

ENVIRONMENT CONFLICT AND COOPERATION

How can sustainable development and

This exhibition was conceived and realized as a touring exhibition at the initiative of the German Federal Foreign Ministry and is the result of collaboration among Adelphi Research, Adelphi Consult and Weltformat.Design. It will be displayed around the world in the coming years.

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ENVIRONMENT CONFLICT AND COOPERATION

environmental cooperation contribute to stability and peace?

Why do changes in our natural environmental threaten human security?

**3 RESOURCES
ACCESS
LIFE**

**6 RESOURCES
FINANCE
VIOLENCE**

**11 CLIMATE
CHANGE
SECURITY**

7 Democratic Republic of the Congo
The misery of resource richness

8 Bougainville
The right to land and natural resources
Angola: Oil versus diamonds

9 Liberia: Diamonds, timber and the
price of war

12 Bangladesh: Constantly on the run
from water

13 The Horn of Africa
The vicious circle of drought

14 Central America
Destruction wrought by
Hurricane Mitch

INTRODUCTION

- 1 Environment: From the cause of conflict to a factor in conflict prevention and peace-building
- 2 What are conflicts, and what types of conflicts does this exhibition explore?

Does the exploitation of natural resources lead to violent conflict?

16 WATER CONFLICTS

- 17 National and local conflicts
- 18 Will wars be waged over water in future?
- 19 Dams as a source of conflict
- 20 Water is a matter of life and death

22 ENVIROMENTAL PEACEMAKING

- 23 Peace Parks – sustainability as a precondition for peace and development
- 24 The Environment and Security Initiative” – Turning Conflict into Cooperation
- 26 Cooperation on international rivers
- 27 Corporate responsibility and promotion of renewable energy
- 28 Reducing emissions from large consumers
- 29 Maintaining social standards

31 CONFLICT PREVENTION AND RESOLUTION

**ENVIRONMENT
CONFLICT AND
COOPERATION**

This exhibition has an initial showing period of two years. Within this period, you can book this exhibition and present it at your organisation or company.

The exhibition 'Environment, Conflict and Cooperation' is conceptualized as a touring exhibition and is therefore constructed in a modular way, both in content and physical structure. According to your multinationality, different language options are compiled. The exhibition system is simple and quick to build up and take down, weighs little and is packed in a way that facilitates transport.

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For pictures of the exhibition and further information

www.ecc-exhibition.org

Environment: From the cause of conflict to a factor in conflict prevention and peace-building

Environmental degradation and the growing scarcity of natural resources are appearing increasingly on the international political agenda as the causes of crisis and conflict. The background is a complex one, and it is rarely the case that these factors are the sole causes of crisis and violent conflict. Rather, environmental degradation and the growing scarcity of natural resources most often aggravate existing development crises and poverty, lead to migration and expulsion, and can thus contribute indirectly to the emergence of violent conflicts.

Natural resources provide livelihoods and homes for hundreds of millions of people in the developing world and are an elementary part of the daily struggle for survival. Therefore, the destruction of those life-sustaining natural resources puts people's personal security at risk. Viewed in this way, security should no longer be understood as a purely military concept limited to the defence of territorial integrity: Today, the term security must be expanded to include political, economic, environmental, and social stability.

On the other hand, the sustainable use of natural resources and joint efforts to protect the environment across national borders and social divisions can contribute to conflict prevention and peace-building. For example, the predictions of future wars over access to water have thus far failed to come true. On the contrary, various forms of cross-border water cooperation are contributing to stability and peace in regions of latent conflict. This contribution also applies to other areas of environmental policy, as this exhibition will demonstrate.

What are conflicts, and what types of conflict does this exhibition explore?

The majority of violent conflicts are civil wars or other forms of internal violence. Access to and overuse of natural resources – compounded by environmental degradation – often play a key role in such conflicts. The reasons for violent conflicts are diverse. They often stem from a lack of democratic structures and mechanisms for non-violent conflict resolution, absence of the rule of law, destruction of social and cultural identity, and disregard for human rights. However, economic and social inequality and population growth are also contributory factors to conflict. Violent conflict can in return break down social structures and national order – it can hinder development efforts and poverty reduction.

Yet conflict is also an integral part of co-existence within society. In the context of opinion-forming and decision-making processes, conflict presents an opportunity for cooperation between citizens and between countries. If resolved peacefully, conflict provides the potential for positive change.

This exhibition highlights the various impacts of environmental degradation and the growing scarcity of natural resources: as a threat to human security and economic and political stability, as a cause of tensions and conflicts between social and political groups, and as a cause of violent conflicts.

However, it is also one of the focuses of this exhibition to present the ways and means of environmental cooperation as an instrument of conflict prevention and peace-building.

RESOURCES

Direct access to natural resources such as water, land, forests and minerals ensures the survival of millions of people in the developing world.

The unequal distribution of those resources – or their overuse, exploitation or degradation – poses a threat to those people's livelihood.

ACCESS

LIFE



Over one billion people – one-sixth of the world’s population – lack access to safe water.

13 million people worldwide dig, hammer or pan for mineral resources using the most basic tools or their bare hands. The products of their labour – smallest amounts of raw materials such as silver, gold or diamonds – secure these people a minimal existence.

Three-quarters of the world’s extreme poor live in rural areas. They largely depend on agriculture for a living.

For 240 million poor people who live in wooded areas, the forest directly contributes to reducing extreme poverty and hunger. It provides them with food, water, firewood, building materials and shelter.

