Preface

Sustainability and economic growth can go together. That conclusion is presented by a number of researchers in this issue of Tilburg Research on climate change. But we'll have to create the right conditions to make it possible.

These conditions are the subject of a number of research programmes at Tilburg University, conducted by lawyers, economists, econometrists, psychologists, sociologists and theologians alike. For years, they have been working on finding solutions for the disquieting effects of climate change, and they will still be hard at work for years to come. At the recently founded Centre for Sustainable Enterprise and Society (SES), researchers from the faculties of Law, Social Sciences and Economics and Business Administration will work together even more closely than before.

As the problems and solutions become more clear, it also appears that everyone in society will have to pitch in: not only governments and businesses, but private citizens, too. May this edition of Tilburg Research inspire us all.

Prof. dr. Philip Eijlander
Rector Tilburg University

TILBURG RESEARCH
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PHOTOGRAPHY

COVER: MELTING FOR CLIMATE CHANGE

Ice sculptures of 100 children melt in the sun at Beijing's Temple of Earth during a Greenpeace event symbolizing disappearing water supplies and climate change. Made from glacial melt water from the source of the Yangtze, Yellow and Ganges rivers, the melting sculptures mark the start of the 100-day countdown to the United Nations Copenhagen Climate Summit. Photo Stephen Shaver/Eyevine/HH

THE PHOTOGRAPHY IN THIS EDITION OF TILBURG RESEARCH IS DEVOTED TO ACTION FOR A SUSTAINABLE FUTURE

Tilburg lawyers on climate change:

"European environmental legislation has been overtaken by events"

By Marion de Boo

European nature conservation legislation is absolutely inadequate when it comes to protecting our natural environment from the effects of climate change, says Tilburg Professor of International and European Environmental Law Jonathan Verschuuren. According to his fellow professor Kees Bastmeijer (Nature Conservation and Water Law), we are definitely not going to meet the international objectives for the preservation of biodiversity.

The threat of climate change on earth has not only sparked off a great deal of environmental research, but also raised major social, economic, legal and moral questions. How effective is legislation against climate change? When the Kyoto Protocol expires, what should the new agreements to be reached in Copenhagen entail? And why is the Netherlands, a country which was once a leader in technology, getting further and further behind?

We will have to make clear choices about our future economic growth

"In connection with mitigation, which means reducing the greenhouse gases, we see a lot of research relating to legal instruments", says Jonathan Verschuuren. "Emission rights and emission trading are complex issues which whole teams of legal experts have been working on for years. But because climate change is already in full swing, we will have to prepare ourselves for changes that are going to take place anyway, regardless of what may be agreed in Copenhagen. That is why my research focuses mainly on adaptation measures, which make society adapt to the consequences of climate change."

The key question is how effective our present national and European nature conservation legislation is

No more waste

Five years ago the village of Kamikatsu, in south-western Japan, embarked on an ambitious environmental campaign that could become a model for the rest of the country and beyond. By 2020, the village's 2,000 residents aim to eliminate the use of landfills and incinerators, and instead recycle or reuse every single item of household waste. *Photo Daniele Mattioli / Hollandse Hoogte*

Sustainable city roof

The roof of a library in Rotterdam, the Netherlands, is covered with plants. The city council subsidises green roofs – they save energy, help to drain and clean rain water and create a healthy green environment. *Photo David Rozing / Hollandse Hoogte*

in ensuring that the adaptation of the environment to climate change stays on the right track. Verschuuren: "I've just come back from a big international conference in Prague, where about 1200 biologists presented their research results. It was alarming to hear that the effects of climate change are being observed everywhere, in a huge variety of ecosystems. Some European species, such as the Middle Spotted Woodpecker, have already moved hundreds of kilometres north because of the warmer climate. Species which cannot migrate easily become extinct. To give plant and animal species a chance to move to new climate zones we need big, protected nature reserves which are linked to each other."

"European Birds and Habitats Directives are not up to preserving species"

According to Verschuuren, the European Birds and Habitats Directives are not up to meeting this goal. "The European nature conservation policy is geared to the protection of individual species in specific areas. But now that so many species are on the move, it seems rather artificial and obsolete to protect a nature reserve. It is like locking the stable door after the horse has bolted."

SPECIES POLICY OBSOLETE

Verschuuren has a more positive opinion of Natura 2000, a network of interlinked nature areas throughout Europe – the European equivalent of the Dutch National Ecological Network. "The idea is good, but the rollout is pretty limited." Countries such as Spain and Italy have in fact designated large areas as nature reserves and there is a recognizable network structure. But in most other European countries the Natura 2000 areas are islands in a sea of unprotected areas. "The implementation of the Dutch National Ecological Network is also running behind schedule due to political and financial problems," says Verschuuren. "We should be opting to a much larger extent to protect big, robust wilderness areas which offer habitat to many different species. The European Commission is well aware that the current nature conservation policy focuses too much on individual species, but it would not be politically expedient to turn the nature conservation policy upside down right now, while the new EU member states are still in the middle of implementing this legislation."

Will a country like China, now the world's third economy, adopt a serious climate policy?

How should we proceed after the Kyoto Treaty has expired? Verschuuren is eager to see what agreements are made at the Summit on Climate Change. "Will a country like China, now the world's third economy, adopt a serious climate policy? People should not focus too much on mitigation objectives, because climate change is already well under way. The main thing now is to help developing countries, because climate change will have the biggest impact on them."

WAKE-UP CALLS

Kees Bastmeijer, Professor of Nature Conservation and Water Law, completely agrees with this view. "On the basis of our legal expertise, we want to link reliable research on sustainability issues to results in society. In every discussion about sustainability the challenge is to find a balance between all kinds of interests and values." Legal scholars at Tilburg University are trying to find ways to collaborate with other disciplines such as ecology and economics.

Bastmeijer is investigating what role law can play in solving problems relating to climate change at the international, national and regional levels. "We have to translate emissions agreements into a range of economic, social and legal instruments, to ensure that everyone participates and that some players in the market do not get a much better deal than others. Our present policy is strongly focused on the

development of technology. We want to reduce emissions, but apart from that just carry on with what we're doing. But we will have to make clear choices about our future economic growth. In the Netherlands perhaps we should simply not aim for further growth in certain sectors, such as aviation and transport. When agreements like this are given shape, rock-hard legal measures are crucial."

Nature conservation is not a luxury

COMPROMISING CONSERVATION

According to Bastmeijer the Netherlands is certainly not going to meet the objective – laid down by law – of ensuring that biodiversity is not further reduced after 2010. "Moreover, our nature conservation is failing. The conservation of the last 'green islands' is constantly being compromised so as not to limit our economic growth. We need to have the courage to decide to protect valuable natural areas for future generations. To an increasing extent economists are also stressing that ecosystem services are of huge economic value – nature conservation is not a luxury."

Many legal experts regard 'wilderness' mainly as a 'state of mind', not as a concept to which legal measures can be applied.

Assistant Professor of Encyclopaedia of Law Hendrik Gommer:

The Netherlands is lagging behind

"When I worked for Greenpeace as the campaign leader for sustainable energy, I promoted solar energy. In 2000 I had a solar energy consultancy firm, megaPV, and I supervised the four biggest solar energy projects in the Netherlands. Along with Germany, the Netherlands was the leader in solar energy. The year 2000 is the beginning of the age of the sun, said the Ministry of Economic Affairs at the time. I took the initiative of drawing up a Solar Power Manifesto, which was backed by no fewer than 75 social stakeholders. We wanted an unambiguous grant scheme, with guaranteed prices for a period of ten years.

