

Environment, Security and the International Agenda

Presentation by Wouter Veening, Director Institute for Environmental Security, The Hague.

Presented at the Linking Environment, Development, Stability and Security Conference, Athens, June 15, 2007.

1. Environmental degradation as threat to security and stability

“The critical factors for economic and security stability in the 21st century are energy, water and the environment. These three factors need to be balanced for people to achieve a reasonable quality of life. When they are not in balance, people live in poverty, suffer high death rates or move toward armed conflict.”

This is a quote by General Paul J. Kern (U.S. ret.), one of the members of the Military Advisory Board of the report *National Security and the Threat of Climate Change*, published in April 2007 by the CNA Corporation, demonstrating the evolution of the security concept from (hard) military security to also including human and environmental security.

The Board consisted of eleven retired U.S. generals and admirals of all four services (army, navy, air force and space), who gave their views on how climate change might induce food, land and water insecurity and thus susceptibility to fundamentalism with increased risk of terrorism, how migration may lead to conflicts in for the U.S. strategic areas, how sea level rise will threaten low-lying naval bases in the Pacific and Indian Oceans (Diego Garcia!) and how hurricanes may affect the bases on the U.S. Atlantic and Mexican Gulf coasts.

The general thrust of the report is that there should be no delay of action in the fields of mitigation and adaption in relation to climate change until 100% certainty has been achieved, because in a later stage the price of inaction may have to be paid in military terms.

Compared to the Cold War with its low probability/high consequence scenarios of nuclear strikes, climate change is a high probability/high consequence scenario.

Climate change is of course the most salient aspect of the degradation of ecosystems and their essential services for man and nature, as documented so comprehensively by the Millennium Ecosystem Assessment report in March 2005 and now also taken seriously by the security community as shown by the just-mentioned report and by the discussion on climate change by the Security Council of the United Nations on 17 April 2007. (The UK government deserves credit for putting this on the agenda of the Security Council, against opposition from the U.S and China, amongst others.)

Water shortage poses a direct human security risk, but not necessarily a conflict risk. Among the many factors causing a situation to either erupt in violent conflict or in peaceful negotiations, water may also be an impulse for cooperation, as is the case –at least for the moment - in the Nile Basin, through the Nile Basin Initiative, where all nine countries discuss efficiency of use and equity of distribution.

However, if shortage is too severe, when distribution becomes a zero-sum game – the water is either yours or mine – the conflict potential is bound to increase.

Water may be one of the underlying factors of the conflict in the Middle East. In its Advisory Opinion of July 2004 on the construction of the wall by Israel in the occupied Palestinian territory the International Court of Justice reached the conclusion that the construction was contrary to international law, one of the reasons being that by this construction Israel effectively annexes most of the western aquifer system which provides 51% of the West Bank's water resources.

If indeed water is one of the crucial factors in the Middle East to be dealt with in an effective, efficient and equitable way in order to reach peace and stability in that part of the world, the role of Turkey as the regional “water tower” with the Euphrates and the Tigris as life lines for Syria and Iraq becomes pivotal. A Turkish membership of the European Union would then bring the water problematique in the region as an additional challenge to the European Common Foreign and Security Policy.

If, as is to be expected, the melting of the glaciers on the Tibetan Plateau and in the Hindu Kush, will continue, the countries of Central, South, South East Asia and China in the end –after of course a first increase in discharge of water - will be faced with serious water shortages. With three of the countries affected being nuclear powers (Pakistan, India and China) a UN Task Force will be needed to study possible scenarios and how to prepare for them, if possible.

One of the factors causing the violent tragedy of Darfur is ecological scarcity (land and water) exacerbated by climate change and environmental restoration –again, if possible – is a condition for lasting peace.

2. The drivers behind environmental degradation

All change in the environment is always a function of the natural evolution, the number of people, their production and consumption patterns or life-styles, and the technology with which production and consumption are organized and conducted.

