts a variety of projects, supported by seminars,

exhibitions, excursions and brochures, for the conservation of wet meadows, river banks and lakes. The LBV has introduced a Bavaria-wide source conservation programme (www.lbv.de).

The LBV is particularly active in education and provides schools and facilitators with teaching materials on the subject of water. In addition, the LBV's seventeen education centres offer a wide range of activities on nature experience which include wetlands.

2.3. Educational Organisations at *Länder* (State) Level

State education institutions can be separated from those of non-government organisations. Private education institutions are presented in Section 3.

Technical colleges, technical universities, universities and teacher training colleges fall under the responsibility of the ministries for education in the various *Länder*. In Germany, there exist some one hundred study opportunities involving the themes covered in this study, including the following technical subjects in science and technology and natural sciences:

- landscape management
- water management and hydraulic engineering
- geography and landscape ecology
- biology
- environment education

The courses cover the scientific principles of water and wetland ecology, protection and conservation instruments, sustainable use of water resources and other issues in various depth and scope (HAAN 1999).

3. Actors at Regional and Local Level

It is impossible to assess the number of actors involved in communicating wetland conservation at regional and local level. There are at least 5,000 actors among the **combined subdivisions of the larger nature conservation associations** and the regionally and locally active **nature conservation clubs**.

It is easier to define the number of regional **nature conservation centres, stations and education centres** involved in nature and environment protection. Country-wide, there are approximately five hundred non-school educational institutes of which at least 80% offer courses, conferences, tours, excursions and publications on the topics of wetland conservation, water and waterbodies.

Many of the approximately 14,000 **regional organisations** in Germany are active in wetland conservation and select suitable media to report on their activities. Recently, such actions have been integrated into the Local Agenda 21 of various cities, districts and municipalities.

Germany's approximately 42,000 **ordinary schools** are a source of huge actor potential. The conservation of waterbodies and their plant and wildlife is not only included in lessons, but is often underpinned by project weeks, excursions and outdoor experiments. The adoption of

streams, the creation of small waterbodies or the management of wet meadows are extremely popular activities (see Section III, 2).

The following groups of actors also deserve a mention without going into detail:

- municipal water and soil associations
- special purpose groups for water management (reservoirs, groundwater)
- angling clubs and fishing associations
- walking and local interest associations
- tourist associations
- sports clubs: rowing, sailing, surfing, diving, etc.

4. Actors in Wetlands of International Importance

Under the Ramsar Convention, the Federal Republic of Germany has designated 31 wetlands of international importance with a total area of some 670,000 acres. The Ramsar Convention calls for expert management and monitoring of wetlands of international importance, which includes the promotion of public awareness.

In each of the 31 wetlands of international importance, private organisations or active individuals take on this task with varying levels of intensity. The activities are supported and enhanced by the local public agencies responsible for the Ramsar sites.

More than three-quarters of the wetlands of international importance have an information centre that manages the area, provides visitor information and carries out public relations work. In over 50% of the wetlands of international importance, a professional nature ranger is employed to carry out informational and educational work on site. A variety of informative and richly illustrated brochures, flyers and, in some cases, videos are available on all wetlands of international importance located in Germany (MITLACHER 1997).

5. Actor Analysis

The CEPA Outreach Programme 1999-2002 recommends increasing the number of actors to be integrated as ambassadors of the Convention on Wetlands.

- Actors within the meaning of the Ramsar Convention are involved at all levels of government structure in the Federal Republic of Germany: at national level and as regards international responsibilities, at *Länder* level and in the districts and municipalities.
- The main actors involved in communicating wetland conservation in Germany are the national and *Länder* nature conservation associations followed by the agencies of the various *Länder*; government institutions play a supporting role (publication of research results, model projects, activities programmes).
- The number of actors is particularly large at regional and local level and extends far beyond nature conservation. Other social groups (e.g. local interest clubs, sports clubs), schools and private education centres, municipalities and special purpose community groups are also

involved in informational work. This most important group of actors involved in wetland conservation has thus been integrated into the CEPA programme.

- In each of the 31 German wetlands of international importance, there are national and private actors involved in the implementation of the objectives of the Ramsar Convention. However, the actor structure is not yet complete in about half of these areas – there is in particular a lack of professionally active facilitators on site (area managers, nature rangers).
- The local managers of the 31 German wetlands of international interest have little contact with one another and develop their informational work independently of the overriding objectives of international wetland conservation as defined by the Ramsar Convention. To date, there exists no communications strategy between the government and its *Länder* (states) on German Ramsar sites. Inroads have however been made by one *Land*, i.e. Bavaria (see Section III, 1.1.4).
- The actors exchange information on areas in Germany and Europe that are important in international, national and supra-regional wetland conservation: Wadden Sea, the Rhine, Weser, Elbe, Oder, Havel and Donau rivers, valleys and meadows of those rivers, and lakes. This often means that numerous national and private actors are involved in public relations work, which sometimes leads to duplication of effort (e.g. on the issue of the Elbe in nature conservation organisations). There is no evidence of the actors having agreed on prioritisation.
- Depending on their specific area of interest, the actors place a different focus in their public relations work: scientific principles, political actions, local management measures, educational work, nature experience activities, etc.
- The informational work between the main actors of the government, *Länder* and nature conservation organisations is not coordinated. Neither the Environment Ministry nor the National Ramsar Committee has accepted the role of leadership as regards information as assigned to the contracting parties in the CEPA Programme.

III. Tools

1. Communication and Public Relations Work

The actors use various tools in their communication and public relations work. These can be divided into four categories:

- print media
- exhibitions
- digital media
- events.

The media analysis focuses on the years 1998 to 2000, while in some cases, longer periods have been analysed to determine changes and trends.

It is evident that the term *wetlands* is too general on the one hand, and on the other too narrow to describe the broad content of the issues being communicated in Germany. The study was therefore conducted using a number of key word or categories and then classified by six titles:

- *wet biotopes*: wet meadows, meadows
- *waterways*: streams and rivers
- *still waterbodies*: lakes, pools, ponds, etc.
- *Wetland plants and animals, e.g. typical species*:
- *Watten Sea/Coastal Biotopes*: Watten Sea, North Sea, Baltic Sea
- *Water as a medium*: comprises water in general, waterbody pressures, protective measures, drinking water problems, water cycle.

The results of the study cannot present a complete picture of the communication tools, the activities and the target groups which come under the German CEPA Action Plan. Rather, the various media and activities are presented in their full range and diversity, and made transparent using selected examples. Target groups are dealt with in individual Sections.

1.1. Print Media

Print media make up the largest portion of information tools used for the individual topics. The available print media are grouped into five categories.

1.1.1. Magazines

Germany has a wide and plentiful variety of specialist magazines. We have studied a selection of magazines aimed at different target groups from the years 1998-2000:

- Specialist journals on nature conservation: *Natur und Landschaft*
- magazines published by the nature conservation associations: BUND, Greenpeace, NABU, WWF
- Consumer magazines: *natur & kosmos*, *Geo*
- Politically-oriented magazines: *Der Spiegel*.

Specialist Journals

The monthly specialist journal *Natur und Landschaft*, published by the Federal Agency for Nature Conservation (BfN), has a circulation of 6,400 and targets government agencies, planning offices, surveyors, associations and universities. The analysis is divided into two categories: essays and commentaries/news items. Over the last three years, an average of seven essays and some fifty commentaries per year have appeared on the subject of wetlands (see Figure 1). By comparison, just twenty-one essays and only seven commentaries/news items appeared in 1980.