I handed over this petition to Annemarie Jorritsma, the then Minister of Economic Affairs. But in her opinion solar energy was simply too expensive. It is astonishing to see a ministry adopt such a radical policy change in such a short time. I suspect that it was due to staff changes among the senior civil servants. In that respect the Netherlands is just like a banana republic! How can an entrepreneur invest in solar energy when government policy vacillates like this? You see exactly the same thing with wind energy. Once the Netherlands was a leader in climate technology, but now we are lagging further and further behind."

Bastmeijer: "Recently I was at a conference in Iceland, where the concept of wilderness protection really is used and taken into account in practice, for instance in reports on environmental impact and in granting permits." Concrete, applicable definitions of wilderness have been devised, such as: 'An area of 25 square kilometres which is unspoilt and free of buildings'. Not only Iceland, but also Canada and Spitsbergen, for example, have areas with an explicit legally protected status as wilderness areas. Knowledge of these approaches may be helpful in relation to the further development of international nature conservation law.

GUEST COLUMN

Climate is everywhere

By Hugo von Meijenfeldt

Not so long ago the problems of climate change were a topic reserved for environmental specialists. It was just as with other global environmental problems such as acidification and the hole in the ozone layer: experts from a large number of countries negotiated about a binding multilateral treaty. However, the climate negotiations did receive wide coverage in politics and the media right from the outset. The tense negotiations associated with the Kyoto Protocol and the withdrawal of the American Senate caused a great deal of consternation.

But it was not until late 2006 that climate change made it onto the agendas of government leaders and heads of state and the front pages of newspapers. The alarming scientific reports, Al Gore's tour and film, Stern's financial report and the European initiative of Balkenende and Blair were the direct cause of this.

An indirect cause is that other sectors apart from the environment were also affected by climate change: industry, housing, traffic and agriculture. They were confronted with the consequences of having too little water (for cooling or irrigation, for instance) or too much (flooded river forelands) and of plant and animal diseases as a result of high-temperature boundaries moving northwards.

These sectors are also the biggest drivers of climate change, which is why lately they have agreed or been compelled to do three things: (1) conserve energy, (2) use more sustainable energy, and (3) use less harmful fossil energy. In the Netherlands we have a national programme – 'Programma Schoon & Zuinig' (2007) – and in the European Union we have a series of directives in the Climate and Energy Package (2008). In the United Nations we hope to reach a climate agreement in Copenhagen (2009).

If we succeed, then climate may well be able to get other global negotiations moving again as well, such as those on world trade (WTO), since the main objective in Copenhagen will be to reach a combination of agreements on emissions reduction and funding streams. The emissions reductions will have to be laid down strictly by industrialized nations (25 to 40% in 2020 in comparison with 1990). The developing countries are expected to make their growth a little greener (15 to 30%), but for that to happen, funding flows from North to South will have to be put in place. The European Union is the world leader in regard to both of these objectives: in 2007 the EU stated that it was willing to reduce emissions by 30% and was prepared to pay a fair amount of 100 billion euros a year. This removed a great deal of mistrust among developing countries, as is shown by the offers now coming forward from Latin America and India.

Of course there are still many very familiar hurdles to be overcome. It seems likely that the American Senate will not be ready on time, Russia feels it has been sidelined and Saudi Arabia is demanding compensation for reduced oil sales – plenty of fodder for pessimists. But there is also plenty for the tireless negotiators and politicians who will not rest until – probably some time deep in the night of Friday to Saturday 18-19 December – a global climate agreement has been reached.

Hugo von Meijenfeldt is Deputy Director-General of the Environment Department at the Dutch Ministry of Housing, Spatial Planning and the Environment, and a Dutch climate delegate.

RESEARCH PORTRAITS

Businesses should not be morally indifferent

Name: Wim Dubbink
Position: Associate Professor
Department: Department of Philosophy; Tilburg School of Humanities
Research: Kantian moral and political theory, business ethics and political economy

"I started out on my PhD research project with a simple question: 'How can we guide the free market in such a way that it becomes sustainable?' However, in the course of the project, which culminated in 1999 in my PhD thesis *Duurzaamheid als patstelling. Over de onvriendelijke betrekkingen tussen openbaar bestuur, markt en civil society,*[1] I had to modify this question, because I was not satisfied with the answers I found. This question was treated too much as an operational issue, whereas I became increasingly convinced that it involved a philosophical problem.

The way many environmental economists think about sustainability is a good example. In economics the view prevails that governments are inefficient and do not accomplish very much. This is why environmental economists often say that the solution to the environmental crisis should be left to the free market. In other words – give the environment an owner and everything will be fine! However, this solution relies far too much on the government, which has to create the conditions in which a free market can flourish. Those same economists should be the first to point this out, since their analyses always begin with the assertion that the government is not very effective. Their opinion is inconsistent: the government is the problem, but that same government is also the solution, as organizer of the market. To a certain extent – I hope this will not be misunderstood – our desire to organize a problem-free society stands in our way.

Over the years the focus of my research has shifted towards the moral responsibility of businesses. I am examining what the morality of the market should be in a liberal society. At present the prevailing view is that businesses have limited moral responsibility. Businesses may not be involved in morally reprehensible matters such as child labour, but they are not obliged to concern themselves with moral or political issues for which they are not to blame. A recently published United Nations report confirms this view by saying that businesses 'must respect human rights, but are not obliged to establish or guarantee them'. So long as businesses themselves do not violate any rights, they are entitled to be morally indifferent. In my opinion the dogma of 'entitlement to moral indifference' is one of the biggest fallacies in contemporary market morality. Businesses do not have to solve political and moral issues, but indifference is at odds with the liberal idea of moral freedom."

[1] *In 2003 an English version of this book was published: Assisting the Invisible Hand: Contested Relations between Market, State and Civil Society. Issues in Business Ethics XX, Springer: Dordrecht.*

Learn young, learn fair

Vegetable Garden Project (Moestuinen) in the 'Wijsgeren' neighbourhood in Amsterdam. *Photo Friso Spoelstra / Hollandse Hoogte*

Granny tree

"When you first meet her, my Grandma seems like an old-fashioned type of lady. She lives in a hundred year old two story California Craftsman style bungalow on a sleepy old street. She has a really old crank style phone, but luckily it's been converted 'recently' and has a much newer rotary style dialer installed under the crank generator. But once in a while she likes to kick down the fence and, for instance, only use LED bulbs on the Christmas tree." *Photo on Flickr, anonymous.*

'Economic development and sustainability can go together'

Name: Erwin Bulte
Position: Professor of Environmental and Natural Resource Economics at Tilburg University and Development Economics at Wageningen University
Institute: CentER
Research: Development Economics, Institutional Economics

"Approximately once a month I supervise PhD students who are doing fieldwork – mainly in Africa – for our various research projects. Until a couple of years ago my research projects focused chiefly on environmental economics, but now we are mainly occupied with development economics.

For example, we are investigating the economic and humanitarian consequences of civil wars and other conflicts in Africa. With our research we are trying to gain a clear picture of the conditions which make reconstruction possible in countries dominated by civil wars. Those conflicts are often about natural resources – water, land – and the economic developments associated with them. The land conflicts in Burundi are a consequence of these developments.

