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“TRANSPARENCY IN THE OSCE”

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Environment and Security

Even though there have been environmental concerns since the early 1970s, the Chernobyl disaster, the discovery of the hole in the ozone layer, and the resurgence of epidemics and health crises have prompted awareness of the fragility of the planet's future and the appearance of new risks. Significantly, TIME Magazine in 1989 made "Endangered Earth" "Planet of the Year" and, a few years later, the 2007 Nobel Peace Prize went to Al Gore and the experts of the Intergovernmental Group on Climate Change.

From being merely marginal, the environment is now part and parcel of security questions.

I. A NEW SECURITY CHALLENGE: ENVIRONMENTAL RISKS

A. An alarming observation: climate change

While experts are divided on the subject, most of them conclude that we are faced with global warming and changes in the climate system.

1. Facts and question marks

a. Warming

According to the latest assessment drawn up by the Intergovernmental Panel on Climate Change (IPCC), the global mean surface temperature (air temperature over land and sea) rose by 0.6° C to 0.75° C during the twentieth century.

Further findings have been a diminution of snow cover and the shrinkage of glaciers, while the mean sea level is estimated to have risen by 10 to 20 centimetres during the last century.

b. Climate changes

Episodes of precipitation in the northern hemisphere have increased while those of drought have been on the rise, particularly in the south.

c. Question marks

Some experts object that the earth has previously undergone warming cycles and that the observations reported correspond, as they see it, to a natural climate variation.

Climate simulations and projections are very scattered. It is difficult to predict both the extent of the changes ahead, particularly on a regional scale, and their environmental impact.

2. Causes

Human activities, notably industrialization and the new modes of air and road transport, requiring as they do the combustion of fossil fuels, are mainly responsible for this warming, through the increased concentration of carbon dioxide in the atmosphere.

B. A host of environmental risks

The environmental threat is not confined to global warming. A great many forms of pollution caused by agriculture or industry, or resulting from accidents, have for decades been putting populations and the economy at risk.

1. The upheaval of agriculture

Urban development and intensive farming have radically changed the European rural landscape. The practice of land consolidation, aimed at regrouping plots for the sake of greater farm productivity, brought about the destruction of natural features (such as hedges and ditches) and so amplified run-off and soil erosion besides cutting back on biodiversity.

The practice of intensive irrigation has accentuated the drying up of watercourses.

The situation of the Aral Sea, an inland sea between Kazakhstan and Uzbekistan, is a prime example of this. Over-exploitation of cotton has led to an increase in irrigated areas. Pumping from the two rivers discharging into the Aral Sea, the Syr Daria and the Amu Daria, has greatly reduced its volume. The Aral Sea has thus shrunk from 68 000 km² in 1960 to 30 000 km²; its salinity has tripled since 1950 and is above the limit recommended by the World Health Organization (WHO). Furthermore, the region's drinking water is polluted by the pesticides and fertilizers used in cotton growing.

In general, the large-scale use of plant protection products in agriculture has led to the pollution of ground water.

Growing urban development in Europe and North America has accentuated deforestation. In Central Asia, the intensive use of firewood and building timber has done much to reduce wooded areas.

2. Uncontrolled industrialization

The chemical industry causes a great deal of damage, whether through emissions of toxic substances or with its elimination of hazardous wastes.

The Fergana Valley in Central Asia is a densely populated distress area.

The exploitation of uranium, mercury and antimony mines, some of which have been abandoned in open-pit mode, has contaminated soils, agricultural produce and river water.

In Europe, the Ruhr Basin was long an environmental disaster area. The substances released by heavy industry and agriculture, including phosphates, helped make the Rhine one of Europe's most polluted rivers.

3 Instances of accidental pollution

The carriage of hydrocarbons by sea gives rise, in the event of accident, to coastal pollution that destroys fauna and flora. The Exxon Valdez, in 1989 in Alaska, United States (37 000 tonnes spilt); the Erika in 1999, in France (20 000 tonnes spilt), and the Black Sea last winter are but a few sad examples.

Several major industrial accidents in Europe have revealed the seriousness of the risks inherent in potentially dangerous industrial activities: accidental release of dioxin in Seveso, Italy, in 1976; chemical warehouse incident in Basel in 1986; explosion of the AZF factory in Toulouse in 2001.