The majority of articles were written on wet biotopes, Watten Sea/coastal biotopes and wetland plants and wildlife. The commentaries covered mainly wetland plants and wildlife and waterways (see Figure 1).

Figure 1: Analysis of the Specialist Journal *Natur und Landschaft*
(Number of essays and commentaries/news items in absolute figures and in %)

<i>Natur und Landschaft</i> 1998 - 2000		
Theme	Essays	Commentaries/ News Items
Wet Biotopes	36% (8)	13% (19)
Waterways	14% (3)	22% (34)
Still Waterbodies	9% (2)	4% (6)
Wetlands Flora and Fauna	23% (5)	31% (48)
Watten Sea/Coastal Biotopes	31% (2)	10% (15)
The Medium Water	22% (2)	20% (30)
Total Articles	100% (22)	100% (152)

Source: BfN (1998-2000), *Natur und Landschaft*. - Contents Pages (Years 73 - 75).

Magazines Published by the Nature Conservation Associations

The magazines of the national nature and environment conservation associations appear quarterly and are aimed at both members and interested individuals from various age groups. The total circulation of the four magazines analysed comes to approximately 900,000 copies with a readership of around 2.7 million.

In the three years studied, the four magazines contained one hundred and two articles: an average for all four magazines of around eight articles per quarter. Apart from comprehensive articles, the study also includes short reports. The associations report on wetlands topics with varying degrees of intensity (see Figure 2). The Environment Federation WWF Germany published the

most articles in the past three years, followed by NABU. While the six content themes are roughly evenly spread amongst the publications of the BUND, NABU and Greenpeace, the WWF reports frequently on the dangers to and the efforts to protect the Watten Sea/coastal biotopes and waterways. One example is the article entitled *Auen sind der beste Hochwasserschutz* (Meadows Provide the Best Flood Defence) which appeared in the WWF Journal 2/1998 and covered more efficient conservation of the meadows on the upper Rhine – a potential Ramsar site.

Figure 2: Analysis of Magazines Published By Nature and Environment Associations
(Number of Individual Articles in the Years 1998 - 2000 in absolute figures)

Theme	BUND	NABU	WWF	GREENPEACE
Wet Biotopes	3	5	n/a	n/a
Waterways	2	5	15	1
Still waterbodies	2	3	2	n/a
Wetland Flora and Fauna	1	5	8	2
Watten Sea/Coastal Biotopes	1	6	23	4
The Medium Water	3	2	5	4
Total Articles	12	26	53	11

Sources: BUND: BUNDmagazin; Greenpeace: Greenpeace Magazin; NABU: Naturschutz heute. Umweltstiftung WWF Deutschland: WWF Journal.

Consumer Magazines

Of the monthly nature consumer magazines, *natur & kosmos* and *Geo* were selected for analysis. A certain amount of overlap exists between the readership of these magazines and that of the association magazines. However, with four million readers, *GEO*'s coverage is greater (*GEO* circulation is 600,000 and *natur & kosmos* 40,000). *GEO* is also placed in doctors' waiting rooms, targeting different social groups than the association magazines.

Over the three year study period, clear differences between the two magazines become evident: *natur & kosmos* contained three times as many essays and reports (see Figure 3). Almost every other month, an article appeared on the topic covered by this study. Both magazines reported frequently on *wetland plants and wildlife*. Reports are published on the fascinating world of wildlife and on the problems of habitat. Attractive and exotic animals are popular media-effective lead-ins for reports, e.g. aquatic birds, frogs, fish, water spiders and water insects. Comparing the number of individual articles with those in association magazines, the consumer magazine *natur & kosmos* reports more than twice as frequently on wetland themes.

GEOLino, the children's edition of *GEO*, appeals mainly to children in the 8 and 14 age group. It offers fun and excitement with interesting facts, experiments and simple games, which also include the subject of water. *GEOLino* is also available on the Internet (www.geolino.de).

Figure 3: Analysis of Selected Consumer Magazines

(Total Individual Articles from 1998 - 2000 in absolute figures and in %)

Theme	<i>natur & kosmos</i>	Geo
Wet Biotopes	11% (7)	n/a n/a
Waterways	16% (11)	12% (3)
Still Waterbodies	6% (4)	4% (1)
Wetland Flora and Fauna	44% (29)	71% (17)
Watten Sea/Coastal Biotopes	11% (7)	13% (3)
Water as a Medium	12% (8)	n/a n/a
Total Articles	100% (66)	100% (24)

Sources: NATUR MEDIA GMBH (Hrsg.): *natur & kosmos*. Stuttgart.
(1998 editions of *natur* and *kosmos* published separately)
GRUNER + JAHR AG (Pub.): Geo. Hamburg.

Political Magazines

Of the political magazines, editions of *Der Spiegel* from the years 1998 - 2000 were selected for analysis. Its circulation of 1.25 million appeals mainly to adults in the middle and upper classes.

In both the print edition and the on-line archive, which provides some 600,000 users with current affairs articles from the world of politics and business, the key words water, river, plants and wildlife, Watten Sea, North Sea and stream or streams were looked up. Both media contained only a few reports involving the themes covered by the study (www.spiegel.de).

1.1.2. Expert and Research Reports

Expert and research reports are aimed at experts, surveyors, scientists, government agency and association representatives, and also at politicians. The combined number of publications from the four institutions was analysed in depth (as at 2000):

- Federal Agency for Nature Conservation (BfN),
- Federal Environmental Agency (UBA),
- International Commission for the Protection of the Elbe (ICPR),
- International Commission for the Protection of the Rhine (ICPE).

Around 23% of the one hundred and sixty articles in publications put out by the Federal Agency for Nature Conservation (BfN) up to the year 2000 dealt with the themes covered by the study (see Figure 4). They covered mainly wetland plants and wildlife, waterways and wet biotopes. A representative analysis was conducted on *Renaturierung von Moorlandschaften* (Renaturalisation of Moorland Landscapes) from 1998 (SCHOPP-GUTH 1998). In 1997, expert literature in the form of a special edition of the *Natur and Landschaft* magazine contained a comprehensive

bibliography on the Watten Sea Ramsar site. The BfN published the Ramsar Report Germany in 1997 (MITLACHER 1997) to evaluate the application and implementation of the Ramsar Convention on the occasion of the 25th anniversary of the Convention.

Articles In the serial publications (texts, reports, contributions) put out by the Federal Environmental Agency (UBA), 28% of the articles published in the period 1997-2000 covered wetlands-related topics. 60% of the main content of those articles dealt with water as a medium (see Figure 4). Some examples are *Pestizideinträge in Gewässer*, *Nachhaltige Wasserwirtschaft in Deutschland* (pesticide emissions in waterbodies, sustainable water management in Germany) (www.umweltbundesamt.de).

Figure 4: Analysis of Research and Expert Reports of Selected Government Institutes
(Number of reports in absolute figures and in % as at 2000)

Theme	BfN	UBA
Wet Biotopes	13% (5)	1% (1)
Waterways	22% (8)	14% (18)
Still Waterbodies	3% (1)	1% (1)
Wetland Flora and Fauna	43% (16)	24% (30)
Watten Sea/Coastal Biotopes	13% (5)	n/a n/a
Water as a Medium	6% (2)	60% (77)
Total Articles	100% (37)	100% (127)

Sources: Publications Lists of the Various Organisations (as at 2000),
see web sites

The International Commission for the Protection of the Rhine (ICPR) and for the Protection of the Elbe (ICPE) each publish specific expert and research reports on their respective rivers on the following topics: ecology, flora and fauna, contamination and rehabilitation, prevention of hazardous incidents, flood defence and action programmes (a total of some 100 publications).