Some 800 million people suffer from chronic malnutrition. Two billion people – one-third of the world’s population – have an insufficient supply of nutritious food.

Further information

The *United Nations Development Programme* (UNDP) publishes annually the acclaimed Human Development Report.
<http://hdr.undp.org>

The *World Water Development Report* (2003) of the United Nations gives detailed information on the status of the world's fresh water reserves. www.unesco.org/water

The *Center for International Forestry Research* (CIFOR) publishes comprehensive information on the significance of forests for livelihoods. www.cifor.cgiar.org

The *Communities and Small-Scale Mining* (CASM) knowledge centre aims to reduce poverty by supporting integrated sustainable development of communities affected by or involved in artisanal and small-scale mining in developing countries.
www.casmsite.org

The *Food and Agriculture Organization of the United Nations* (FAO) hosts a wealth of information and data on its websites on agriculture www.fao.org/ag/ and forestry www.fao.org/forestry/ while an Informal Working Group on Participatory Approaches and Methods works on supporting sustainable livelihoods and food security www.fao.org/participation/

The *UN World Food Programme* is the food aid arm of the UN and supplies food and logistics to meet emergency needs and support economic and social development. It works to put hunger at the centre of the international agenda, promoting policies, strategies and operations that directly benefit the poor and hungry.
www.wfp.org/index

FINANCE

How is your laptop related to civil war, and your jewellery to child soldiers?

VIOLENCE

Valuable natural resources – such as gold, diamonds, high-grade timber and oil – are often used to finance wars, prolonging them and exacerbating their destructive impact. Disputes over the control of such natural resources can also be a source of violent conflict.

Financing wars with natural resources is closely linked to corruption, arms trading, despotism and human rights abuses. In addition to the human suffering brought about by war and violence, the inhabitants and future generations of resource-rich developing countries are robbed of vital income.

RESOURCES

Democratic Republic of the Congo
The misery of resource richness



The 1994 genocide in Rwanda is followed by the outbreak of another war in the neighbouring Democratic Republic of Congo (formerly Zaire). Government troops and rebels from six neighbouring countries are involved in this conflict. The different groups are engaged in a struggle for control over the natural resources of eastern Congo, thereby aggravating existing ethnic conflicts.

Rebels and government troops from neighbouring countries plunder raw materials and organise their own soldiers to extract minerals. They exact charges from that portion of the local population engaged in artisanal and small-scale mining, and they subject the region's inhabitants – including children – to forced labour.

The governments of neighbouring countries as well as foreign companies with mining rights exploit the conflict for their own lucrative ends. Apart from gold, high grade timber, diamonds and uranium, the Congo has the world's largest reserves of columbite-tantalite (coltan). Coltan is used to produce heatresistant semiconductors that are used in chips for mobile microelectronic technologies, such as laptops, mobile phones, jet engines and rockets. After a United Nations report brings to light the looting of natural resources in the Congo, prominent foreign companies refuse to use raw materials from the country.

But the local population still suffers tremendously from the consequences of the armed conflict. Murder, systematic rape, migration and expulsion trigger a humanitarian crisis of gigantic proportions. The war in the Congo is the bloodiest since the Second World War and has claimed the lives of over 3.8 million people between 1998 and 2004. Despite a peace agreement in 2002, the humanitarian crisis continues to claim large numbers of victims. After the first free and democratic elections in 2006, there is hope that the Congolese resource richness will drive peace and development instead of war.

Bougainville

The right to land and natural resources



On Bougainville, an island in the South Pacific, a conflict over the exploitation of natural resources has been smouldering for decades. The Australian colonial power and later the government of Papua New Guinea sold the mining rights for Bougainville's minerals to international corporate groups without sufficiently involving or compensating the island's indigenous inhabitants.

The Panguna copper mine on Bougainville becomes the biggest in the world. While it generates US \$ 500 million every year for the government and foreign investors, the island's inhabitants suffer from the serious environmental and social consequences of mining. The chemicals used in mining contaminate the land and water and force the population to migrate.

In 1989, in the wake of unsuccessful negotiations, independence fighters stage violent attacks on the mine, which is consequently closed. The central government responds with an air and water blockade of the island and suppresses the revolt. Before a ceasefire in 1998, 20,000 people die on Bougainville as a result of the sanctions and army brutality

Angola

Oil versus diamonds



Angola is the world's fifth largest producer of non-industrial diamonds and the second biggest producer of oil in southern Africa. Since independence in 1975, civil wars have continued to rage in Angola. During the latest war from 1997 to 2002, UNITA rebels fought against the government.

The rebels finance their cause through the sale of diamonds, which still generates US \$, 300 million per year after the tightening of international sanctions at the end of the 1990s. The Angolan government, in turn, finances the war by selling exploitation rights to international oil

corporations. The income from crude oil amounts to 88 percent of Angola's total revenue.

However, more than one-quarter of the public revenue vanishes from the public treasury owing to corruption – while 3.7 million Angolans are left dependent on humanitarian aid. Despite the rich deposits of oil, diamonds, gold and high grade timber, the majority of the population still lives below the poverty line.

Liberia

Diamonds, timber and the price of war



The Liberian rebel leader and subsequent president Charles Taylor is one of the men behind the bloody civil war in Sierra Leone. He receives diamonds in return for supporting the rebels in that country. Europe, North America and Asia are the main customers for these "blood diamonds," with which Taylor finances his own civil war in Liberia. After 2001, international sanctions make it more difficult for President Taylor to trade with diamonds.