What we learn there about the consequences of the unequal distribution of natural and financial resources generates input for the policy of ministries such as Foreign Affairs and Agriculture, Nature and Food Quality. For these ministries we have examined the economic effects in other parts of the world of the blending of biofuels with car fuels, which is mandatory in the Netherlands. These fuels are sometimes grown on big plantations for which small farmers' land is claimed. This not only has effects on the availability of land and on labour demand; the large-scale production of these biofuels also raises the prices of food. In addition, the effects of blending are not even positive for the environment and nature: on balance, it leads to practically no climate benefit. It even leads to further reduction of bio-diversity.

In Ethiopia we are investigating why farmers are willing or not willing to invest in sustainable use of their land. The farmers there are experiencing the direct consequences of climate change – they are faced with severe drought. One factor related to willingness to invest seems to be traditional family ties: if you have worked hard and invested a lot and you also have many relatives, then you will have to share your harvest with many people who have been less fortunate or have not worked as hard. The result is that some people invest less or go to less trouble to boost their harvest.

An interesting point is that family ties are less 'demanding' if households have access to financing – in other words, if they have an alternative to informal personal insurance. Sometimes economic development and investment in sustainability can go hand in hand.

But rich countries should be more aware of the significance of nature conservation for developing countries. We are still doing far too little for nature. Who will pay nature back for all the natural resources we use? The term for that is 'payments for ecosystems'. Why should countries in Latin America, Africa and Asia be prepared to protect their forests if we are not willing to compensate them for the international positive effects associated with that protection? If we really believe that sustainable forestry is important, then we have to be prepared to pay for it. Who is prepared to pay, and how should we organize payment? There is still a lot of interesting research to be done in this area."

The green king of bling

By Rik Oerlemans

Thanks to the credit crunch, the end of the age of ego seems to be in sight. Or is it not? Rik Oerlemans explores the answer with Aart de Zeeuw, Professor of Environmental Economics, and Kees Koedijk, Professor of Financial Management.

As far back as 1972 the Club of Rome expressed great concern about the depletion of raw materials and the way human beings treated the environment. This concern was lovingly embraced by the hippy culture of the 1970s, but apart from that it had little impact. In the late 1980s acid rain and climate change became known to a wide public, but again without major consequences. Nobody felt responsible. It was really up to the government, people reasoned. Omly in twenty-first century the realization began to dawn that things might really be going the wrong way.
The first companies which touted themselves as 'sustainable' – often without knowing what the term really meant – did so mainly as a form of window dressing. Initially there was a somewhat condescending attitude to the real pioneers of sustainable enterprise, such as Anita Roddick of The Body Shop. An increasing number of companies have now sincerely become involved in sustainable thinking and action. For one simple reason: it can earn a lot of money for them. Green Business is the new King of Bling.

The question is where the profit opportunities are

RECALIBRATING

The credit crunch dealt a heavy blow to our faith in old certainties. It was time for self-reflection. Today we are prepared to discuss many questionable habits: our greed, which is partly to blame for the crisis; our short-term thinking, which led us to grab as much as possible from the bargain bins of the throw-away economy, and also our work ethic, which until recently prescribed that you worked mainly in order to stop working as soon as possible. The end of the age of ego seems to be in sight. Thanks to the credit crunch we are recalibrating our perception of ethics. The environmental crisis fits in perfectly with the set of moral deformities which have blemished the face of society over the past few decades. In this respect 'environment' and 'credit' are synonymous: after all, we are holding the earth on trust for our children, but we have overplayed our hand by exhausting it, just as we have wasted our financial reserves by continuing to borrow. The environmental crisis and the credit crisis are very closely connected. In fact, the one heralded the arrival of the other.

Morally speaking, the economic crisis is good for the environment. But in financial terms? Economists are pragmatists, not altruists. The bottom line is that they act in their own interests. At present these are prompting them to think green. After all, the most valuable component of entrepreneurs' assets is their customers. If there is no more world, who's going to buy stuff? Ironically enough, this is the main reason why businesses are getting greener: to preserve their market.
A second reason for commercial greening is the fact that investing in sustainable equipment and processes often means not only ecological savings, but financial savings as well. Sometimes an investment does not immediately generate savings, but the consumer is more and more often prepared to pay a bit more for 'green' businesses and products. And green money is good money.

So the crisis is good for the environment, both in moral and financial terms. We are awake. But does that mean that the economic crisis will also help to create a green investment climate for the government? Yes and no, says Aart de Zeeuw, Professor of Environmental Economics. "In terms of government investments, for years a battle has been going on between green and grey; in this case, grey stands for the asphalt lobby. If it's too hard to give priority to green in times of prosperity and calm, then I wouldn't have any illusions about it in times of crisis. On the other hand: the longer the crisis lasts, the better it is for the environment."

A RIGHT TO POLLUTE

In order to reduce carbon emissions, Europe is now issuing emission allowances to big companies in the member states. An emission allowance is a right to pollute: a permit to release a certain amount of pollution into the air during a certain period. Emission allowances are allocated to polluting companies in each country separately. This gives rise to trading in polluted air, because a modern company in Sweden that works with hydro energy and therefore puts less strain on the environment than an outdated company in Eastern Europe can sell its emission allowances. And it works! A lively trade in emission allowances has now arisen at the stock exchange in Chicago. Prices are rising.

Environment and credit are synonymous

Why can't private individuals obtain negotiable allowances to pollute as well? If people get rid of their cars, they could sell some of their allowances to someone who wants to carry on driving. Theoretically this is possible, according to Aart de Zeeuw. "But then you need countries with effective taxation systems – otherwise you could never keep track of that trading properly. In countries with flawed tax systems, such as Belgium and Italy, that would lead to large-scale fraud. But it is certainly an appealing idea, because cars are responsible for half of all CO_2 pollution."

INNOVATION

If we are to have any hope of a sustainable investment climate, we also need the influence of science and investment in innovation. The question is whether the business world is prepared to invest. De Zeeuw modifies this: "The question is where the profit opportunities are."
Kees Koedijk, Professor of Financial Management, sees opportunities for sustainable innovation in times of crisis: "Companies are now still occupied with survival, but interest in sustainability is breaking through. The big companies are taking the lead: Nike, Toyota and Philips are seriously committed to green investments. In this context 'green' is quite a broad label; for instance, no child labour is involved in producing a Nike shoe. This gives the producer an important selling point."

Let us hope that the word 'sustainable' will have a long life. The green king of bling may redefine our future.

RESEARCH PORTRAITS

‘Sustainable purchaser improves company’s image’

Name: Bart Vos
Position: Professor of Purchasing Management
Department: Organization and Strategy
Research: socially responsible/sustainable purchasing, global sourcing and designing effective customer-supplier relationships

“When I was appointed in 2003 the response was sceptical: surely sustainability was not a purchasing issue? But if you bear in mind that the government alone makes purchases to the value of about sixty billion euros a year, the potential of sustainable purchasing policy must be clear.

In 2006 sustainable purchasing suddenly became a hot item after Al Gore’s film about climate change. At the national level the arrival of Jacqueline Cramer as Minister of Housing, Spatial Planning and the Environment also contributed to greater awareness. Cramer declared that one hundred per cent of the government’s purchases should be sustainable – by 2010. I told Cramer that this was in itself a praiseworthy endeavour, and a powerful signal, but that it also concealed a danger. If you make businesses use a kind of box ticking system, which compels them to meet strict requirements, you may well cancel out all their own initiative and creativity. High standards are fine in themselves, but they should be achieved by stimulating innovative processes.