On the subject of improving wetland conservation in Germany, numerous other actors – research institutes, associations, universities, academies and specialist institutes in the various *Länder* – publish reports on research results, expert meetings, conferences and scientific symposiums. From the large and almost insurmountable number of reports, some were named which contained Ramsar sites: Tagungsband über "Feuchtgebiete Internationaler Bedeutung - Schwerpunkt Unterer Niederrhein", financed by the *Land* of North Rhine- Westphalia (Naturschutzzentrum im Kreis Kleve 1997), Dokumentation der Fachtagung "Schutz von Ramsar-Gebieten" des BUND-Landesverbandes Hamburg (BUND LV Hamburg 1999) and Studie über "Die bayerischen Ramsar-Gebiete" (LOHMANN & VOGEL 1996).

An idea of the sheer breadth of expert literature available on the topics covered by the study can be obtained from the library at the Federal Agency for Nature Conservation (BfN). The BfN's

literature database – accessible via the Internet – was selected for analysis for this purpose. The on-line inventory currently contains some 50,000 titles – mainly from 1980 and onwards.

Some 11% of the literature in the database covers wetlands themes. The total inventory in the BfN library is possibly larger. Some ninety titles relate to the Ramsar Convention (see Figure 5), while the rest provide a relatively even coverage of the keywords Watten Sea/coastal biotopes, wet biotopes and waterways. The low number of titles on still waterbodies is probably attributable to the classification according to keywords.

Figure 5: Expert Literature in the Federal Agency for Nature Conservation (BfN) Literature Database

(Number of individual articles in absolute figures and in %, multiple counts possible, as at 2000)

Keyword	Title
Ramsar	2% (91)
Wet Biotopes incl. international	34% (1836)
Waterways	29% (1539)
Still Waterbodies	1% (69)
Watten Sea/Coastal Biotopes	34% (1854)
Total Articles	100% 5389

Source: BfN Literature Database via www.bfn.de

1.1.3. Books

Books for everyman on the themes covered by the study and which are generally available from book shops were researched using one of Germany's largest Internet book shops (www.amazon.de). The books available on-line were grouped in accordance with the above named keywords. Of the two hundred and eighty eight titles researched, 50% fall in the category Watten Sea/coastal biotopes, followed by waterways and still waterbodies (see Figure 6). The type of books involved are species identification books (e.g. Birds of Inland Waterbodies and Wetlands), text and nature books (e.g. Environmental Atlas of the Watten Sea), travel guides and video tapes.

Figure 6: Analysis of Book Titles

(Number of Titles in absolute figures and in %, as at 2000)

Theme	Title
Wet Biotopes	8% (24)
Waterways	19% (56)

Still Waterbodies	18% (53)
Wetland Flora and Fauna	3% (10)
Watten Sea/Coastal Biotopes	50% (145)
Water as a Medium	not included
Total Publications	100% (288)

Source: Internet book shop www.amazon.de

1.1.4. Brochures and Flyers

It is impossible to assess the volume of brochures, flyers, documents and written information available. We would estimate that several hundred publications of this type have been put out by various actors over the past twenty years. Below are some examples which serve to make transparent the range of brochures and target groups:

Theme Brochure/Flyer	Target Groups	Publisher
Waterbody renaturation and agriculture	Water management administrations, farmland consolidation agencies, nature conservation agencies, nature conservation associations, landscape architects	AID (1993)
Water is Life	General public	NABU-Bundesverband (1997)
Nationalpark Vorpommersche Boddenlandschaft (Ramsar-Gebiet)	Visitors Tourists: rambblers, cyclists, sailing enthusiasts, windsurfers, local population	Nationalparkamt Mecklenburg-Vorpommern (1992)
All 7 Ramsar sites in Bavaria: Unterer Inn, Chiemsee, Ismaninger Speichersee, Starnberger See, Ammersee, Lech-Donau-Winkel, Donauauen and Donaumoos	Interested holiday-makers and visitors, land users, local population	Bayerischen Staatsministeriums für Landesentwicklung und Umweltfragen (1996)
Wild geese in the Wesel District/NRW	Visitors to geese excursions in the Unterer Niederrhein Ramsar site	Biologische Station im Kreis Wesel (2000)

1.1.5. Materials on Campaigns

Campaigns serve to inform and involve the population, promote public awareness and communicate political requirements for improving wetland conservation. Since the mid-seventies – starting with the launch of the Council of Europe's European Wetlands Campaign in Germany – it is estimated that between fifty and one hundred campaigns have been implemented in Germany.

The initiators of such campaigns are usually the nature conservation associations. A campaign folder usually contains the following material: brochures, flyers, posters, statement paper, requirements catalogue, stickers, action guide, check lists, postcards, etc. Books and videos may also be included. The information is now also available on the Internet.

Three examples of campaigns currently being conducted in Germany are:

Campaign Theme	Target Groups	Initiator
Water - The Circle of Life	Politicians, industry, consumers	Greenpeace Germany (www.greenpeace.de)
Donau 2000 - Survival of a River	Politicians, water management administrations, associations, government agencies, general public	Bund Naturschutz in Bayern e.V. (www.bund-naturschutz.de)
"In the River"	Children and youths, teachers, facilitators	Naturschutzjugend im NABU (NAJU 1999)

1.2. Exhibitions and Multimedia

Exhibitions are a useful way of presenting nature conservation themes to the general public. The *Wissenschaftsladen Hannover e.V.* (Hannover Science Shop) has founded an agency that offers around 200 exhibitions (www.wissenschaftsladen-hannover.de). Some 20 exhibitions on the themes wetlands, waterways and water can be hired, e.g.:

- The Rhine, yesterday, today, tomorrow 1947 - 1997
- Waterways - ecology, importance and conservation
- Upland moors cannot be replaced
- Flood water – where it comes from
- Water in the home.

Exhibitions or multimedia presentations are available at almost all information centres (see II.3) in an effort to promote public awareness.

For example, the Erlebniswelt Watten Sea (Experience the World of the Watten Sea) at the *Rosenhaus* National Park Centre on the island of Wangeroog, Lower Saxony, contains twenty-five presentation boards displaying comprehensive information on the Watten Sea in Lower Saxony, the habit and wildlife communities of the Watt, salt meadows and dunes, the island's birds, fish and seals in the Watten Sea, the evolution and formation of Wangeroog, and the conflicts between nature conservation, traditional usage in the national park and tourism.

Further multimedia presentations on the Watten Sea are available in the national park centres in Wilhelmshaven, Lower Saxony and Tönning, Schleswig-Holsten. These were developed with the financial backing of the Environment Ministry (BMU):

In the Elbtal-Haus environment centre in Bleckede, Lower Saxony, an exhibition on The Living Elbe covers some 400 m². It provides information on ecology and the dangers to the Elbe as well as the necessary protective measures for the Ramsar area.

The Environment Ministry's (BMU) web site offers a virtual tour of the walk-through exhibition entitled *Nachhaltige und rationelle Wassernutzung - Beispiele aus Deutschland* (Sustainable and Rational Water Usage - German Examples). The main theme covers the principles of sustainable water management, waste water treatment and water purification (www.bmu.de).