In response, Taylor turns to the rich timber resources in his own country to consolidate his dominance. One in every four Liberian corporations holding government logging concessions has direct links to the arms trade. The same channels used to export timber are also employed to smuggle weapons into the country and to circumvent the United Nations' 2001 arms embargo against Liberia. At the same time, considerable sums from the enormous profits generated by the private timber trade find their way back into the regime's pocket in the form of protection money and bribes. By this means, despite the embargo, Taylor is able to finance loyal sections of the military, which are also involved in grave human rights abuses and acts of violence.

In July 2003, the United Nations Security Council announces sanctions on the trade in timber from Liberia. Shortly thereafter, owing to increasing domestic and

international pressure, Taylor flees into exile. In 2004, the United Nations Security Council decides to confiscate Taylor's private assets, estimated to be worth around US\$ 100 million. This fortune stems largely from the illicit trade in natural resources and should now be put to good use in the reconstruction of the country.

Charles Taylor was arrested in 2006 and is awaiting his trial before the International Criminal Court in The Hague.

Ellen Johnson-Sirleaf, the Präsident of Liberia elected in 2006, cancelled all existing logging concessions and initiated reform of the forestry sector.

Further information

In *The Anatomy of Resource Wars* (2002), Michael Renner explains the relationship between natural resources and violent conflict by providing descriptions of specific cases and analyzing their dynamics. www.worldwatch.org/pubs/

Global Witness is working to expose the link between natural resource (oil, diamonds and timber) exploitation and human rights abuses. www.globalwitness.org

The final report (S/2002/1146) of the UN *Panel of Experts on the Illegal Exploitation of Natural Resources and Other Forms of Wealth of the Democratic Republic of the Congo* gives detailed insight in the extent and dynamics of illegal exploitation of natural resources in the DRC. www.un.org/Docs/sc/letters/2002/sglet02.htm

International Alert works to help build lasting peace in countries and communities affected or threatened by violent conflict, amongst others with their campaign on business and conflict, which highlights the extractive industries. www.international-alert.org

Ian Bannon and Paul Collier, the editors of *Natural Resources and Violent Conflict: Options and Actions* (2003), have collected articles, that examine the economics of the natural resources/violent conflict nexus by some of the leading authors in the field. www.worldbank.org

CLIMATE

CHANGE

Floods

Floods are the most frequent of all natural hazards. They also cause the greatest economic loss and claim the most lives. Nearly 2,000 floods occurred worldwide between 1990 and 2006, with Asia being the worst affected continent. A continuing rise in sea level, changes in rainfall or more frequent storms as a result of global warming will further exacerbate the social and economic impacts of flood.

Droughts

In contrast to the gradual process of desertification, droughts are disasters that occur suddenly because of a prolonged absence of rainfall. There have been more than 140 incidences of drought worldwide since 2000, often accompanied by considerable crop losses. If an affected region does not have sufficient food reserves and no relief efforts are forthcoming, a drought can result in catastrophic famines.

Storms

Storms take many different forms according to region. They may occur as tornadoes, winter storms or tropical cyclones. With wind speeds of up to 400 km/h, storms can develop incredibly destructive force and leave devastation in their wake. There were more than 1400 storms between 1990 and 2006, the majority in Asia and the Americas.

SECURITY

Constantly on the run from water



For centuries, Bangladesh has to cope almost every year with severe losses caused by natural disasters. Because of its low-lying coastline, Bangladesh is the country worst affected by floods. The Brahmaputra, Meghna, and Ganges rivers – all of which flow through the country – form the largest river system on Earth. The entire coastline in the delta region of these three rivers is often completely flooded.

Bangladesh is the most densely populated country in the world, with 133 million people living in an area approximately half the size of Italy. In 2002, over one half of its people are living below the poverty line. Three quarters of the population live as subsistence farmers. The country's rural population is adapted to life with floods, knowing that the mud spread over the fields by the high waters makes their land fertile.

However, even the adaptability of the rural population is overstretched by the growing scale of the flooding. In Bangladesh in the summer of 2004, an area the size of Switzerland is under water. A total of 747 people die in these floods, with millions having to flee the torrents of water and almost one half the population left homeless. Large numbers of people are forced to remain on higher lying ground for weeks on end. For many of the flood victims, there is neither clean drinking water nor food: The floods destroyed the crops and polluted the water sources.

If the sea level rises by one meter as a result of global warming – as is sometimes predicted – this change will have far-reaching consequences for the population: 15 million people permanently displaced by the floods would be turned into environmental refugees. The streams of refugees might give rise to new risks by contributing to ethnic and social tensions in refugee areas.

The Horn of Africa **The vicious circle of drought**



Between 2001 and 2004, the Horn of Africa is hit by persistent drought. One fifth of the population in the northern territories of Uganda, Kenya, and Tanzania as well as in Ethiopia and Eritrea suffer from acute undernourishment. The effects of the drought lead to a catastrophic vicious circle for these agriculture-based societies. The rainy season, which usually lasts for three months in this region, has a duration of only one month in 2002, too short for productive agriculture. Each additional year without rain made growing conditions in the Horn even worse.

There was virtually no harvest at all in Eritrea or Ethiopia in 2002. Stocks of grain rapidly run low; watering holes and springs hold barely any water for people and cattle. Families that normally make their livings from subsistence farming in the rural regions do not have anything to eat nor can they purchase agricultural products.