At any rate, this became my signature issue. And now I am acquiring colleagues all over the world; a research field focused on purchasing management, the new role of purchasers and their relationship with their suppliers is clearly taking shape. Everyone who wants to buy sustainably is confronted with many new aspects which require specific knowledge. If purchasers enter into contracts, they need to know everything about packaging, energy conservation, carbon emissions, child labour, you name it. Good purchasers try to exclude any risks to their companies as much as possible, but they can never be completely successful. For example, C&A and H&M were accused of using child labour, because children in Uzbekistan worked in cotton picking. Although these are companies which are seriously committed to sustainable purchasing, it was difficult to establish the facts, because there were too many links in the chain. Good purchasers also look for creative solutions to improve their companies’ images, which in the long term generates money; for instance by using labels such as FSC for hardwood which does not come from old-growth forests.

One of my research projects is about what makes sustainable purchasing policy successful. I focus on the role of management: the commitment and determination of the management is of paramount importance, but how do you get the subject onto the agenda? I am also examining the management of customer-supplier relationships; it is very important for a company to be able to rely on its suppliers. And finally I would like to study ways in which purchasers cope with psychological dilemmas – what they do in stressful situations when the management puts them under pressure to buy cheaply, whereas sustainability is better, but costs more in the short term.

Especially now, with the credit crisis, research into sustainable purchasing is of crucial importance. Research I have conducted so far has shown that even in these economically less prosperous times people and companies are still interested in sustainability.”

Wolves and bears confront us with legal dilemmas

Name: Arie Trouwborst
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Department: Constitutional and Administrative Law, Faculty of Law
Research: environmental law and environmental policy

“When it comes to solving environmental and nature conservation issues, the Dutch government often deliberately limits itself to what is absolutely necessary. In many cases this boils down to the minimum protection measures prescribed by European law. If you look at the specific area of nature conservation, it’s easy to see that this approach is at odds with global, European and national policy intentions to put a stop to what is known as the biodiversity crisis. What this crisis, which has been going on much longer than the present economic crisis, entails is that on average plant and animal species are dying out faster than they are arising. It has been calculated that the extinction rate is now 100 to 1000 times higher than the average in the past. Whatever the case may be, the fact that the Netherlands looks for the minimum requirements of European and international law means that the relative importance of the European and international rules in question is increasing.

Two of the subjects I am occupied with against this background have to do with shifts in nature. The first is the adaptation of nature to climate change and the role of the law in that context. If we want species and ecosystems to be able to adapt to the changing climate without too much damage, then our present nature conservation law will have to be reconsidered carefully and changed. My colleagues and I are trying to respond to this need. The fact that very little legal research has been done in this area makes it even more challenging.

The other subject has nothing to do with climate change, but is very closely related to shifts in nature. For a change, this is a success story. As a consequence of effective legal protection and reintroduction, big predators like bears and wolves are slowly but surely advancing towards countries where they have previously been extinct. Because they have not occurred there for a long time, this situation brings up new legal problems. For the Netherlands, the wolves approaching through Germany raise specific questions. Should the Netherlands welcome them with open arms, or does the government have the legal capacity to determine that there is no room for wolves in this country? Do we still remember Bruno the bear? Bruno was a descendant of Slovenian bears released in Italy who failed to observe national borders and travelled through Austria to Germany. He came close to human settlements and devoured sheep and goats. After a few failed attempts to catch him, the bear was shot down.”

GUEST COLUMN

Climate and consumer confidence

By Lou Keune

The climate crisis is not isolated. It is connected with a multitude of ecological and social issues such as overuse of natural resources, the continued existence of large-scale poverty, and steadily increasing global inequality. This situation also gives rise to violent conflicts ranging from piracy to terrorism. The survival of many people and ecosystems is at stake, within the relatively short term of a few decades. The slowness and superficiality of actual policy formation is completely at odds with the urgency of the situation.

Compare this tardiness with the response to the financial-economic crisis, for which large-scale measures were taken. In the space of a few months hundreds of billions of euros and dollars were conjured up and banks were nationalized. The scale and nature of the measures taken surprised many people. Apparently this is an issue whose urgency is acknowledged by the rulers of the earth.

In the first few months of this crisis many economists and politicians sought and found the causes in the nature of the global economic order. The crisis was also seen in a broader perspective; specifically, connections were made with the food crisis and the climate crisis. Many distanced themselves from neo-liberal views and policy. These views suddenly vanished into thin air. A contributing factor was that one of the main advocates and implementers of neo-liberalism, the IMF, expressed regret and has now become much more generous and less demanding when it comes to giving credit to developing countries. And now that another neoliberal agent, the WTO, is also keeping a low profile, much of the criticism has died down.

The economic crisis is being narrowed down to issues such as the bonuses in the bank world. And even in regard to that tiny component of the whole it now seems to be business as usual again. The economists have also gone back to their old routines. “Has the recession reached its lowest point yet? It’s starting to look like it, look at the development of the GBP, the rate of contraction is slowing down”. This is then followed by a discussion about V, W or L curves. All this is in spite of the fact that famous economists ranging from Daly to Stiglitz showed decades ago that the GDP is simply not a good indicator. It does not serve as a measure of welfare, and it gives an incorrect picture of the economy because it fails to add and subtract what needs to be added or subtracted.

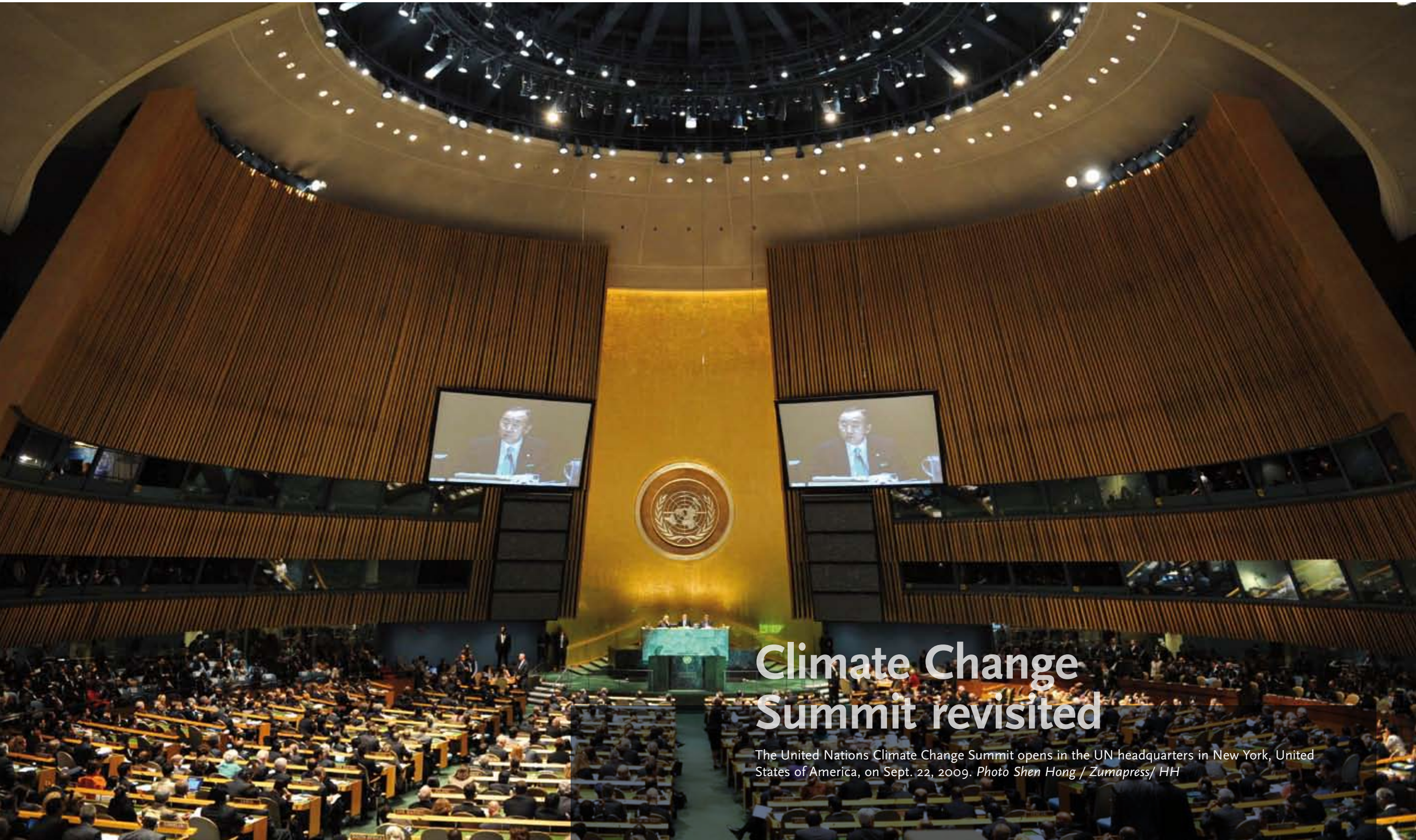
The classic formula has now been readopted: growth is essential, consumer confidence must be boosted, people have the costly duty to save less and spend more. And it is truly a costly duty – because due to this overconsumption, this Pursuit of More, carbon emissions are much too high, soon there will be no fish left to catch, even more Somalis and Senegalese are losing their livelihoods, the Bengalis get flooded, the forests where indigenous peoples live are disappearing, hundreds of thousands of children have to go to work instead of to school, 700 million workers in the informal sector earn less than 1 euro a day, even more pirates and migrants are appearing, and the wretched of the earth are becoming even more susceptible to fundamentalism and populism.