In formula:

$I = \Phi (P \times A \times T)$, where

I = Impact on the environment

Φ = the coefficient for natural evolution

P = Population

A = Affluence (or the consumption pattern including the underlying production system)

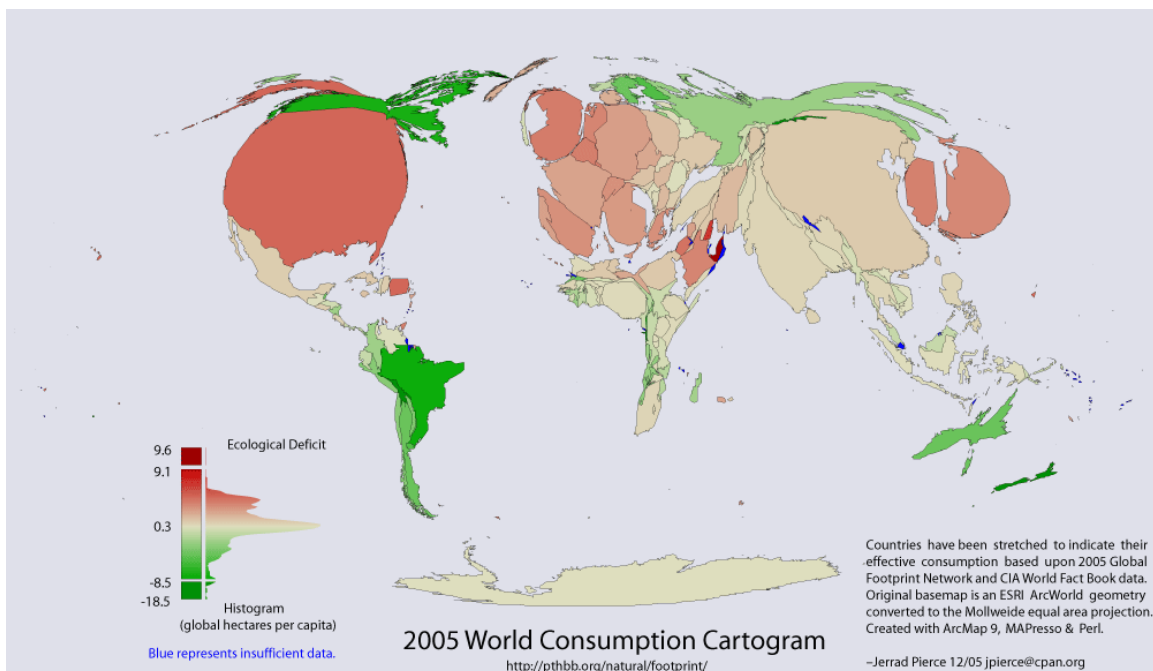
T = Technology

Now controlling population numbers is of course a very controversial issue and except for China, no other country in the world has adopted a stringent population control policy. On the contrary, several countries (France, amongst them), are proposing pro-birth policies.

It is not only numbers that count, but also the age structure and the proportion of the population living in rural or urban conditions are important factors. In the formula that would be reflected under the second component referring to consumption and production patterns.

It is clear that life-style and production patterns make a huge difference to the environment. The U.S. with less than 5% of world population consumes 25% of the global oil production and the same order of magnitude applies to many other commodities which greatly affect the environment, often elsewhere in the world.

The map here-under, produced by the Global Footprint Network, clearly depicts the differences between countries and their populations as to their impacts on the environment, measured in terms of hectares claimed per capita.



At the Rio '92 UN Conference on Environment and Development (UNCED), President Bush Sr. said the "the American way of life is not up for negotiation" and his son Bush Jr basically has said and professed the same thing, but with Al Gore having won the Oscar

for Best Documentary with his slide show *An Inconvenient Truth* now so prominently present both in and outside the U.S. and so many state governors, mayors of cities and major companies subscribing to the content of the Kyoto Protocol also in practice, things might change.

Many people think (and hope) that new technologies –the last factor in the formula – will provide THE answer to the ecological challenges of the world, because they are very reluctant to have to change their comfortable life-styles. But then they tend to overlook another very inconvenient truth, the technological “Law of the Conservation of Misery”: you solve one problem here, you create another problem there.

Let us take the example of biofuels: they are meant to replace fossil fuels used by f.e. automobiles and thus reduce the greenhouse gas emissions resulting from transportation. However, the production of biofuel on the basis of palmoil or corn (ethanol) may cause so much additional emissions at the site of production, that the net effect for the global climate is negative.

To find out whether a new technology will indeed promote a better environment, one has to look at all phases of the production and consumption processes involved in a certain product cycle. It should be a cradle-to-grave approach: which primary materials have to go into the product, how are they produced and transported, how much energy and pollution is involved in the mining of these materials and the shipping to the factories actually making the end product. How well can the product, after its useful life is over, be re-used or recycled and how safely can the final waste be stored or burned: these are all questions which have to be answered before technological innovations can be applied.