Because of the drought, the prices of the dwindling supplies of grain double, making the situation even worse. To be able to buy grain, farmers are forced to sell cattle. However, their animals – emaciated by the drought – fetch only one half of the normal market price. The longed for rain does not arrive until the end of 2004. The region's recovery will take many years.

A shortage of food is the biggest problem facing the Horn of Africa. Unstable political conditions, ongoing violent conflicts, and intense poverty make the situation still worse. With increasing global warming, droughts will occur more frequently in future; they will last longer and further aggravate the situation in the region.

Central America Destruction wrought by Hurricanes



In autumn 1998, Hurricane Mitch tears through Central America, leaving a path of destruction in its wake. Hurricane Mitch originates in the Caribbean Sea and its trail of destruction makes its way from Honduras through Guatemala, reaching the Gulf of Mexico at the beginning of November. The storm destroys 50 percent of the harvest and at least 70,000 houses in Honduras alone.

The tragic toll: more than 9,000 people dead and over 9,000 missing. More than 6,000 lives are lost in Honduras alone. One-quarter of the population in the region is directly affected by the disaster, with 500,000 people needing emergency shelters and over one million requiring evacuation. The economic loss is estimated at US \$ 5.5 billion.

In August 2005, Hurricane Katrina floods 80 percent of New Orleans with some parts more than six metres under water. More than 80 percent of New Orleans residents are evacuated; 1,833 people are killed, the economic losses are estimated at US \$ 125 billion, the largest damage ever recorded by a disaster.

The long-term consequences of Katrina are also devastating. One year later, only half of its 455,000 residents have returned. Some refer to the Katrina displacement as the first example of what may become a larger migration movement from the hurricane-prone coastal regions of the U.S. Southeast.

Further information

Security-related implications of global climate change are discussed by Nigel Purvis and Joshua Busby in *The Security Implications of Climate Change for the UN System* (2004), which was prepared as a background paper for the reform of the United Nations. www.un-globalsecurity.org/pdf/purvis_busby.pdf

The study entitled *Climate Change and Conflict* (2002), commissioned by the German Ministry for the Environment, contains on the one hand the results of a comprehensive examination of potential security-related implications of climate change for different regions, and on the other hand an assessment of conflict prevention possibilities entailed in international climate change processes. www.bmu.de/de/1024/js/download/b_broschuere_klimawandel_konflikte/

The report *An Abrupt Climate Change Scenario and Its Implications for United States National Security* (2003) by Peter Schwartz and Doug Randal, commissioned by the US Department of Defence, shows alarming security implications of an abrupt climate change scenario. www.gristmagazine.com/pdf/AbruptClimateChange2003.pdf

The Inter-Agency Secretariat of the International Strategy for Disaster Reduction (UN/ISDR) is the focal point in the UN System to promote links and synergies between, and the coordination of, disaster reduction activities in the socio-economic, humanitarian and development fields and serves as an international information clearinghouse. www.unisdr.org

The reinsurance company *Munich Re* conducts research and informs on loss or damage caused by natural catastrophes and on the probable effects of global climate change. www.munichre.com/

Supported by different international organisations, the *Humanitarian Early Warning Service* (HEWS) offers early warning, up-to-date forecasts and reports on droughts, floods, tropical storms and earthquakes. www.hewsweb.org

WATER

Water is an indispensable resource – both for the health of humans and the environment, and also for economic development. For thousands of years, people have been rivals for scarce water resources. Only around one percent of the Earth’s water supply is fresh water readily available for human use. In addition, that one percent is distributed very unevenly in terms of geography and the seasons.

Households, agriculture, industry, power generation, and the Earth’s ecosystems all need an adequate quantity and quality of water, and they need it at the right time. The interests of rival users have to be weighed against each other. Unless a solution is reached that is acceptable to all parties concerned, there is potential for dispute or even violent conflict.

Water flows – whether in rivers or as groundwater. Therefore, the impacts of water use and water pollution can also be seen in distant places and across national borders. Conflicts over the use of water thus arise not only at a local level, but also between regions and countries.

CONFLICTS

National and local conflicts



Different social groups compete for water resources at the national and local level. Disputes over water use have on many occasions led to violent clashes. However, since water is seldom the sole reason for violence, such conflicts have to be viewed in a political, ethnic, and religious context.

Conflict between federal states within the same country

The Cauvery River in India has long been a source of dispute between the downstream state of Tamil Nadu and the upstream state of Karnataka. People from both states use the river's water for agricultural irrigation. When, in 1991, the two federal states refuse to recognize a water tribunal's arbitration decision about allocation of water from the Cauvery, clashes – at times with fatal consequences – break out along the river.

Conflict between rural and urban use

In July 2000, on the lower reaches of the Yellow River in the Chinese province of Shandong, thousands of farmers protest after the run-off from a reservoir is shut off. While the farmers rely on this water to irrigate their fields, the authorities want to make it available for urban and industrial use. Lives are lost during the brutal suppression of the protests by the police.

Conflict between ethnic groups

In January 2005 in Kenya, the water of the Ewaso Kedong River becomes the trigger for violent conflicts between Massai and Kikuyu. The Massai, nomadic herdsman, accuse the sedentary Kikuyu farmers of drawing too much water from the river. Several people are killed in the clashes, and thousands flee from the area.