It is time for a new Enlightenment, first of all among the practitioners of economics.

On 21 January 2010 a conference on these topics, hosted by Platform Duurzame en Solidaire Economie, will be held at Tilburg University. See www.PlatformDSE.org (Dutch only). Lou Keune is one of the coordinators of the Platform.

The clock is ticking

Thousands of climate change activists gathered in New York's Central Park in September 2009 to form a human sculpture - the shape of the earth trapped inside an hourglass. The event was organized by Oxfam as a part of the tcktcktck campaign. *Photo Charles Sykes / Rex Features / HH*



Climate Change Summit revisited

The United Nations Climate Change Summit opens in the UN headquarters in New York, United States of America, on Sept. 22, 2009. *Photo Shen Hong / Zumapress/ HH*

A first for Tilburg University

Former Dutch prime minister Ruud Lubbers charges his electrical car at a charging point at Tilburg University, the first charging point of energy companies in the Netherlands united for this purpose. *Photo Ed Oudenaarden / ANP*

Gaia Logica: seven moral challenges of sustainability

In his recently published book Gaia Logica Professor Kees Zoeteman describes seven elemental spheres which can be distinguished in the structure of the natural world, from solids and liquids to the spheres of electricity, magnetism and radio-active radiation. He gives an overview of the problems human beings cause in these spheres and the moral challenges entailed in solving those problems. On the basis of seven sustainability attitudes we can learn how to deal with them in practice.

For instance, the book shows that in the sphere of solids creative artistic work predominates, as is reflected in our landscape and urban design. In higher natural elements such as water and air the most important thing is to learn to accommodate actions of each other, and with the element of warmth to be united in a global solidarity in solving the climate problem. Problems which occur in the highest elemental spheres require greater consciousness of the consequences of the computerization of our environment (the amoral aspects of the internet, for instance), less pollution of the space around the earth (by radio waves and space travel debris) and awareness of the impacts of strong fluctuations in the geomagnetic field.

When technologies require a higher moral attitude than we are accustomed to, we should use them with caution. This applies for instance to nuclear energy, which may burden tens of thousands of generations with radio-active waste problems; it is difficult for anyone to take on the administrative responsibility for a consequence like this.

Kees Zoeteman, Professor of Sustainability Policy in International Perspective, has worked his whole life on sustainability and environmental management issues. As a director and researcher at the National Institute for Public Health and the Environment and later as a senior civil servant at the Ministry of Housing, Spatial Planning and the Environment in the Netherlands he learnt that polarization between environmentalists and businesses is not effective, whereas collaboration based on shared goals is. Zoeteman is a member of the Dutch Council for Housing, Spatial Planning and the Environment – the advisory body for Ministers Eberhard van der Laan and Jacqueline Cramer – and also chair of the Commission on Genetic Modification (COGEM), an independent state advisory body on the admission of genetically modified organisms (www.cogem.net). From 2001-2004 he chaired the Management Board of the European Environment Agency in Copenhagen and the Globus Institute in Tilburg (see www.tiasnimbas.edu) and since 2005 he has been working at Telos, Brabant Centre for Sustainable Development (www.telos.nl).

Revised Handbook of Globalization and Environmental Policy

In the current era of globalization, national governments are increasingly exposed to international influences which can present many new constraints and opportunities for domestic environmental policies. The Handbook of Globalisation and Environmental Policy (published by Edward Elgar, Cheltenham, UK) pushes the frontiers of theoretical and empirical knowledge, and provides a state-of-the-art examination of the critical effects of globalization on environmental governance. In 2010 Frank Wijen, Kees Zoeteman, Jan Pieters and Paul van Seters will prepare a new and completely revised edition of the handbook.

“You can only prove that a model doesn’t make sense”

By Enith Vlooswijk

Should we invest billions in reducing CO_2 emissions? Or would it be better to invest that money in industry, so that future generations will have enough money to raise their dykes? Economists do not agree on these issues, which is understandable in view of the different assumptions on which they base their models.

“The oil will be depleted in the coming century. Will we make a transition to heavy oil and coal, or will we develop alternatives which produce lower emissions? If we opt for the easiest way, we will be in big trouble climate wise.”
Reyer Gerlagh, Professor of Environmental Economics at Tilburg University, makes no effort to conceal his concern about climate change. He argues in favour of financial incentives to stimulate the development of sustainable technologies. According to Gerlagh, the reason why not all economists share this view is related to a fundamental controversy which has divided economists ever since the 1970s.
“Economists completely disagree regarding the costs and benefits of measures to reduce carbon emissions. Conservative economists like William Nordhaus say that the rise in temperature will mainly affect agriculture in sub-tropical areas. Our Western economies will not suffer so much from it. As a result, the costs of climate change he arrives at are surprisingly low. It is true that agriculture in developing countries will suffer more, but people there earn so little that the loss of income will be limited.”
If you follow this line of reasoning, the costs of climate change soon turn out to be lower than the costs of mitigating that change. So why should we bother? Gerlagh: “You might say – instead of spending a billion euros on measures to avoid losses in the future, it would be better to invest that money in industry. In a hundred years’ time that will generate hundreds of billions of euros, which will raise a lot of dykes.”
The question is whether losses caused by climate change should be expressed in terms of loss of revenue. And can financial wealth compensate for the loss of natural riches? The English economist Nicholas Stern thinks it cannot. For ethical reasons he believes the losses in developing countries should be given a much higher priority. Moreover, he rejects the assumption that the effects of climate change can be dealt with in a hundred years’ time by investing in industry. It is no surprise that his calculation of the loss due to climate is twenty-five times higher than Nordhaus’s.
“Stern has read the same literature as Nordhaus, but from his own perspective”, says Gerlagh. “The discussion is so fundamental that it would not be easy to find a compromise.”