Greenpeace Germany has an exhibition entitled *Im Zeichen des Wassers* (All About Water). It deals with the smallest drops of water to the widest ocean, and especially highlights the global context. The visitor is treated to a multimedia presentation combining sound and visual effects, appealing texts and pictures. The exhibition particularly targets schools (www.greenpeace.de).

1.3. Digital Media

Digital media have grown in importance over recent years and the items available are constantly on the increase. This group includes traditional media like films and videos through to contemporary interactive Internet presentations.

1.3.1. Films, Videos, Slide Series

The *Medienkursbuch Ökologie* – published by the Ökimedia Institut e.V. – is the most comprehensive catalogue of films, videos, slides, synchronised sound/slide shows and transparencies on the themes ecology, nature and environment protection. Since 1998, the films have been available in on on-line database. The analysis includes media from 1993, the first year in which the entire inventory of German material could be assessed (ÖKOMEDIA INSTITUT 1993). To take a closer look at developments in the film sector, the study included the inventory of the film database from 1999 (www.oekomedia-institut.de).

The media catalogue is aimed at the following bodies:

- Institutes, associations, environment organisations,
- Schools and other educational institutions
- Media bodies in state, church and private commercial organisations
- Independent media individuals and environment journalists

In 1993, around 150 individual articles were available on the themes of wetlands and water conservation (see Figure 7). The videos made up a large portion and involved mainly wetlands plants and wildlife. The slide series provided about equal coverage of the subject theme groups. The films focused mainly on the medium water. The number of films available increased threefold between 1993 and 1999. The state-run television broadcasting companies made the greatest contribution to this growth:

- Nature study (biology) programmes: the Globus series (ARD): Moore am Tropf
- Children's programmes: the Löwenzahn series (ZDF): Watten Sea, gravel pits, the North Sea, etc.

Film material on ecology and the danger to wetlands, waterways and still waterbodies increased considerably in this period (see Figure 7).

Figure 7: Analysis of Films, Videos and Similar Media

(Number of Individual Articles in absolute figures and in %, as at 1993 and 1999)

Synchronised Sound/Slide Shows, Slide Series, Videos and Films					
Theme	Sync. Sound/Slide Shows (Q1: 1993)	Slide Series (Q1: 1993)	Videos (Q1: 1993)	Films (Q1: 1993)	Films (Q2: 1999)
Wet Biotopes	n/a n/a	23% (7)	18% (12)	13% (6)	21% (34)
Waterways	40% (2)	20% (6)	7% (5)	11% (5)	23% (29)
Still Waterbodies	n/a n/a	n/a n/a	2% (1)	4% (2)	12% (19)
Wetland Flora and Fauna	20% (1)	30% (9)	35% (24)	18% (8)	2% (4)
Watten Sea/Coastal Biotopes	20% (1)	17% (5)	19% (13)	14% (6)	4% (5)
Water as a Medium	20% (1)	10% (3)	19% (13)	40% (18)	38% (49)
Total Individual Articles	100% (5)	100% (30)	100% (68)	100% (45)	100% (140)

Sources: (Q1): ÖKOMEDIA-INSTITUT (1993); (Q2):www.oekomedia-institut.de (2000)

1.3.2. CD ROMs and Edutainment Software

The range of CD-ROMs on the themes covered by the study is meagre. At present, there are some interesting basic information packages and problem scenarios available for different types of users. The Federal Environmental Agency's (UBA) *Ökobase* Multimedia 8 is suitable for people with either a personal or professional interest. The virtual atlas is a geographical information system in which data relevant to environment protection can be combined with a location of choice.

Aktion Fischerotterschutz e.V. published the CD-ROM *Alles im Fluß – Revitalisierung in der Ise-Niederung* (In the River - revitalisation of the Ise-Niederung) as part of an experimental and development project of the Federal Agency for Nature Conservation (BfN). In a transparent and understandable form, the CD-ROM shows how ecological and anthropogenic parameters can influence the development of a waterway and the surrounding environment. The user quickly learns the various interconnections between man and nature and can experience with a mouse

click how changes in habitats evolve. The CD-ROM is aimed at those active in nature conservation, facilitators, farmers and planners, and can also be used in schools.

A CD-ROM published by the North Rhine-Westphalia State Ministry for Environment, Regional Planning and Agriculture deals with water sports and nature conservation. It presents the principles of waterbodies and their biocoenosis together with waterways navigation rules for water sports. The CD-ROM is a joint project of the Ministry and the sport and nature conservation associations in North Rhine-Westphalia: BUND NRW, Landesgemeinschaft Naturschutz und Umwelt NRW and NABU NRW, Canoe Association NRW and Landssportbund.

AID has published a CD-ROM entitled *Gewässer - Teil 1: Wasserkreislauf, Quellen und Höhlenwelten*, (Waterbodies - Part 1: Water cycles, Sources and the World of Caves) containing information on the risks to and protection of source areas and caves. It targets mainly facilitators in nature conservation associations and education institutions.

For the 4-10 age group, an edutainment game has been developed entitled *Oscar der Ballonfahrer taucht unter* (Oscar the balloonist goes diving). It provides information on plants and wildlife in a pond over the course of the four seasons, and allows children to playfully explore the lives of fish, ducks, beavers, frogs and dragon flies.

The Bundesverband für Umweltberatung e.V. has also produced edutainment software on water as a medium: *Max Wasserwelt* and *Axles Abwasserwelt* (Max's Water World and Axle's Waste Water World) on drinking water supply and waste water treatment.

1.3.3. Web Sites

The availability of interactive information on the Internet is still in its teething stages. This information tool is particularly popular amongst young people and some thirty-four per cent of the German population now have Internet access. Anyone entering the keyword Ramsar into a search engine will get around thirty hits, for example, on the Ramsar site Mühlenberger Loch in Hamburg.

Naturdetektive (nature detectives) (www.naturdetektive.de) offers interactive information on the themes covered by the study. This is a joint project of Deutsches Clearing-House Mechanismus and Schulen ans Netz e.V. together with other partners, and is sponsored by the Environment Ministry (BMU). In connection with the UN Convention on Biological Diversity, the network offers children the opportunity to exchange experiences, and to communicate and interact via the Internet. Data sheets are available for children to enter the species of animals and plants they find in the country-side. In a game scenario, species identification in wet biotopes and other habitats can be learned and the network of habitats can be made visible.

Some environment organisations have created special Internet pinboards for children. These pinboards provide children with information on a variety of topics, and allow them to post their ideas and questions, e.g. Greenkids at www.greenpeace.de, Young Panda at www.wwf.de, Rudi Rotbein Club at www.naju-bgs.de.

1.3.4. Television Programmes

In Germany, television programmes are an important medium for providing information on biological phenomena and the issues of nature conservation. Nature programmes are particularly popular with children. Research of the archive at the Westdeutsche Rundfunk (www.wdr.de/archiv) revealed seventy film broadcasts in the period 1998 - 2000. The series Quarks und Co, Abenteuer Erde, Wildnis vor der Haustür and Dschungel reported on the Paddyfield Warbler, the Bearded and Penduline Tits, and the seal paradise on the island of Helgoland. Reports on wildlife take the lead with some 50% (see Figure 8).

The programmes appeal to nature lovers of all ages. They provide information in simple scientific terms, with wildlife playing a vital role in the communication of ecology and the forming of emotional ties.