Conflict over water supply

In February 2000, citizens of the Bolivian city of Cochabamba go on the warpath when the price of water increases dramatically following the privatization of the municipal water supply. The protests bring the city to a standstill for several days and spreads to other parts of Bolivia. In April, the Bolivian government declares a state of emergency and dispatches the army to Cochabamba. In the subsequent unrest, one person dies and over 100 people are injured. The protests only subside when the government puts the local administration back in charge of the water supply.



Will wars be waged over water in future?

There are 263 river basins worldwide that are shared by two or more countries. In such transboundary river basins, disputes over water use often arise between downstream and upstream countries. In view of the increasing scarcity of water and the large number of transboundary rivers, politicians and the media warn loudly of impending “water wars”.

In a few river basins, neighbouring states have actually threatened each another with military force – for example, on the Euphrates and the Nile Rivers. However, historical records show that water disputes alone have never led to international war. On the contrary, even countries with hostile relations (such as India and Pakistan or Israel and Jordan) have either found mutually acceptable solutions to conflicts over water or are in the process of negotiating cooperation agreements.

Yet even without the danger of international water wars, conflicts over water remain a problem that still needs to be taken seriously for several reasons. On the one hand, negotiations on the protection and use of international water resources frequently draw out over a number of decades. And while the governments of neighbouring states struggle to find mutually acceptable solutions, the water resources in dispute are often not used in a sustainable manner – to the detriment of both population and ecosystems in the affected river basin. On the other hand, disputes over water can put strain on general political relations, aggravate international tensions, and therefore make it more difficult to reach agreement in other areas of conflict.

Dams as a source of conflict



Nationally and internationally, large infrastructure projects play an important role in water-related conflicts. Rivers and other watercourses are subjected to drastic change as a result of dams and other major infrastructure projects. Rapid change of the watercourse is one of the fundamental factors that heighten the potential for conflict between countries bordering on international waters. Moreover, the construction of dams often means that entire human settlements have to relocate. People are forced to leave their homes while their cultural heritage sinks beneath the water.

National protest against a dam project in China

In November 2004, in the Chinese province of Sichuan, almost 50,000 farmers protest against the Pubugou dam project. The reason for the protests is the flooding of inhabited areas because of the dam: Up to 100,000 people are to be moved out of the river basin into less fertile mountain regions. The protesters consider the compensation they are offered in return for their forced resettlement inadequate. The Chinese government mobilizes soldiers and policemen, which spurs violent unrest.

International protest against a dam project on the Euphrates

In 1974, Iraq threatens to destroy the Tabqa Dam in Syria and deploys troops along the border between the two countries. Iraq maintains that the dam would unacceptably reduce the water flow of the Euphrates into Iraq. The confrontation is only resolved when Saudi Arabia steps in as a mediator and Syria eventually allows more water to flow into Iraq. However, dams remain a contentious issue in the Euphrates basin. Major dam projects, especially those in Turkey, lead to protests from the downstream countries of Syria and Iraq.

Water is a matter of life and death

Clean drinking water is essential for life. Water also plays a vital role in ensuring a minimum level of hygiene. If people do not have access to sufficiently clean water, the result is the spread of disease, whether through drinking contaminated water or from a lack of hygiene. The most common illnesses transmitted in this manner are diarrhoea, trachoma and worm infections.

- 6,000 children die every day from the consequences of illnesses caused by insufficient access to clean water.
- In the past 10 years, more children have died from diarrhoea than all the lives lost in armed conflict since World War II.
- The risk of diarrhoea can be reduced by 35 percent just by hand washing with soap.
- About 50 percent of people in the developing world have only polluted water available to them, 49 percent have no access to basic sanitation.

Further information

In chapter 5 *Managing Water Conflict and Cooperation* of the State of the World 2005 report published by the Worldwatch Institute, Aaron T. Wolf, Annika Kramer, Alexander Carius and Geoffrey D. Dabelko present key issues in past and future water-related conflicts, different levels of conflict and approaches to their transformation www.worldwatch.org/pubs/sow

Peter H. Gleick has compiled the water conflicts of the last 5,000 years in his *Water Conflict Chronology*.
www.worldwater.org/conflict.htm

The World Health Organisation aims to reduce water-related disease and optimize the health benefits of sustainable water management with its programme *Water, Sanitation and Health*.
www.who.int/water_sanitation_health/en/

Leif Ohlsson analyzes how water is linked to conflict and points out the importance of tools used to manage water scarcity in Chapter 6 *Water, conflict, and social resources scarcity: The concept on trial* of his 1999 book *Environment, Scarcity, and Conflict*. www.padrigu.gu.se/ohlsson/files/ESC.html.

The *Transboundary Freshwater Dispute Database* offers information and maps to all transboundary water basins as well as studies to water conflict and water cooperation.
www.transboundarywaters.orst.edu

ENVIROMENTAL

Environmental problems know no political boundaries or social divisions. Solving these problems therefore requires collective efforts in the area of environmental protection. Away from the polarizations of economic and political relations, environmental cooperation can contribute to building trust, to initiating dialogue and to fostering the creation of a regional identity based on the shared use of natural resources. Peace-building through environmental cooperation creates a positive political framework for cooperation and reduces the likelihood of open conflict between countries and social groups.