On a yet more dramatic scale, nuclear accidents have impressed themselves on public opinion. The 1986 Chernobyl disaster had the biggest effect: 4.8% of Ukrainian territory, inhabited by some 2 million people, was contaminated with caesium-137; in Russia (then the Soviet Union) 50 000 km² and 1.5 million people were affected; while in Belarus (then Byelorussia) 18 000 km² were contaminated in a densely populated area.

The contamination affected individuals (the immediate and related death toll was put at 9 000 in a 2006 United Nations report, but could be higher according to environmental protection associations), but also soils and surface waters.

C. New security challenges

Even though most analysts do not expect to see direct conflicts arising from environmental matters, all these phenomena have a hand in exacerbating pre-existing tensions and adding to instability.

Significantly, in April 2007 the United Nations Security Council held a debate on "energy, security and climate".

A report was submitted to the March 2008 European Council session identifying the security risks of climate change and urging the European Union to conduct "carbon diplomacy".

1. Tensions over access to natural resources

a. Water

Global warming and the melting of glaciers will affect water reserves. Forms of chemical pollution are impairing the quality of drinking water.

In cross-border areas that are home to various ethnic communities, access to water and the management of catchment areas may exacerbate tensions; this is particularly so in the Fergana Valley, in Central Asia, covering the Uzbek, Tajik and Kirghiz regions and where water sharing is a sensitive issue.

There are likely to be more border disputes, particularly with respect to maritime boundaries.

b. Forests

Droughts give rise to forest fires, particularly in the Mediterranean Basin, and make reforestation more uncertain.

2. Food crises

Climate change is going to accentuate episodes of drought or heavy precipitation, penalizing the developing countries and making for food shortages.

Soil degradation, whether from industrial or from agricultural pollution, is detrimental to livestock farming and crops.

The drying of watercourses and the lowering of the level of seas threaten fishing activity. This sector has thus all but disappeared from the Aral Sea.

3. Threats to health

Climate change will have an impact on the functioning of ecosystems and on the transmission of animal diseases. A return of malaria to European humid zones is thus feared.

Heatwaves cause an above-normal death rate among vulnerable people, as happened in Europe in the summer of 2003.

The mad-cow disease crisis illustrated the health risks associated with the use of bone meal for feeding cattle instead of traditional fodder or grazing.

4. Increased migrations

Soil degradation and periods of drought will accentuate desertification. The shortage of cultivable land will make for increased migratory flows.

Furthermore, the rising sea level will threaten densely populated and often industrialized coastal zones (Gulf of Mexico, United States) and could lead to population displacements.

5. Trafficking encouraged

In the OSCE area, a lucrative trade exists between the member countries of the European Union, where regulations concerning dangerous waste are very strict, and neighbouring countries. In this way, Moldova, Belarus and Ukraine unlawfully receive toxic waste, particularly from Hungary or Slovakia.

Within the European Union the free flow of goods may facilitate such trafficking.

In Poland, since 1990 the transfer of illegal waste from neighbouring countries, in particular Germany, has been thriving and has increased since the country joined the European Union. In 2007, the border guards recorded 1 039 instances of illegal entry of waste.

II. FINDING SOLUTIONS

A. Integrating the notion of sustainable development into economic policies

The challenge facing countries is to find a new, more environment-friendly mode of growth meeting current needs without compromising the capacity of future generations to meet theirs. These new attitudes must above all be geared to limiting greenhouse gas emissions.

The Organisation for Economic Co-operation and Development (OECD) issued an alarming report in March 2008: "Environmental Outlook to 2030". It recommends action in four fields: climate change, biodiversity, water resources, and risks to human health from pollution.

France has pledged its commitment to sustainable development.

In 2005 Parliament adopted an Environment Charter, incorporated in the Preamble to the French Constitution. This Charter features the precautionary principle, obliging the authorities to intervene to prohibit or regulate activities or scientific developments that present risks.

In May 2007, a Ministry of State was established with explicit responsibility for the environment, energy, development and physical planning.

1. Reducing greenhouse gas emissions

In order to limit global warming, measures must be taken in various fields.

As something of trail-blazer, the report of the economist Nicholas Stern, published in October 2006 for the United Kingdom Government, quantifies the threat of climate change in economic terms and makes it clear that doing nothing about it will be expensive in the long run.