Figure 8: Analysis of Programmes on Westdeutscher Rundfunk (WDR)

(Number of Individual Reports in the Period 1998 - 2000)

Theme	Number
Wet Biotopes	8
Waterways	8
Still Waterbodies	8
Wetland Flora and Fauna	33
Watten Sea/Coastal Biotopes	11
Water as a Medium	2
Total Reports	70

Source: www.wdr.de/archiv (Feb. 2001)

1.4. Events

1.4.1. Seminars Held by Academies in the Various *Länder* (States)

Seminars on the themes of water and wetlands held by the academies of the various *Länder* (states) are aimed at a broad audience – government agencies and nature conservation associations, planning offices, agricultural organisations and associations, the water management and fishing industries, educationalists and other interested parties.

The analysis covers the 1998, 1999 and 2000 event programmes from the academies of the various *Länder*. No data is available for Mecklenburg-Vorpommern, Hamburg and Rhineland-Palatinate as programmes were not made available for research. In the case of Baden-Württemberg and Brandenburg, only the figures for 2000 are available (see Figure 9).

The proportion of theme-related seminars in relation to all seminars on offer varied from 3% (Lower Saxony 1998) to 25% (North Rhine-Westphalia 2000). One group of academies offered an average of 5% of its total events: ANU, NNA; UBZ, TLU, NZH and the Brandenburg Academy for Nature Conservation and Landscape Management (7% in 2000). A second group of academies offers proportionately about twice as many or a third more seminars: SNU, ANL, UA. The Academy for the Protection of Nature and Environment of the State of North Rhine-Westphalia (NUA) takes the lead with an average seminar count of 20% of all events on offer

(see Figure 9). This difference is remarkable although the geographical and natural environment in the respective Federal *Länder* and the priorities of the academies should not be overlooked.

The individual seminars focus mainly on waterways, which in most cases make up around half of the wetlands-related seminar programmes.

Figure 9: Seminars Held by Academies of the Federal *Länder* (States)
(Number of Events in the Period 1998 - 2000, Proportion of Events on Wetland Themes in %)

Academies of the Federal <i>Länder</i> (States)										
	ANU	NNA	UBZ	NUA	SNU	TLU	NZH	ANL	UA	
Total Events in 1998	98	65	121	106	104	-	49	89	-	
Proportion in Percent 1998	5%	3%	6%	17%	9%	-	6%	7%	-	
Total Events 1999	93	79	141	87	123	80	58	113	-	
Proportion in Percent 1999	6%	8%	5%	23%	5%	4%	5%	10%	-	
Total Events 2000	97	71	131	89	98	49	56	115	112	
Proportion in Percent 2000	7%	4%	5%	25%	11%	4%	4%	15%	14%	
3-Year Average	Pro-portion	96	72	131	94	108	-	54	106	-
	%	6%	5%	5%	22%	8%	-	5%	11%	-

Source: 1998, 1999, 2000 Event Programmes of the Various Academies

Academies:

ANU = Akademie für Natur und Umwelt des Landes Schleswig-Holstein

NNA = Alfred Toepfer Akademie für Naturschutz, Niedersachsen (data from 1997 rather than 1998)

UBZ = Umweltbildungszentrum Saale-Unstrut e.V. Nebra, Sachsen-Anhalt

NUA = Natur- und Umweltschutz-Akademie des Landes Nordrhein-Westfalen

TLU = Thüringer Landesanstalt für Umwelt (Akademie für Umwelt und Naturschutz im Aufbau)

SNU = Sächsische Akademie für Natur und Umwelt

NZH = Naturschutz-Zentrum Hessen - Akademie für Natur- und Umweltschutz e.V.

ANL = Bayerische Akademie für Naturschutz und Landschaftspflege

UA = Akademie für Natur- und Umweltschutz Baden-Württemberg

1.4.2. Services of Private Information Centres

Privately run information and education institutions use the explanation of ecological relationships in their goal of providing an opportunity to experience nature and either to anchor people's relationship with their natural environment or to help to reestablish it. Throughout Germany, there are some five hundred privately run information and education institutions which offer seminars, conferences, excursions, walks, tours and leisure activities. A look at the courses offered in the programmes of some fifty institutes showed that the majority of organisations offer

events that include the following themes: exploration of moorlands, wildlife in streams, aquatic birds, pond amphibians, natural habitat river meadows, saving water, waterbody status classification.

The environment centres reach a broad range of target groups: children, youth groups, school classes, tourist groups, families, nature-lovers, etc. In addition, some education centres conduct further training for facilitators.

The following examples were chosen from among the offerings of numerous institutions:

Aktion Fischotterschutz e.V. runs a visitor's centre with a nature reserve in Hankelsbüttel, Lower Saxony. Visitors learn all about the life of the common otter whose habitat is in local natural waterways. Children in the 5-7 age group can hear stories on the common otter, while 8-9 year-olds can solve quizzes and questions about it. There are special attractions in the summer holidays and night expeditions are also conducted to show the hunting behaviour of the animals.

The Naturschutz- und Informationszentrum Goldenstedter Moor e.V. in Lower Saxony aims to heighten awareness of the need to protect the moorlands by means of direct contact. Visitors can walk barefoot around the open-air moorlands experience trail and conduct their own biology, chemistry and physics experiments on peat (Umweltzentren 2000).

The Naturschutzzentrum Rheinauen in Bingen, Rhineland-Palatinate is operated by the NABU Landesverband Rheinland-Pfalz e.V. and informs the public on the Ramsar area of the Rhine between Eltville and Binden. Apart from talks on and tours of the meadow lands, boat trips providing an opportunity to observe aquatic birds in the nature reserves are a particular attraction of the annual events programme.

Apart from the events offered by the information and education institutes, conferences, lectures and excursions are conducted by many local and regional nature conservation groups, whose numbers country-wide must be in their thousands.

1.4.3. World Wetlands Day

World Wetlands Day takes place on 2 February each year as a reminder of the signing of the Convention on Wetlands of International Importance on 2 February 1971 in Ramsar, Iran. World Wetlands Day came into being in 1997, and in 1998 over fifty countries participated with related information programmes.

The first campaigns in Germany took place in 2000. The WWF informed the public of the importance of wetlands and the need to preserve them. The district of Hannover called a press conference in which it lobbied for improvements in wetland conservation in the Leinetal (Leine Valley).

The magazine *Natur und Landschaft* gave particular coverage of the World Wetlands Day 2001 and rallied participation in recognition of the thirty-year existence of the Ramsar Convention (Natur und Landschaft 11/2000). Participation was similar in scope to the previous year, with press articles and an action for the conservation of the Mühlenberger Loch in Hamburg.

1.4.4. Camps and Excursions

Camps and excursions over several days offer adults, families and youth groups in-depth experience of and a new insight into nature. This type of event is gaining in popularity, for example in the form of a short break or as part of the annual family holiday.

Worth mentioning are, for example, the offerings of the NABU Academy Gut Sunder with the theme *Zeit für Natur – Zeit für Kinder* (Time for Nature – Time for Kids), with multi-day water experience trips, canoe trips and biology expeditions on lakes.

Youth organisations like the BUND or NABU offer activities and camping trips especially for youth groups. Such meetings often have a specific theme, e.g. *Abenteuer mit Goldauge und Rotfeder* (Rudi Rotbein Club der NAJU in the Gut Sunder Events Journal 2001).