Environmental cooperation and environmental protection can contribute to peace-building in different ways. One approach is to resolve the environmental causes of conflicts. A second approach is aimed at conflicts that are not based on environmental problems. Here, common environmental challenges can contribute to conflict resolution between the parties by replacing their mistrust, suspicion, and diverging interests with a shared knowledge base and common goals. When other diplomatic approaches fail, environmental cooperation is often the only opportunity for political dialogue between the conflict parties. A third approach to environmental peace-building is based on sustainable development as a precondition for enduring peace.

The extent to which environmental cooperation is conducive to peace-building depends on the specific form of cooperation and on whether environmental cooperation evolves over the long term into a broader social and political dialogue.

PEACEMAKING

Peace Parks – sustainability as a precondition for peace and development



The harmonious development of society, business and the environment represents a challenge for all of us in today's era of globalization. Our commitment is particularly important to developing regions, which are faced with poverty, political instability, insufficient educational opportunities and poor environmental protection practices.

The Peace Parks Foundation is meeting this challenge in Southern Africa – by establishing Transfrontier Conservation Areas, so-called peace parks. The Foundation was founded in 1997 by Anton Rupert, President of the South-African branch of the World Wildlife Fund, Nelson Mandela, former President of South Africa and Prince Bernhard of the Netherlands.

Aims of the Peace Parks:

- Improve the living conditions for people and animals, which have suffered from artificial frontiers
- Preserve the environment and biological diversity
- Create jobs and training opportunities and build sustainable economic development
- Ensure peace through international cooperation

The first Peace Park, the Kgalagadi Transfrontier Park in Botswana and South Africa, was opened in May 2000. Meanwhile, nine Peace Parks are supported by the Peace Parks Foundation. Additional parks with a total surface of 120 million hectares are currently being planned.

Education and employment are drivers of economic and social stability.

In addition, the Peace Parks Foundation and Deutsche Bank cooperate to support the Southern African Wildlife

College. More than 3,000 students from 20 African countries have already completed their training. This includes the first 35 women game rangers in Africa. The second focus is the support of the Southern African Tourism College in Graaff Reinet. This college offers management courses for guest houses and game lodges in the Peace Parks.



Further information

Hans Michael Hölz
Group Compliance Officer for the Sustainability Management
System Deutsche Bank
www.umwelt.deutsche-bank.de/en (see 'Sustainable')

The "Environment and Security Initiative" – Turning Conflict into Cooperation



The Environment and Security Initiative – Turning Conflict into Cooperation Environmental sources of human insecurity are complex and multifaceted. Acknowledging this fact, four international organizations with complementary mandates, expertise, and networks – the Organization for Security and Cooperation in Europe (OSCE); United Nations Environment Programme (UNEP); United Nations Development Programme (UNDP); and the North Atlantic Treaty Organisation (NATO) – joined to form the Environment and Security (ENVSEC) Initiative.

The initiative's aim is to promote peace and stability through sustainable development and environmental cooperation. The Initiative's activities initially focus on South Eastern Europe, Central Asia, and the Southern Caucasus, and address three areas:

- Vulnerability assessment, early warning, and monitoring of areas "at risk"
- Policy development and implementation
- Institutional development, capacity building, and advocacy.

For the vulnerability assessment, ENVSEC organizes consultations and dialogues that help identify and map situations where environmental problems threaten to generate tensions or offer opportunities for synergies – among communities, countries, or regions. In a second step, these priority areas are analysed in more detail to help develop targeted projects. Based on the assessment and in consultation with national governments, ENVSEC generates an agenda of priority environmental investments that also promote peace and human security.

This process has already led to diverse activities, which are carried out by the Initiative, governments, partner organizations and development cooperation institutions. Examples include projects to foster biodiversity conservation; promote cooperation in shared water basins (Sava, Tisza, Prespa); conduct training courses on ENVSEC topics for journalists; support the development of Aarhus centres (e.g. in the Ferghana Valley); and visualize and communicate environmental concerns related to human security to a broad public and decision makers through maps, reports and websites.

For further information on this initiative and all their projects please refer on the website **www.envsec.org**.

Cooperation on international rivers



In the course of its history, humankind has devised many different ways of coping with water scarcity and cooperating in the management of water resources. Even though disputes frequently arise between different water users, the historical record shows that such disputes are usually resolved by peaceful means – even where there is hostility between the countries concerned, and even though actual conflicts may be sparked off at the same time for unrelated reasons.

Even some of the world's most bitterly hostile neighbouring countries have entered into agreements on the use of common water resources. The negotiations are complex and often protracted, but the joint institutions that are eventually put in place often prove surprisingly resilient despite the highly strained political relations between the countries involved, for example the Indus River Commission that survived two major wars between India and Pakistan.

Since countries that border on international waters go to the trouble of engaging in difficult, decades-long negotiations in order to profit from the joint development of water resources, cooperation in the management of common water resources provides a particularly promising starting point for peace-building.

In regions of political unrest, water is frequently an essential element in regional development strategies aimed at indirectly helping to prevent conflict. In Southern Africa, for example, where a series of civil wars still raged in the 1970s and 1980s, transboundary water cooperation presented an important basis for today's broader regional cooperation. All ten countries that border the Nile River are currently involved in negotiations on the development of the Nile Basin – despite the sometimes fiercely warlike rhetoric that marks political relations between upstream and downstream countries.