Gerlagh himself tends more to Stern's side. His research adds substance to critical comments on the arguments against reducing emissions. “Many of the calculations in this area are based on simulations. We need to collect more empirical information. The oil lobby often claims that reducing emissions will be expensive and ineffective because energy-intensive businesses will leave. This is scare tactics. I am collecting data about energy consumption in various sectors in various countries. Do countries which invest in reducing emissions really have a small share in energy-guzzling sectors like the metal industry? And are businesses really getting out? So far the figures are showing that if this effect exists at all it is minor.”
Gerlagh also thinks that the costs of measures to reduce emissions will automatically drop, because higher energy prices stimulate the development of new technologies. Therefore halving the emissions does not mean that we can only drive half as much. According to Gerlagh that idea is based on a static image of the world which fails to take technological developments into account.

His colleague, economist Dr Sjak Smulders, would like to add a note of caution to this line of thinking. “This reasoning is too optimistic. If you adopt a climate policy, there will be less technological progress in other areas, for instance in improving household appliances, because there will be less money for that. This kind of policy is good for the climate, but not so good for consumer welfare. You shouldn’t neglect costs of that sort.”

We need to collect more empirical information

As an economist, Smulders studies the relationships between economic growth, technological developments and energy consumption. Those relationships are complex, which is why Smulders warns people about what he calls the ‘spreadsheet economy'. “There is no button you can just push so that suddenly there is more technological development. Nor can you say what percentage of economic growth automatically leads to a certain amount of carbon emissions. Models like that, which are often developed by physicists and based on figures from the past, are not sophisticated enough. They don’t take human decision-making into account – and people respond to all sorts of influences.”
What makes someone decide to leave the car at home, turn off the lights and turn the heating down a degree? Conventional economists would say: price incentives. If they do not contribute, the urge to drive your car is apparently too great.
Smulders takes a different view. “Traditional economists take certain preferences people have, such as driving, as givens. New economists say that those preferences also depend on what the neighbours are doing. If it’s 'not done' to drive in a Hummer, people will change their behaviour. They don’t have a preference for cars, but for social appreciation.”

The branch of economics known as behavioural economics has been describing how emotions dominate people’s behaviour ever since the 1980s. While neo-classical economists pay very little attention to the influence of non-financial incentives, over the last five years behavioural economics has been gaining more influence. According to Smulders the economic crisis is now enhancing this trend. “The neo-classical school of thought

"Ultimately you can never know for sure that a model provides a good reflection of reality"

was always that as long as people let themselves be guided by price incentives and profit, the economy would prosper and therefore society would too. However, the crisis was caused by the group which put this idea into practice the most. Economists are becoming increasingly aware that other values are also important."
Behavioural economics focuses mainly on economic processes at the micro level – for instance, an employee who no longer does his best because a fellow-worker has been given a rise and he hasn't. According to Smulders, models which describe micro-economic processes like this can also be used in macro-economic models. And that creates perspectives. "I think our behaviour is much easier to influence than the old economic model predicts. If you don't start with a spreadsheet model, but a model in which several factors play a role, that model will also become more flexible."

No-one is better able to assess the prediction value of any model whatsoever than Jack Kleijnen, Professor of Simulation and Information Systems. His expertise is in the field of methodological analyses of models. It makes no difference whether they are about climate control or the radio-active contamination of gloves in the treatment of cancer patients.
"You can never prove that a model makes sense, but you can prove that it doesn't", says Kleijnen. "In science it's all about the falsification of models. But policy makers want confirmation that their favourite model is right, because then everyone can go home satisfied. That is dangerous."
Several years ago the Dutch Ministry of Traffic, Public Works and Water Management went in search of a climate model on which to base its policy. The National Institute for Public Health and the Environment (RIVM) was given the task of designating which variables had a decisive role. The Institute enlisted Kleijnen's aid.

"Our behaviour is much easier to influence than the old economic model predicts"

"Once these 'critical' variables have been chosen, their influence on the outcome of the model is measured", says Kleijnen. "Different combinations of values for those variables lead to different scenarios. Often the variables are changed one by one to see how that changes the outcome. However, you can study scenarios more effectively by changing several variables at once. That is much more realistic. At RIVM that's what I did, and I discovered which variables were in fact critical. I also found that there were computer errors in the model. If you test several scenarios, you have more chance of discovering such errors."
According to the professor, the simplest rule of thumb in assessing a scenario is: garbage in, garbage out.
"If you feed the wrong information into a model, it will come back out again. If the model itself makes no sense, the outcome won't make sense either. Ultimately of course you can never know for sure that a model provides a good reflection of reality – because you can never really know reality."

Small is beautiful

How green is your car? *Photo Johannes Abeling / Hollandse Hoogte*

No Don Quijote

The Dutch political party Green Left puts wind turbines in front of the parliament building to point out to the Minister of the Environment that more wind energy is needed. *Photo Michiel Wijnbergh / Hollandse Hoogte*

GUEST COLUMN

Investment funds needed for developing countries

By Maarten Hajer

The climate issue is closely linked to two major global issues: addressing the loss of biodiversity and global poverty. The harmful effects of climate change – such as floods and reduced food production – affect mainly the developing countries, while these countries make little use of the fossil fuels such as oil, coal and gas which are to a large extent responsible for climate change. Like poverty, the conservation of biodiversity is also connected to the climate issue; deforestation is one of the main sources of carbon emissions and also leads to loss of biodiversity. The extension of forests, for example, would be beneficial in relation to both biodiversity and climate.

There is no lack of global solution strategies. Energy conservation and renewable energy, but also nuclear energy and carbon capture and storage are all options which could contribute to solving the climate problem and at the same time increase the security of energy supply. Technologically speaking it would be quite possible to cut greenhouse gas emissions worldwide by 50% by 2050. There is also increasing consensus about the costs of a turnaround of this magnitude: the estimates range from about 0.5 to 2 per cent of the global GDP. These are hardly alarming percentages. This is why it is crucial for broad agreement to be reached in Copenhagen regarding reduction targets for 2020 and 2050, between the wealthy countries, the rising economies – China, India and Russia – and the OPEC countries.

However, this is only part of the story. It is not so much the technology itself that is the problem – it is the distribution of the costs. Who will pay to compensate the developing countries? Another factor is setting up the institutional arrangements to ensure that the agreements reached are in fact met. But above all we have to hope that sustainability will become a new and universally accepted value. Economic efficiency is something none opposes – as is energy conservation. But without a change in values we will consume more and more, with increasing efficiency, and we will certainly cancel out the effects of energy conservation by consuming more energy.

In spite of the major steps taken by China, the US, South Africa, Australia and Japan, the current proposals put forward by the wealthy countries are not sufficient to limit the global warming of the earth to two degrees. The world summit can be a success if steps are also taken to transfer technology and expertise to developing countries through investment funds to help ensure that their economic development is less carbon-intensive. These funds could come from the revenue of a global tax on greenhouse gases or emissions trading, or from direct contributions by the wealthy countries. This also makes the big challenge stand out: can global agreements be reached about financial transactions during a period of economic crisis and tight financial markets?