The various nature conservation organisations often use camps and field camps as a particular form of action in larger projects. One example is the International Elbe-Saale-Camp organised by the BUND in 1993 in an attempt to stop the expansion of the rivers Elbe and Saale as a shipping waterway. Active nature conservationists and other interested parties come together from various countries to exchange experience, enter into dialogue with politicians and to experience nature together (www.bund.net/aktionen/elbe-projekt).

2. Education

The analysis in this Section is limited to schools media, material for teachers and facilitators and also to events related to the subjects taught.

Extra-school offerings of events and other actions of educational nature are covered in Section II, 1.4.

2.1. School Text Books

To find out whether the subject of wetland conservation has been introduced into the education system, the text books used in an elementary school and a high school in North Rhine-Westphalia were selected for analysis.

In the 3rd grade, children are introduced to the principles of chemistry and physics, covering the water cycle, the extraction of drinking water and the dangers of pollution (MUTSCHLER 1997). In 4th grade elementary science, the plant and wildlife in a stream are studied and the water quality examined. In the Section "protecting animals", children learn about toad migration, the associated dangers and ways to help (MUTSCHLER 1998).

High school biology classes teach 5th - 7th graders about the lifestyles of selected wildlife species, including those of wetlands: seals, ducks, mudflat birds, storks, amphibians, and fish. Information on the dangers from man to natural habitats and the necessary protective measures are included and explained (CLAUS ET AL 1993). In the 8th and 9th grades, the curriculum covers the various aspects of waterbody ecosystems: plants and wildlife on lakes, eutrophication,

waterbody status and self-cleaning waterways (CLAUS ET AL. 1994). In the upper grades, biology classes deal with these problems in depth.

5th grade geography classes deal with the three Watten Sea national parks in Germany. Under the heading Protect the Watten Sea, the special importance of the Watten Sea as the nursery school for fish species and as the pivot for bird migration is emphasised. The national parks and their zoning are also covered as a conservation tool (FUCHS 1995). From the 7th to 10th grades, selected areas of conflict are dealt with. "Der Aralsee - vom Meer zur Wüste", "Ökologisches Konfliktfeld - Europas Meere", "Euromodell Rhein?", "Wasser in Bochum", (FUCHS 1996, 1997), "Marine Ökosysteme und zukunftsfähige Fischereiwirtschaft". "Wasserversorgung und Wasserentsorgung als Eingriff in die Landschaft?" und "Wirtschaftsförderung oder Naturschutz im Jade-Raum?" (BRAMEIER 1999).

2.2. Materials for Facilitators

Facilitators play a crucial role in both school and external education. The monthly magazines *Geographie und Schule*, *Praxis Geographie*, *Unterricht Biologie*, *Praxis Naturwissenschaften Biologie* and *Biologie in der Schule* (appears quarterly) are designed for teachers in ordinary schools, but may also be used for extra-school education purposes. The last three years were selected for analysis using the keyword method outlined above.

The magazines *Unterricht Biologie* and *Biologie in der Schule* had the most frequent articles (see Figure 10). Most themes concerning wetland wildlife were covered, e.g. benthic fauna in a lake, endangered eel stocks, white storks, mussels and measures for the protection of amphibians.

Figure 10: Biology and Geography Magazines for Teachers

(Number of Individual Articles in the Years 1998 - 2000 in absolute figures))

Theme	Geography and School	Geography in Practice	Teaching Biology	Biology in Schools	Natural Sciences in Practice Biology
Wet Biotopes	-	-	2	-	-
Waterways	-	-	-	1	-
Still Waterbodies	-	-	1	-	-
Wetland Flora and Fauna	-	-	10	16	1
Watten Sea/ Coastal Biotopes	2	-	-	-	-
Water as a Medium	-	3	1	-	-
Total Articles	2	3	14	17	1

Sources: BÖRSCH ET AL. (Ed.): *Geographie und Schule*: Köln

WESTERMANN SCHULBUCH-VERLAG (Ed.): *Praxis Geographie*. Braunschweig

PÄDAGOGISCHE ZEITSCHRIFTEN (Ed.): *Unterricht Biologie*. Seelze

PÄDAGOGISCHER ZEITSCHRIFTENVERLAG GmbH (Ed.): *Biologie in der Schule*. Berlin

GERHARDT-DIRCKSEN ET AL. (Ed.): *Praxis der Naturwissenschaften Biologie*. Köln.

In promoting their educational activities, some nature conservation organisations publish their own teaching materials for use in the classroom or for teacher events which take place outside school. For example, the Bavarian Association for the Protection of Birds (*Landesbund für Vogelschutz in Bayern* (LBV)) and the NABU publish a joint work and information pamphlet on *Wald, Wasser, Wiese* (woods, water, meadows) as part of the *Natürlich lernen* (Learning Naturally) series. The pamphlet contains information on habitats and their bioceonosis and also games and activities for excursions (LANDESBUND FÜR VOGELSCHUTZ O.J).

The DJV also offers a slide presentation on "domestic wildlife in the fields and on the shores" and a field guide to domestic waterfowl identification to be used as teaching materials for high school students.

As part of its campaign *Erlebeter Frühling* (Experiencing Spring), the Naturschutzjugend (NAJU) has put together material for school children which they distribute to elementary schools free of charge for use in the classroom (www.erlebter.fruehling.de). In the year 2000, typical Wetland Flora and Fauna species were investigated: downy birch, amphipods, water frog and grey heron. The campaign is promoted and financed by the Environment Ministry (BMU) and the Federal Environmental Agency (UBA).

Greenpeace Germany offers teaching materials for secondary level II entitled *Wasser. Mehr als ein Molekül* (Water, More Than Just a Molecule) (SLABY 1996). These involve an underlying knowledge and the use of the resource water. The text includes suggestions for practical experience.

Teaching modules and teaching materials may also be obtained from some of the nature conservation academies in the various *Länder*, e.g. Naturbegegnung in Heide und Moor (experiencing nature on the heaths and moors) from the Alfred Toepfer Nature Academy in Lower Saxony (www.nna.de).

The Academy for the Protection of Nature and Environment of North Rhine-Westphalia (NUA) uses its environment bus LUMBRICUS to support environment education in schools. Serving both as a classroom on wheels and as a mobile environment station, the bus is available to schools for habitat exploration – waterways being the most popular (www.lumbricus.nrw.de).

2.3. Project Days

Project days and project weeks are an important element of practice-oriented teaching and are integrated at all school levels. From the 4th grade on, open-air project days are ideal for nature exploration. The number of project days conducted by schools is not known, but if each ordinary school in Germany conducted one project week per year on the theme of wetlands, some 42,000 projects could take place (Section II.3).

The most popular tasks include exploration of waterways or ponds, adopting streams, helping to mow wet meadows, and digging ditches for the re-irrigation of meadows.

3. Facilitators

In addition to communication via media, the dissemination of information through facilitators plays an important role in promoting awareness among target groups and fostering nature-friendly actions. Facilitators are mainly actors at regional and local level and in Ramsar sites (see Section II.3. and 4).

The personal approach rests on several pillars:

- Professionally trained specialists (e.g. nature rangers in national parks)
- Volunteer members of nature conservation organisations
- Employees at information centres and extra-school education institutions (permanent employees, volunteers, young men performing compulsory community service, voluntary ecological year employees)
- Teachers in ordinary schools.