Corporate responsibility and promotion of renewable energy

A diversified, decentralized and sustainable energy supply decreases the dependency of many countries on energy imports. In many poorer regions of the world, energy deficiency is still widespread. In this case, a decentralized energy supply with renewable energy sources offers a basic option with potential for peace building. The promotion of renewable energy in industrialized countries is of particular importance here and requires corporate engagement. Besides alternatives for energy supply, this also offers a contribution to sustainable energy and climate policy. Many corporations are already working on technological innovations that may, in the future, contribute to sustainable energy supply and therefore to regional stability. Moreover, they enforce international environmental and social standards for their own corporation and their suppliers and thereby create a general framework for sustainable management of natural resources and natural resource justice. A wide range of projects and initiatives by Deutsche Telekom provide examples of innovative approaches within companies.

Further information

Dr. Ignacio Campino
Head of Environmental Affairs Office
Deutsche Telekom
www.telekom.de (see 'Sustainable')

Reducing emissions from large consumers

Innovative projects to minimize greenhouse gas emissions from large consumers make an important contribution toward climate policy. DeTeFleetServices, Deutsche Telekom's mobility provider, operates one of the largest company fleets in Germany, with 32,000 service vehicles and 9,000 company cars, as well as a further 10,000 and more vehicles at the Group's various subsidiaries and shareholdings in the rest of Europe. Each year, Deutsche Telekom employees travel some 400 million kilometers in these service vehicles, consuming around 28 million liters of fuel in the process.

In view of the size and importance of its vehicle fleet, Deutsche Telekom has made a voluntary commitment to reduce environmental impacts and conserve natural resources. With this in mind, DeTeFleetServices has joined forces with vehicle users within the Group to launch a raft of measures aimed at conserving resources and minimizing pollutant emissions. Such measures focus primarily on the use of alternative fuels and drive systems, such as natural gas-powered vehicles.

DeTeFleetServices operates the largest natural gas fleet of any German company, with around 408 service vehicles powered by this method. Over the next few years, there are plans to further expand the fleet of natural gas-powered vehicles. In nature and landscape conservation areas that are considered particularly sensitive, the company is committed to making vehicle use as eco-friendly as possible.

Maintaining social standards

Deutsche Telekom is committed to upholding internationally recognized minimum social standards throughout every stage of the value-added chain. To this end, the company has drawn up a binding social charter with Group-wide validity. The Social Charter is a voluntary commitment by the employer, based on the values of the Global Compact as well as the guidelines and standards of the International Labor Organization (ILO) and the Organization for Economic Cooperation and Development (OECD). In 2004, the charter was gradually incorporated into the Group's HR management processes. As part of an annual "Social Performance Report," the HR departments of the Group units are required to submit declarations confirming their agreement with all the principles contained in the charter.

In accordance with the global purchasing guidelines, Deutsche Telekom only does business with environmentally and socially responsible suppliers, in compliance with the relevant international agreements and standards as well as local, national and international laws and regulations. All purchasing staff are required to observe the guidelines on environmental protection and the Social Charter of the Deutsche Telekom Group, as well as the corporate policy on safety and the environment. The General Terms and Conditions for Purchasing also obligate suppliers to observe the principles of the Social Charter.

Further information

Understanding Environment Conflict, and Cooperation is a policy paper that gives an overview on the current debate on this topic. www.unep.org/PDF/ECC.pdf

The information and dialogue platform *Environment, Conflict and Cooperation* disseminates targeted information on new publications, conferences, reports and initiatives on this topic. www.krium.de

The UNESCO project *From Potential Conflict to Co-operation Potential* (PC>CP) pursues the objective to foster cooperation between stakeholders in the management of shared water resources and to mitigate the risk that potential conflicts turn into real ones www.unesco.org/water/wwap/pccp/

The *Nile Basin Initiative* is an initiative of the Nile riparian states to foster a common development of the Nile River water resources. www.nilebasin.org

In the recently published State of the World 2005 report of the Worldwatch Institute, Ken Conca, Alexander Carius and Geoffrey D. Dabelko discuss the topic of *Building Peace through Environmental Cooperation* in chapter 8. A quick entrance to the topic. www.worldwatch.org/pubs/sow/

Environmental Peacemaking is the title of the standard work by Ken Conca und Geoffrey D. Dabelko (2002) with numerous case studies on the peace building impacts of environmental cooperation and sustainable development. www.press.jhu.edu/books/

CONFLICT PREVENTION

Those violent conflicts that are partly caused by environmental degradation and the exploitation of natural resources require multiple approaches for crisis prevention, conflict mitigation and promotion of peace. As with a puzzle, these approaches fit together and complement each other.

Preventing crises and violent conflicts is also integral to many efforts to reduce poverty or foster economic development. The action plan of the German Federal Government – ‘Civilian Crisis Prevention, Conflict Resolution and Post-Conflict Peace-Building’ – reveals the large variety of approaches civil-society, private-sector and political actors can take to reduce conflict.

AND RESOLUTION

Development of peace

The development of peace requires medium-term and long-term measures in order to build mechanisms for dealing with conflicts peacefully, overcome the structural causes of violent conflict and thus create the basic conditions for peaceful and equitable development. Such activities include political measures and development policy programmes for resource equity, poverty reduction or regional integration.

from the "Conflict and Economy" Glossary of GTZ

Peace and conflict impact assessment

Well intended is not always well done. "Peace and Conflict Impact Assessment" and "Do no harm" are methods applied to assess the intended and unintended impacts of activities and projects upon the dynamics of conflict and the process of peace consolidation. In recent years, a number of donor institutions have applied this method for the first time to environmental projects and programmes.