If Copenhagen is a success, we will enter a new stage. The consequences for everyone will rapidly become clear. Ultimately the solutions to global problems can be seen and also leveraged at the local level. Very soon after Copenhagen it will become apparent that sustainability is no longer an issue which is far removed from our personal lives.

Maarten Hajer is Director of the Netherlands Environmental Assessment Agency, a national institute for strategic policy analysis relating to the environment, nature conservation and spatial planning.

Religion as a source of inspiration for nature conservation

By Tineke Bennema

Why do people spend time and money on nature conservation? Tilburg research shows that religion is sometimes a source of inspiration, even for non-religious Westerners. But religion alone does not induce people to adopt environmentally conscious behaviour.

The Chipko ('I embrace') movement in India in the 1970s received worldwide attention when peasant women chained themselves to trees which were going to be felled because multinationals wanted to sell the timber. The women had economic reasons (they would have to walk much further to fetch wood), but they were also driven by traditional religious convictions. They felt strongly that financial gain should not be at the expense of nature, which was the dwelling-place of the divine. The images of these women who successfully stood up against large-scale logging machinery inspired many activities in India and abroad.

Can we in the West learn from non-Western religions when it comes to making a contribution to nature conservation? Tineke Nugteren, an Indologist who works at the Faculty of Humanities at Tilburg University as a lecturer in religious pluralism, is cautious. While she does believe that religion influences the way we approach and treat nature, she thinks that religion alone is not enough for nature conservation. Besides: "Often it works both ways – religion can also be a reason to do nothing. If a river in India which is seen by believers as a goddess is severely polluted, people may say: 'The goddess is all-powerful and she will fix it. So we don't have to do anything.' There is a certain danger of anachronism and an overly romantic picture of the situation: with our present knowledge and our current problems we are inclined to look selectively in the sacred writings of other cultures, seeking to confirm how nature-friendly they were. There are some things you can't investigate in retrospect – we don't know what influence the fine ideals in their sacred writings exerted on everyday life."

"What you can examine is whether a religion's world view influences the way its followers treat nature. Take for instance the phenomenon of 'sacred groves' – small patches of sacred forest in the landscape. These sacred places are so important to religions that they may not be harmed. You just can't touch them. You can investigate whether people who respect places like this are also likely to be more cautious with nature in other places. In Japan, for instance, Buddhism offers no protection against greed: in spite of their aesthetic and religious love of nature, the Japanese are major tree fellers in large parts of Asia. In Bhutan, on the other hand, the residents put the brakes on tourist projects after they heard about the ecological consequences of similar projects in the neighbouring country of Nepal. It is quite likely that the influence of Buddhism had something to do with this."

CREATED ONE AFTERNOON

Nugteren's colleague Assistant Professor Dr Leo van der Tuin has no doubts that Christianity can exert a positive influence on nature conservation. He has concluded this from his PhD research among adults to whom he presented the creation story. It was presented as a story, not connected in any way with the discussion about evolution. This is a story in which human beings are assigned a modest role – after all, man was only created 'one Friday afternoon'. All of us and all other things are part of that creation – we constitute a whole. And at the end of the seven days God rested and enjoyed his creation. The story was told in this way to make people aware that they are part of creation and nature. Before and after people read the story, Van der Tuin asked them questions, and he found that after the readers had become aware they said they felt more involved in nature as a whole. They also wanted to make more of an effort for conservation.

"The environmental movement should acknowledge the aesthetic element more in order to attract people to make a commitment"

"In this way I was able to present the relationship between creation and sustainability from a spiritual perspective. Respect for life. Everything that lives deserves respect and maintenance in order to be preserved. In Christianity man has always been seen as the image of God and has been allowed to rule over nature like a god. The Enlightenment elaborated on the second part of this idea. Human beings began to think about the world themselves, they themselves became the centre of attention and they began to rebel against the mentality of obedience propagated by the Church. Nature, including man, became the object of investigation and of control by man. This was the beginning of modern science and also of the manipulation of nature. But if you read the creation story properly, you see that not only man is the image of God, but that the whole of reality is described as an image of God, and that human beings occupy only a modest place in that whole."

"So people – even non-religious people – can learn that awareness of our modest place in the creation story. Although the churches are losing members every year, we can still use the creation story. It's a beautiful story and a beautiful way to explain the world and to gain respect for creation and nature."

In the autumn Van der Tuin will start the same kind of study among young people. He expects at least an equal result. Possibly the outcomes will be helpful in education, for instance in world view classes. As a word of caution, he says that awareness does not necessarily mean that people will really take action to protect nature. "I can't measure that. But at least it's a start."

"Religion can also be a reason to do nothing"

COMBINATION OF FACTORS

Nugteren also concludes that awareness based on religious motives alone is not enough to induce people to make efforts for sustainability. "You have the best chance of success if several considerations play a role. The success of the Chipko movement was due to the combination of economic, cultural-historical, traditional and religious motives. I would like to add that the environmental movement should acknowledge the aesthetic element more in order to attract more people to make a commitment to nature conservation. For example, it is sometimes underestimated how much people like to have greenery around them in the city, and that they like to work in beautiful surroundings and to live in a neighbourhood where you can get to nature areas quickly. Pleasure and quality of life, and an aesthetic experience of nature are very important elements of awareness."

Sustainable shopping among the apple trees

By Marga van Zundert

People are often urged to behave more sustainably in a pedantic way, according to social psychologist Marijn Meijers. Her research aims to find more subtle methods.

Green is hip. This year the Lowlands music festival used green power and served beer in bioplastic cups. Leonardo di Caprio and George Clooney drive hybrid cars. Nevertheless, sustainable products are not yet popular among the ordinary public. The market share of organic and fair trade products has been rising rapidly in recent years, but the total has not yet got any further than three percent. Green power and fair trade coffee are doing better. Almost one in three consumers opts for these products – but still not a majority. In shops people's purses still have a bigger say than the human or animal suffering attached to the products or the environmental disasters we may have to face in the future.

The big question is: how can you stimulate sustainability? Social psychologist Marijn Meijers is conducting research on this topic. "I want to gain more insight into why that is and we are also trying to find more subtle ways to induce people to consume more sustainably."

Women with children are the most sustainable consumers

ME TOMORROW, OTHER PEOPLE LATER

Ads for sustainable products often stress the long-term perspective. If we want our children and grandchildren to live on a clean, safe and liveable planet, we have to take good care of the earth. Meijers wondered whether this idea really produces the right mindset for people to buy sustainable. She devised an experiment in which students were unconsciously induced to think about either 'me' or 'other people'. These groups were then further divided by giving them – again unconsciously – the terms 'tomorrow' or 'later'. With these mindsets, the subjects had to opt for more or less environmentally-friendly behaviour. What emerged was that the most responsible choices were made by subjects with the mindset 'others and later', but also by those who had been given 'me' and 'tomorrow'. Meijers: "So it is not necessarily the case that someone who is thinking about here and now focuses purely on pleasure. People can also make sustainable choices when they are thinking in the short term, but then the focus has to be on the individual – on 'me', not on the world at large." The effect of the right mindset can be considerable. During the experiment, sixty per cent of the subjects with the appropriate mindset opted for organic chocolate as opposed to forty per cent in the other groups.

APPLE TREE

Meijers also wants to do practical experiments. Along with postdoc researcher Marret Noordewier and Professor Diederik Stapel she received a grant for that purpose from TransForum, a national innovation programme for sustainability in the Dutch agricultural sector and green spaces. "I will be very interested to see if people make more sustainable choices if there are photos of nature hanging in a shop. We know from research that people become more egoistic, materialistic and competitive when they see price tags. Then it's only about me, me, me. An apple with a price tag or a bag of pre-packaged salad mix has a completely different effect from an apple on a tree or a head of lettuce in a field. Apparently if we see the products in their natural environment, we think the environment is more important than ourselves. Then it's about 'us' again – us and the environment. Photos of trees in the meat section may encourage people to buy free-range chicken."