In recent months several developed countries have adopted plans of action: in Germany there is the programme to reduce CO² emissions; and in the United States the Lieberman-Warner bill on a cap-and-trade system for greenhouse gas emissions, to be discussed in the Senate.

France has initiated negotiation between the State and various economic and civil society players within six working groups, dubbed the environment Grenelle. The upshot is proposals that will be the subject of a loi-programme (act providing the framework for a government programme).

Back in 2005, with the adoption of the loi d'orientation (general principles act) on energy policy, France set itself the target of reducing its emissions by 75% by the year 2050. In 2006 France cut its greenhouse gas emissions by 4% as against 1990.

a. Less polluting and more efficient energy sources

In the first place, research must be encouraged in order to promote less carbon-intensive technologies.

The technology of carbon capture and storage (CCS) is a promising element. This technology comprises a succession of procedures which capture the CO² present in the gases discharged by industry, transport it and inject it into geological formations. Two research sites are operating, in the Norwegian sector of the North Sea and in Canada, on the Weyburn oil field. In France, studies are under way on a site in the Paris Basin.

Secondly, it is important to promote clean energy sources. Renewable sources, drawing on hydropower, solar energy, wood, biomass and wind energy, may become an alternative.

Denmark and Germany are well to the fore in the wind energy sector. The United Kingdom is seeking to develop wind farms in the North Sea.

In the area of solar energy, Portugal has launched a “solar hot water” programme to extend the use of solar panels in private homes.

Norway has launched a study to build a tidal power station.

France and Germany have set themselves ambitious targets. The share of electricity of renewable origin is 16.4% of French power generation (including 94% hydropower). It is expected to reach 20% in 2010 (the new target set for France by the European Union is 23%).

The development of biofuels for motor vehicles is encouraged; the European target is 10% biofuel use in transport for all Member States. However, the environmental value of “agrofuels” is criticized on the grounds that they could lead to increased emissions of pollutants through incomplete combustion. Their

development poses a threat to other food crops and tends to push up grain prices. Furthermore, fallow land is put back under cultivation and this prevents the reconstitution of natural environments. Hence the European target is now much debated and many States insist on conditions of sustainability.

In addition, the nuclear issue remains open.

Nuclear energy limits gas discharges and so has a hand in combating climate change. According to the OECD Nuclear Energy Agency, this energy source could lower CO² emissions by 8%.

France has prioritized the nuclear option and 78% of its electricity comes from nuclear power stations. The United Kingdom announced last January its intention to relaunch the building of nuclear power stations, and 20% of its electricity production is nuclear.

This choice differs from country to country. Germany, Spain and Belgium have decided on a nuclear moratorium.

Recourse to nuclear energy nevertheless raises several problems. The main one of course is the risk of accidents, together with the production of waste that is difficult and expensive to treat and awkward to store. Then nuclear power stations are large and their considerable generating capacity makes for heightened consumption. Finally, the nuclear industry produces only electricity and cannot replace the fossil energy sources used for heating.

b. "Cleaner" transport

Air transport and motor traffic are responsible for a high proportion of carbon dioxide emissions. Hence the rehabilitation of rail and river transport is afoot.

In France, the measures of the environment Grenelle include the development of rail freight, the extension of high-speed lines and the rehabilitation of waterways. Heavy goods vehicles would be subjected to a tax per kilometre, off the motorways. Then there is the suggestion to introduce "éco-pastilles" (lozenge-shaped emblems of environment-friendliness), with a discount encouraging people to buy less polluting cars.

In Canada the Government has launched its discount programme offering reductions of \$1 000 to \$2 000 for buyers of "clean" vehicles.

c. New building standards

In France a thermal renovation programme for rent-controlled housing (HLM) is to be launched. The target for 2012 would be 50 kilowatt-hours of power consumption per square metre per year as against 150 to 200 today.

Germany has adopted a plan obliging owners of new housing to use a heating system partly relying on clean energy sources. Owners of old housing will be

offered tax incentives to do likewise. Insulation and heating standards will be improved.

In Canada the energy-saving programme offers subsidies for owners making their homes more energy-efficient.

2. Limiting forms of pollution

a. Developing integrated farming

In the light of population growth, agricultural development is all-important. However, the use of pesticides and fertilizers increases pollution and ultimately impoverishes soils. A new approach has emerged, reasonable or integrated farming, which covers a range of agronomic principles and practices taking account of the environment, resting on a global approach to farming and seeking to limit the forms of pollution associated with intensive production, while not ruling out the use of chemicals.