It is clear, however, that technology does not provide the sole answer, that changes in life-style are inevitable – less meat and more bicycling is good for your health anyway! – and that there is a limit to how many people this planet can carry, also of course allowing for enough space for those other creatures saved by the Ark of Noah .

3. International environmental governance: structure and operations

From space to the deep-sea floor there are international conventions, agreements or other legal arrangements to ensure protection of the environment under consideration and/or the sustainable management of resources contained in that part of the environment.

Climate change now has reached the top of the international agenda, having been extensively discussed at the G-8 and in the Security Council earlier this year

The most salient component of the international agreements is undoubtedly the Kyoto Protocol of the UN Framework Convention on Climate Change.

As it is here not the place to discuss the many merits and flaws of the Protocol, suffice it to say that in view of the urgency and severity of the climate problematique, international diplomacy will have to give the highest priority to the designing and adopting of an effective successor to the actual protocol which expires in 2012. The European Union, faced itself with growing droughts, floods, heat-waves, storms, sea level rise and the melting of the glaciers of the Alps, should continue and intensify its leading role in this.

Of course the total international legal picture is one of patchwork, not (yet) reflecting the interdependence of the world ecology. It is one of the objectives of the Institute for Environmental Security, based as it is in The Hague, the Legal Capital of the World, to see whether from a compliance and enforcement perspective more coherence and consistency can be brought into the international environmental legal and institutional structure. The analysis of well-monitored concrete environmental risk situations would be used to identify gaps or inconsistencies in the existing arrangements.

In order to make the international legal machinery work, economic incentives and financial mechanisms will have to be developed and applied: money makes the world go round!

Very promising and already implemented in certain countries (Costa Rica) are the so-called Payments for Ecosystem Services (PES), f.e. to pay forest owners for the sequestration of CO₂, the major greenhouse gas or, if their forests are upstream, to pay them for the management of the forests, so that the downstream communities profit from a constant supply of good quality water.

These PES contracts, comparable also to the EU schemes of compensating farmers for maintaining the landscape and the natural elements of their lands (hedge rows, birds nests, etc.) should be included in the work programmes of the major international financial institutions such as the World Bank, the European Development Fund, the Global Environment Facility. Many developing countries in possession of important ecosystems for the world, such as tropical rainforests, could profit from PES contracts, in which they would be considered equal partners, delivering a service, instead of poor people receiving aid from the rich.

4. The China Syndrome

The whole world eats Chinese, now the Chinese are eating the world – and drinking it too!

The Chinese fabulous economic growth and exports requires tremendous imports of minerals, fuels, timber and water from the rest of the world. Of course the water is not imported as such, but as “virtual water”. China has to import products which require a lot water in the production stage, because it does not have the water to produce these products itself. Examples are cereals, soybean, palmoil, beef, pork and poultry and they are increasingly imported from water-rich countries such as Brazil and the U.S.

In order to finance imports, one has to export. One of the main competitive advantages of China on the world’s export markets is its low labour costs (combination of low wages and hard work) and its present lack of environmental regulation, which of course is not a real advantage because of the high internal and external pollution costs. The Chinese authorities have increasingly to deal with riots resulting from local protests against the lack of drinkable water and breathable air and it is expected that the costs of the much-needed domestic clean-up will considerably slow down exports.

China also has now surpassed the U.S. as the number one emitter of greenhouse gases and any successor to the Kyoto Protocol will have to fully involve China doing everything it can to reduce emissions. This is a difficult debate, because countries like China and India (sometimes) claim they have “ a right to pollute”, since their emissions

per capita are still very low compared to those of the OECD countries and historically the concentration of CO₂ in the atmosphere is largely caused by the industrialised world. However, global warming will hit densely populated countries with low-lying coastal regions and water shortages the hardest, so it is also in the interest of their own survival that there will be no delay anymore in taking effective action to mitigate further climate change – and to prepare for the impacts of the change that will inevitably occur...

5. Concluding remark

Environmental security will increasingly dominate international relations. Technological innovation, but especially public awareness and willingness to change life-styles are essential underlying conditions for the politicians, diplomats, the military and economic leaders who shape these relations, to act effectively.

The time to act is now.