Studies on the total number of facilitators are not available, which leaves us dependent on estimates. As regards nature rangers, there are about 500 specialist employees and it is estimated that the nature conservation associations have around 5,000 volunteer excursion leaders. If we add an average of 4 employees at 500 environment centres and around 2,500 young men performing compulsory community service who are all familiar with tours, we have around 4,500 individuals. Assuming that at each of the 42,000 ordinary schools at least 2-3 teachers cover these themes, this makes for between 84,000 - 126,000 facilitators. In addition, there are the teaching staff at colleges of further education and universities, nursery school teachers, leaders of church-run youth groups or girl guides/boy scouts groups, freelance nature and tourist guides, etc.

This results an estimated total figure of at least 100,000 facilitators in Germany who spend a portion of their working and free time on communicating the themes covered by this study.

In relation to the number of inhabitants of the Federal Republic of Germany, around one per cent of the population is involved in the CEPA programme.

4. Public Awareness

Over the past ten years, a number of studies have been conducted on environmental awareness among the German population. The results of a study done in 2000 show that – following a downward trend in environment consciousness in the second half of the 90s – environment protection is again a talking point in society (BMU 2000). A large majority of people continue to see environment protection as an important, long-term political duty (94%). Only 6% of the population believe environment protection is "not so important" or "not important at all". What is remarkable is that environment protection is seen as "very important" in all age groups in the same way. Families with children show a much more positive attitude towards the environment as do other societal groups (partner households in the over 60 age group, older singles (see BMU 2000)).

Of the environmental policy-related areas of responsibility, water, soil and air pollution control meet with the greatest agreement (99%). This can be interpreted thus that people's ideas on environment protection are strongly related to the dangers to their personal health.

The availability of information on the environment and environment education is also seen as important. It is worth noting that over 80% of the population find the promotion of improved environment protection in developing countries important (BMU 2000).

In relation to the topic of wetland conservation, what should be considered is the fact that people recognise and evaluate the problems of nature conservation differently to those of problems in environment protection. Studies conducted in the 90s confirm the continued high value placed on the societal task of nature conservation (IPOS 1994). Unfortunately, more recent nation-wide surveys no longer provide such evidence.

It is evident that respondents place lesser value on conservation of areas/reserves as on the conservation of water quality. Nature conservation problems are, in comparison, less personal and are considered more distant (KARGER & WIEDEMANN 1994). For this reason, motivation for personal involvement and nature-friendly behaviour is generally lower.

Despite this differentiation, public awareness of the conservation of nature and the environment as being fundamental to human survival is very strong and at a high level in all sections of the population.

5. Tools Analysis

Based on the proposals of the CEPA Outreach Programme 1999-2002, the following can be documented as regards activities in Germany:

- The actors have adapted their tools, measures and campaigns to the framework conditions and requirements of contemporary information and public relations work in a pluralist society.
- The measures for promoting public awareness of wetlands and water pollution control are anchored in broader communication strategies implemented by the actors to tackle diverse problems and areas of responsibility.
- At around 10-25%, media and activities on the complex topics of wetlands and water have a relatively high status in relation to the total scope of the communications tools available in nature conservation.
- The different types of communications media are used as appropriate to specific target groups; all CEPA programme target groups can be reached with the available media, particularly conflict-bearing societal groups like farmers, water management administrations, sportspeople, among others.
- Apart from print media, which have made up the main portion of the tools in the past ten years, contemporary digital media, particularly television and the Internet, are gaining more and more in importance.
- The creative packaging used by the various media is adapted to the various target groups and is generally implemented in a professional manner using modern technologies.

- The content quality of the material is appropriate to the specific target group, ranging from detailed scientific papers on specific phenomena to a more general presentation of subjects for the interested layperson.
- The contents and topics presented are highly complex, strongly differentiated and multi-faceted. Material is available on all types of questions on the complexities of the topic – be it of a global or local nature, descriptions of complex ecosystems or the classification of Wetland Flora and Fauna species, be it on water management in Germany or a conscious attitude towards water usage in private households.
- The media are not only used to communicate knowledge, but often to call for cooperation in conservation actions and for nature-friendly attitudes as regards sustainable use of resources. These types of action are the prime medium in campaigns for children and young people.
- Adventure-oriented offerings for nature experience – especially for children – are a focal element in communicating information about wetlands.
- Providing information on the topic area is firmly anchored in all ordinary schools and included in suitable form in lessons and outdoor, using other methods such as project weeks, class outings, and school trips.
- With at least 100,000 facilitators – around one per cent of the population – wide propagation of the topic is possible throughout the various sections of the German population.

The proposals and comments of the CEPA Outreach Programme 1999 - 2002 as regards the tools, measures and actions to be used have largely been implemented in Germany.

IV. Recommendations for Priority Actions

Starting with the Ramsar Convention and the European Council's Wetlands Campaign, wetland conservation was the focal point of nature conservation policy in the 70s, 80s and 90s of the twentieth century. Considering that Germany has been dealing with this issue for some 25 - 30 years, the following facts deserve to be documented:

- **High Level of Awareness and Acceptance Achieved**

Public awareness of the preservation of nature and the environment as a fundamental element of human survival is both strong and at a high level in all sections of the population. Water conservation receives particular recognition.

The need for wetland conservation is accepted throughout society. Numerous wetlands are now protected, partially renaturalised or have been rehabilitated. This great achievement is attributable to the actors involved and the tools, measures and actions used.

- **Diffusion Evident in all Sections of Society**

The idea of the Ramsar Convention – the preservation of the various types of wetlands across the globe in their geographical diffusion and ecological uniqueness as a fundamental element of human survival and that of the diverse community of plant and wildlife species – has infiltrated all levels of society.

Wetland conservation has become self-propagating. However, this is not sufficient to protect wetlands against negative ecological changes. In order to achieve this, in the future we need more intensified protection measures.

- **Extensive Readiness to Act**

The large number of actors involved shows an extensive and great readiness to act throughout the various groups of society. Those involved make considerable financial, organisational and personal contributions to improving the situation as regards wetlands in Germany.

- **Not All Problems Have Been Solved**

In some cases – such as extension or conservation of the Elbe and the Donau, or in regional wetland conservation such as extensive wet meadow use – there remain considerable social objective conflicts. The existing CEPA programme provides a good base on which to continue the activities in an objective-oriented manner.

• Eliminate Existing Deficits and Implement Alignment

The Ramsar Convention CEPA Programme 1999-2002 should be used as an opportunity to eliminate existing deficits in communicative areas of responsibility and to align activities to the social challenges of the future. The following are considered priority measures and are directed at Federal, *Länder* and nature conservation associations:

1. The German Federal Ministry for the Environment should further develop its coordinating function.
2. The Federal Agency for Nature Conservation should produce a web site on the Ramsar Convention and present Germany's twenty-nine wetlands of international importance on its own web site (map of the wetlands of international importance, facts file, links to the various *Länder*, stations, etc.).
3. The Federal Government and the *Länder* should place greater focus the **international aspect** of their communicative work and thus highlight **Germany's contribution to the globalisation of wetland conservation** (national activities and cooperation in international development).
4. The Federal Government and the *Länder* should tighten the network of area managers of the 31 Ramsar sites. This includes a more intensive exchange of information, the development of a coordinated communication strategy and boosting the managers' identity as part of the Ramsar network.
5. Personal communication through facilitators needs to be strengthened within the wetlands of international importance to foster local acceptance and to alleviate specific areas of conflict in the Ramsar sites (e.g. wet meadow conservation or tourism). The existing deficits in qualified management personnel in around half of the Ramsar sites should be reduced – students of nature and landscape management further training courses make ideal candidates.