France has taken several initiatives. Among the measures of the environment Grenelle is the target of halving the use of pesticides. Furthermore, the practice of zero ploughing, which avoids soil erosion, is making headway on large farms.

Extensive farming has its limits. Hence the European Union has now integrated the environmental dimension into its common agricultural policy (CAP).

The Luxembourg agreements of June 2003 provide for a decoupling of aid from the nature and volume of production, and for making aid conditional. Among the regulatory requirements the farmer must respect are measures to keep the land in good agricultural and environmental conditions.

The European Union has also undertaken the improvement of water resources. A framework directive of 23 October 2000 makes it binding on Member States to achieve a good ecological status for Europe's surface waters and groundwater in 15 years. Furthermore, a 1975 directive limits the nitrate content to 50 mg/l in surface waters used to produce drinking water.

In addition, the Habitats Directive protects natural habitats and wild fauna and flora. The establishment of the Natura 2000 network helps to protect "sites of Community importance". Their list has been updated and now includes zones situated in Poland, Slovakia and Slovenia.

In France, Law No. 2005-157 of 23 February 2005 on the development of rural territories gives precedence to preserving the rural and landscape heritage in land management.

b. Combating deforestation

The disappearance of forests impairs biodiversity and contributes to increased atmospheric CO². Hence low-cost reforestation operations are carried out.

c. Improving waste management

The new ways of life have meant more waste production, and the new industries have given rise to new waste that is more toxic and scarcely degradable.

In the developed countries, programmes are carried out to reduce waste production, promote the recycling of raw materials in the waste, and gradually close down open-air rubbish dumps.

Internationally speaking, the Basel Convention, drawn up under the auspices of the United Nations Environment Programme (UNEP), seeks to prohibit the movement of hazardous wastes from a country of the Organisation for Economic Co-operation and Development (OECD) to a non-OECD country. The Convention was incorporated in Community law by Regulation No. 1013/2006 and has applied to all Member States of the European Union since July 2007.

d. Guarding against natural and technological disasters

Climate change is going to produce more and more episodes of storms and hurricanes or cyclones and make for flooding. It is important to promote early-warning mechanisms for hurricanes and tsunamis.

For protection against rising water levels, the improvement of dyke systems is a solution. The Netherlands, a quarter of which is below sea level, is threatened by the increased force of storms and flash floods of the Meuse and the Rhine. It is therefore developing traditional and innovative solutions. A storm surge barrier protects the port of Rotterdam; it served for the first time in November 2007 to stand up to a major storm in the region. Another project is under way for widening the beds of the Meuse and the Rhine.

In a more revolutionary vein, architects have suggested making artificial islands or creating an amphibious district in Dordrecht.

Conversely, barriers can be built to combat the drying up of watercourses. To save the Aral Sea, Kazakhstan has thus built a sand barrier to divide it into two and revive the small sea. This experiment, started in 1996, has proved conclusive since the level has risen and species of fish have reappeared. The World Bank has granted loans, including one of \$126 million in 2007, to encourage the building of dams and, in the longer term, the reopening of a port.

To limit the risks associated with marine accidents, the United States adopted, back in 1990, the very stringent "Oil Pollution Act" making double hulls compulsory for new oil tankers. The United States coastguards will not allow any oil tanker into the country's territorial waters unless it has documents (annual certificate) that they themselves have decided on under United States legislation, and subject to an inspection visit.

In 2002 the European Union brought itself more into line with United States legislation by establishing the Maritime Safety Agency and gradually debarring single-hull vessels from European territorial waters.

B. The need for international governance

All these efforts will only bear fruit if they come within an overall approach internationally.

1. At global level

Since 1992 and the Rio Summit, environmental concerns have become a priority of the international agenda.

The Climate Conference and framing of the Kyoto Protocol have marked a first stage towards global action to stabilize the greenhouse effect.

One original feature of that treaty is the purchase of carbon offsets. This involves an economic value encouraging countries to develop energy policies that lower greenhouse gas emissions.

The Protocol suffers from two main weaknesses:

- it introduces a differentiated regime between industrialized countries ratifying the Protocol and assuming binding commitments and the emerging countries not held to any target;
- the United States has not ratified the Protocol. Australia did so belatedly in December 2007.