Civilian conflict management arbeitung

Civilian conflict management attempts to regulate by non-military means the way in which a conflict is carried out. The aim is not only to prevent or end violence, but also to find solutions that are acceptable to all parties to a conflict.

from the German Federal Government's Action Plan „Civilian Crisis Prevention, Conflict Resolution and Post-Conflict Peace-Building“

Kimberly-Prozess

The Kimberley Process is an innovative international initiative to prevent trade in "blood diamonds": Developed by numerous companies, government representatives and non-governmental organizations, the programme involves a voluntary monitoring system to certify raw diamonds. The aim is to ensure that diamonds traded on the market are not used to finance violent conflicts.

Peace-building

Peace-building refers to all activities relating to the development or reestablishment of social conditions and relations that favour a peaceful settlement of conflicts. This includes measures to stimulate economic development or promote social justice and initiatives for the reconciliation of opposing parties and the strengthening of common loyalties as well as projects to encourage intercultural learning and cooperation.

from the German Federal Government's Action Plan "Civilian Crisis Prevention, Conflict Resolution and Post-Conflict Peace-Building"

"Peace dividend" of renewable energies

Many countries depend upon energy imports. Diversified, decentralized and sustainable forms of energy supply can reduce such dependence. In many poorer regions of the world, high levels of energy poverty still prevail. However, due to generally low population densities in these countries, it is scarcely feasible to develop broad-scale energy supply networks. Here decentralized energy supply systems based upon renewable energy sources present a fundamentally important option with a potential to foster peace. Development cooperation institutions have already been working for a long time to implement locally appropriate, decentralized concepts. Furthermore, many companies are working on technological innovations that can contribute in the future to sustainable energy supply and thus to regional stability.

Early warning

There are numerous conflict prediction models that permit a systematic monitoring of latent conflicts. Their goal is to predict the escalation of conflicts and initiate preventive measures in time. Some of these early warning models include ecological and environmental policy indicators, such as the FAST Early Warning System run by swisspeace and the UNDP early warning system in the Ferghana Valley in Central Asia.

Strengthening the rule of law

Legitimate and functional rule-of-law structures are a key prerequisite for an equitable balance of interests within society and thus for the socially regulated and peaceful settlement of conflicts. In the medium and long term, moreover, democratization processes contribute to the structural stabilization of a country - in the medium term, functional mechanisms are created for the peaceful settlement of conflicts; in the long term, democratic reforms lead to good governance and to the inclusion of disadvantaged population groups in economic, political and social processes.

from the German Federal Government's Action Plan "Civilian Crisis Prevention, Conflict Resolution and Post-Conflict Peace-Building"

Promotion of peace

A key element of efforts to promote peace is the provision of support to internal social and political forces, which work actively for civilian forms of conflict resolution that take the interests of all parties into account. The promotion of peace can have both a preventive focus and a post-conflict focus.

from a glossary published by the German Development Service DED

Green foreign policy

In international environmental policy, there are numerous conventions and institutions that foster cooperation among states and social groups and thus help to prevent conflict. These include the international and bilateral agreements on waters and nature parks mentioned in this exhibition. They further include forums for exchange on innovative and successful environmental policy approaches, such as the Petersberg Process for global water policy, or the Green Diplomacy Network, which brings together environmental experts in the foreign ministries of the European Union's member states.

Crisis prevention

Crisis prevention means early, planned, systematic and coherent action at various levels of state and society in order to prevent violent conflict. Measures for crisis prevention aim to diminish the potential for violence and to promote the development of institutions for the peaceful settlement of conflicts. Such measures can be taken before, during or after violent conflicts.

from the "Conflict and Economy" Glossary of GTZ

Mediation

Mediation is one of the most frequent forms of conflict resolution. It involves a neutral third-party mediator coordinating the resolution process. It helps all parties to clarify their interests and develop solutions. At the same time, the mediator seeks to build understanding, among the parties to a conflict, of the interests and positions of the other side. The goal is to put the affected parties in a position to resolve their conflicts themselves in a constructive manner, and to ensure that their interrelationships stabilize.

1 Further information

The *Action Plan Civilian Crisis Prevention, Conflict Resolution and Post-Conflict Peacebuilding* was adopted by the German Federal Government in 2004. It describes the new nature of international conflicts, draws the necessary conclusions with respect to German crisis prevention infrastructure and identifies several fields of action and a total of 161 initiatives that the Federal Government plans to implement over the next 5 to 10 years.

www.auswaertiges-amt.de

The *Bonn International Center for Conversion* (BICC) is an independent, non-profit organization dedicated to promoting peace and development. BICC is now organizing its work around three main topics: arms, peace building and conflict. www.bicc.de

FAST is an independent early warning programme covering 20 countries/regions in Africa, Europe and Asia. Its monitoring system includes environmental indicators.

www.swisspeace.org/fast/

Since 1994, the *Environmental Change and Security Project* (ECSP) of the the Woodrow Wilson International Center for Scholars has explored the connections among major environmental challenges and their links to conflict, human insecurity and foreign policy. <http://wwics.si.edu>

The **Berghof Research Center for Constructive Conflict Management** www.berghof-center.org/ initiates, supports and monitors projects and institutions which aim to transform ethno-political conflicts. It aims to interlink four core areas of work: practically oriented research, support for local peace initiatives, networking and policy advice. A comprehensive overview on ethno-political conflict transformation is provided by the *Berghof Handbook for Conflict Transformation* www.berghof-handbook.net

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