V. Annex

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4. Web Sites

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www.amazon.de	Internet Händler [Internet Trader]
www.bafg.de	Bundesanstalt für Gewässerkunde, Koblenz [Federal Institute for Hydrology]
www.bfn.de	Bundesamt für Naturschutz, Bonn [Federal Agency for Nature Conservation]
www.bmu.de	Bundesumweltministerium, Berlin [Federal Environment Ministry]
www.bund.net	BUND e.V., Berlin [Friends of the Earth]
www.bund-naturschutz.de	Bund Naturschutz in Bayern e.V. [BN], Nürnberg [Society for the Protection of Nature in Bavaria]
www.dbu.de	Deutsche Bundesstiftung Umwelt, Osnabrück [Federal Environment Foundation]
www.ems.guj.de	Gruner + Jahr Electronic Media AdSales
www.erlebter-fruehling.de	Internetseite der Kampagne der NAJU [Youth For Nature Experiencing Spring Campaign]
www.geo.de	Geo-Magazin [GEO magazine]
www.geoline.de	Kinderseite des Magazins Geo [GEO kid's pages]
www.greenpeace.de	Greenpeace Deutschland e.V., Hamburg [Greenpeace Germany]
www.iksr.org	Internationale Kommission zum Schutz des Rheins vor Verunreinigung (IKSR), Koblenz [International Commission for the Protection of the Rhine (ICPR)]
IKSE (siehe www.bafg.de/html/ikse)	Internationale Kommission zum Schutz der Elbe [International Committee for the Protection of the Elbe (ICPE)]
www.jagd-online.de	Deutscher Jagdschutz-Verband e.V. (DJV)
www.jagdnetz.de	Deutscher Jagdschutz-Verband e.V. (DJV)
www.kanu.de	Deutscher Kanu-Verband e.V. [DKV], Duisburg [German Canoe Federation]
www.lbv.de	Landesbund für Vogelschutz in Bayern e.V. [Bavarian Bird Protection Association]
www.lernort-natur.de	Deutscher Jagdschutz-Verband e.V. (DJV)
www.lumbricus.nrw.de	Rollendes Klassenzimmer der Natur- und Umwelt-Akademie NRW [NUA] [Mobile Classroom of the Academy for Nature and Environment North Rhine-Westphalia]
www.nabu.de	Naturschutzbund Deutschland e.V. [NABU], Bonn [German Federation for the Conservation of Nature]
www.nabu-nrw.de	Naturschutzbund Landesverband Nordrhein-Westfalen [NABU North Rhine-Westphalia]
www.naju.de	Naturschutzjugend des NABU [NABU Youth for Nature]
www.naju.de/rudi/	Rudi Rotbein Club für Kinder [NABU Youth Kid's Club]
www.naturdetektive.de	Naturdetektive (Deutsche Clearing-House Mechanismus des BMU, Schulen ans Netz e.V., DigiVision GbR) [Nature

www.newsroom.de/djv	Detectives]
www.nua.nrw.de	Deutscher Jagdschutz-Verband e.V. (DJV)
	Natur- und Umweltschutz Akademie NRW [NUA]
	[Academy for Nature and Environment in the State of North Rhine-Westphalia]
www.nna.de	Alfred Toepfer Akademie für Naturschutz [NNA] [Alfred Toepfer Academy for Nature, Schleswig-Holstein]
www.oekomedia-institut.de	Ökimedia Institut für ökologische Medienarbeit e.V.
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www.spiegel.de	Der Spiegel Online [on-line version of the political magazine Der Spiegel]
www.umweltbildung.de	Arbeitsgemeinschaft Natur- und Umweltbildung e.V.
	[ANU], Bustedt [Working Group on Nature and Environment]
www.umweltbundesamt.de	Umweltbundesamt, Berlin [Federal Environment Ministry]
www.wdr.de/archiv/	Westdeutscher Rundfunk, Köln [WDR - Public TV & Radio Broadcaster]
www.wissenschaftsladen-hannover.de	Wissenschaftsladen Hannover e.V., Hannover [Hannover Science Shop]
www.wwf.de	Umweltstiftung World Wide Fund for Nature, Deutschland [WWF Germany]

5. Abbreviations

- aid = Auswertungs- und Informationsdienst für Ernährung, Landwirtschaft und Forsten e.V. [Evaluation and Information Service for Food, Agriculture and Forestry]
- ANL = Bayerische Akademie für Naturschutz und Landschaftspflege [Academy for Nature Conservation and Landscape Management in the State of Bavaria]
- ANU = Arbeitsgemeinschaft Natur- und Umweltbildung e.V. [Working Group on Nature and Environment]
- BANU = Bundesweiter Arbeitskreis der staatlich getragenen Bildungsstätten im Natur- und Umweltschutz [National Working Group of State Sponsored Academies for Nature and Environment Conservation]
- BfG = Bundesanstalt für Gewässerkunde [Federal Institute for Hydrology]
- BfN = Bundesamt für Naturschutz [Federal Agency for Nature Conservation]
- bfub = Bundesverband für Umweltberatung [Federal Association for Environment Consultancy]
- BMU = Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit [Federal Ministry for Environment, Nature Conservation and Nuclear Safety]
- BN = Bund Naturschutz in Bayern e.V. [Society for the Protection of Nature in Bavaria]
- BUND = Bund für Umwelt- und Naturschutz Deutschland e.V. [Friends of the Earth Germany]
- CEPA = Communication, Education and Public Awareness as defined by the Ramsar Convention
- DBU = Deutsche Bundesstiftung Umwelt [Federal Environment Foundation]
- DDA = Dachverband Deutscher Avifaunisten e.V. [Umbrella Association of German Avifaunists]
- DJV = Deutscher Jagdschutzverband e.V. [German Association for Shooting and Conservation]
- DKV = Deutscher Kanu-Verband e.V. [German Canoe Federation]
- DNR = Deutsche Naturschutzring e.V. [**German League for Nature Conservation and Environmental Protection**]
- IKSE = Internationale Kommission zum Schutz der Elbe [International Commission for the Protection of the Elbe]
- IKSR = Internationale Kommission zum Schutz des Rheins vor Verunreinigung [International Commission for the Protection of the Rhine]
- IPOS = Institut für Praxisorientierte Sozialforschung [Institute for Practical Social Research]
- LBV = Landesbund für Vogelschutz in Bayern e.V. [Bavarian Bird Protection Association]
- LLN = Landeslehrstätte für Naturschutz und Landschaftspflege, Brandenburg [Academy for Nature Conservation and Landscape Management, Brandenburg]
- NABU = Naturschutzbund Deutschland e.V. [German Federation for the Conservation of Nature]
- NAJU = Naturschutzjugend im NABU [NABU Youth for Nature]
- NNA = Alfred Toepfer Akademie für Naturschutz [Alfred Toepfer Nature Academy]
- NUA = Natur- und Umweltschutz Akademie NRW [Academy for the Protection of Nature and Environment North Rhein-Westphalia]
- ÖKOMEDIA-INSTITUT = Institut für ökologische Medienarbeit e. V [Institute for Ecological Media Work]
- UBA = Umweltbundesamt [Federal Environment Agency]
- WWF = Umweltstiftung World Wide Fund For Nature, Deutschland
- ZWFD = Zentrale für Wasservogelforschung und Feuchtgebietsschutz in Deutschland e.V. [Centre for Aquatic Bird Research and Wetland Conservation in Germany]