Furthermore, the Protocol does not include measures against deforestation, which is a source of carbon dioxide emissions.

Since the Protocol expires in 2012, a new plan of action must be drawn up. The United Nations therefore held a Climate Change Convention in Bali in December 2007. A road map in the form of a decision launches a new round of negotiations to be completed in 2009.

The results obtained are mixed. On the credit side, we have:

- a global approach including the industrialized countries, the emerging countries and the developing countries, all of which are invited to reduce their greenhouse gas emissions;
- coverage of emissions due to deforestation;

- the operational implementation of an adaptation fund, managed by the World Bank, to help developing countries cope with climate change.

The outcome nevertheless falls short of expectations. The commitments assumed remain very general and the quantified targets are set indirectly, in the form of reference to the work of the IPCC.

2. At European level

The European Union is well to the fore on the subject. As a signatory to the Kyoto Protocol in 1998, it has pledged to reduce its greenhouse gas emissions by 8% as against the 1990 level by 2012.

In the longer term, it offered at the Bali Convention a reduction of its emissions by at least 20% by 2020. The ambitious targets fall foul of realities on the ground and, according to the European Commission, the Kyoto targets are far from being achieved; the reduction in 2005 was reportedly a mere 2%.

To reach the 2020 target, the Commission presented a plan of action on 23 January 2008 set around two main objectives: reducing greenhouse gas emissions by 20% as against the 1990 level by 2020; and increasing the share of renewable energy sources (in the electricity, heating and transport sector) to 20% of total energy consumption by 2020.

What is distinctive about the approach is that it takes account of the specific circumstances of each Member State and its GDP, according to the principle of solidarity, and of its past efforts in these two fields. A special effort is thus asked of Luxembourg, Ireland and Denmark. France must, in common with Germany, cut its emissions by 14%, the United Kingdom by 16%, and Italy by 13%.

Furthermore, this reduction of greenhouse gas emissions differentiates the sectors subjected to the European Commission's emissions trading scheme (EU ETS), which concerns all the major polluting enterprises, with the aim of achieving a 21% reduction by 2020 as against the 2005 level, and the non-EU ETS sector (building, agriculture, motor transport, small industries), which will have to cut their emissions just 10% by 2020 as against the 2005 levels.

At the European Council session of March 2008, differences emerged between States about the prescribed date to be taken into account for a review of the emissions trading scheme and the risk of unfair competition for the energy-intensive sectors, to be affected by products not subject to strict environmental requirements.

France, which is to assume the presidency of the European Union, has made of climate change one of its priorities. It wishes to reach an agreement on energy and climate and to strike a balance between advocating the cause of the environment and keeping European industries competitive.

It is therefore in favour of introducing an adjustment mechanism at the European Union's external borders, in the form of a carbon tax to prevent European enterprises from falling victim to "environmental dumping".

3. At the OSCE level

At the last Ministerial Council, in Madrid in December 2007, the OSCE issued a Declaration on Environment and Security. It marked the first mention of climate change in an OSCE document. The Declaration makes it a long-term challenge. It also highlighted the complementary role that the OSCE can play with the United Nations, for joint action in favour of the environment encourages political cooperation and makes for good-neighbourly relations.

For this purpose, the OSCE possesses an entity in partnership with the United Nations and NATO, the "Environment and Security Initiative (ENVSEC)", which assesses environmental problems in Central Asia, in the Caucasus and in South-East Europe, and looks for solutions.

A conference was held in 2005 in Romania to assess the environmental and security risks stemming from mining in the Tisza Basin. A study was conducted on the Fergana Valley, in Central Asia.

Furthermore, the OSCE has amassed expertise through its field missions.

With regard to hazardous wastes, it conducted in Moldova, in conjunction with NATO, an assessment of pesticide stocks throughout the territory and carried out appropriate restocking.

Concerning the management of water resources, in partnership with the United Nations Economic Commission for Europe, it has helped establish a commission between Kirghizstan and Kazakhstan for the use of the Chu and Talas rivers. It supports a programme of cooperation with Ukraine and Moldova for management of the Dniester Basin.

In addition, following the 2007 Economic Forum, it is going to set up a drought management centre in Central Asia for the purpose not just of monitoring desertification, but of proposing action and training in order to retard this phenomenon and conserve soils.