PREHISTORY

Young women with children always turn out to be the most sustainable consumers in the Netherlands. Meijers is examining this phenomenon in more depth in a purchase data study. For instance, does it apply to all products? She also wants to look into the background. There is a theory that the gender difference in sustainability can be explained by evolution. In prehistoric times men went out hunting and speared the first prey they could, whereas women took care of the land and the children, which are more long-term projects. This is why women think more about the long term, especially if they have children. Meijers: "This evolutionary explanation sounds interesting, even though we live in a completely different society. At any rate, we want to take a closer look at the differences in sustainable behaviour between the sexes and what causes them."

It is not necessarily the case that someone who is thinking about here and now focuses purely on pleasure

It is good to stimulate sustainability, but shouldn't we do that mainly through prices? Or would a 'meat tax' be the ideal solution to stimulate organic or free-range meat? "A combination is probably the best solution", says Meijers. "People do not always make the best choices, neither for themselves – think about smoking, drinking and eating fatty foods – nor for the community – think about driving and cheap grey energy. The government can manipulate those decisions to some extent. But even if bio-industry meat and unsustainable products are taxed, there will probably still be a price difference and stimulation will still be needed. Besides, not everyone has warm fuzzy feelings about sustainability."

Out of conviction or guilt

Many people think that after exercising they have earned a biscuit or snack – after all, they've just got rid of some calories. In the same way there are people who overcompensate their sustainable behaviour. Including one organic product in your shopping is enough. However, some people are very consistent and always take sustainability into account. Psychologist Marijn Meijers thinks this might be linked to motivation. Are you environmentally aware because nature and the earth are important to you personally? In other words, do you act from personal conviction? Or do you buy sustainable products because you think you should? If this is the case, then you are more occupied with meeting goals and expectations which other people have formulated, and one sustainable action may be enough to assuage your feelings of guilt.

RESEARCH PORTRAITS

Sustainability is a selling point

Name: Hans Mommaas
Position: Professor of Leisure Studies
Institute: Telos (Brabant Centre for Sustainable Development) and SES (Center for Sustainable Enterprise and Society)
Research: The role of leisure activities (culture, sport, recreation, tourism) in the sustainable development of towns and regions

"We have the wind in our sails, to use a sustainable expression. Sustainability is high on everyone's agenda. Sustainability is a selling point, both for provincial and local authorities, and for businesses. The climate crisis, the energy and food problems and of course the credit crisis have made it clear that economic, ecological and socio-cultural developments are closely interwoven. Telos will continue to strive towards this 'added value' in its new organizational framework.

Telos, the Brabant Centre for Sustainable Development, was recently incorporated into Tilburg University's Center for Sustainable Enterprise and Society (SES). Telos is a strong brand, and we will not abandon that. With this consolidation of expertise we will raise our research to a higher level. We will now be able to change tack more quickly with the economic expertise of the economics faculty and CentERdata. We will also have a stronger position internationally.

The recurrent thread in my research is a trio of topics: leisure, sustainability and regional development. I make connections between these three areas, not only in theory but also in relation to policy. Sustainability is also about finding a new use for outdated industrial estates, about urban neighbourhoods which have fallen into social decline and need restructuring, about cultural heritage which needs a different function, and about a different kind of economy for villages and towns. Recreation, sports, culture and tourism, in short leisure activities, are playing an increasingly important role as a source of economic, social and spatial development.

For Telos the core question is: how can you measure sustainability and how can you become more sustainable? When can you call a city, province or business sustainable? Telos has developed assessment instruments for this purpose which enable its customers to gauge their levels of sustainability. What are the objectives and targets? When do they have to be reached? What investments are needed? A Triple P scan, with the Ps standing for People, Planet and Profit, is used to analyse whether the organization is on the right track. With this scan, Telos assesses, measures and monitors to what extent projects contribute to a more sustainable community (see also www.PPPscan.nl).

To give an example of one of these scans: the province of North Brabant wants to reduce its use of fossil fuels and put as little strain as possible on the climate. In energy scenarios Telos showed that solar energy and residual warmth may be the most important factors. Another example: along with theme park De Efteling, Telos investigated sustainable energy streams and increased sustainability of water management on the neighbouring golf links.

Telos does not give report marks, nor does it issue certificates. We provide instruments to help reach goals. We organize the mirror we hold up to our customers. We do not say whether a Tilburg mall is a good idea or a silly one, but we do make a list of the criteria a project like that should meet in terms of 'integrated sustainability."

Feel the heat

Processing of waste at the Dutch waste-processing firm Twence. The waste is burnt and the heat generates electricity for 150,000 households. *Photo Ton Koene / ANP*

Biotecture

The Earthship in the Dutch city of Zwolle is being built with one thousand car tires and four thousand bottles. Similar houses have already been built in France and Great Britain. The American Michael Reynolds is the founder of Earthship Biotectures. *Photo Koen Suyk / ANP*

Better regulation of energy market can still work

Name: Bert Willems
Position: Assistant Professor
Department: Department of Economics, CentER, TILEC
Research: regulation and market operation in the energy sector

"The 'polluter pays' principle is supported by the market if the government makes sure carbon emissions are priced. But in the interests of efficiency, everyone should pay the same price for carbon emissions: households, road users, factories, etc. For example, relatively speaking users of passenger cars pay too much. In conjunction with Machiel Mulder, chief economist of the Dutch competition authority's Office of Energy Regulation and extramural fellow of the Tilburg University institute TILEC, I am writing about this in detail in an advisory report about the Dutch energy sector for the 2009 Preliminary Recommendations of the Dutch Royal Society of Economics. The main question is when and how the government should act to safeguard public interests and when the free market should be left to its own devices.

In my opinion the 'polluter pays' principle only works well if the carbon polluter pays a price for each tonne of carbon emitted. This would be fairly simple to introduce, and moreover would make the European Union's efficiency standards redundant. Ultimately we have to stop carbon emissions interfering with the market in such a way that optimal economic conditions are not attained.

On the other hand, the government should stimulate activities with positive spill-overs in the energy market, such as innovation. The problem is that patents on inventions only remain in force for ten to twenty years, which is too short to tackle a long-term problem like climate change. There are not enough incentives for innovation. Moreover, in Europe there is a lack of clarity about climate policy in the medium term. For the market to operate effectively, certainty is needed that the government will not let its climate policy slide.

Security of supply should also be better regulated. For example, power companies might take too many risks, just as happened in the banking sector. To prevent a power crisis, the government should regulate those risks. Another danger is that the Netherlands could become too dependent on one source of energy, Russian gas for instance. To limit that dependency, local energy sources such as wind turbines could be stimulated.

Communication between economists, ecologists and climatologists is not always ideal. Economists are often frustrated with the debate about climate change because there are no cost-benefit analyses. The government focuses too much on technology, as it did with the introduction of energy-saving bulbs. If the government fails to make sure the market operates effectively, a technological measure will not work. Ecologists, on the other hand, often prefer the government to regulate a lot. At TILEC, the Tilburg Law and Economics Center, we try to bridge the gap between those worlds by bringing energy economists, policy makers and industrialists together in workshops."

For more information visit www.uvt.nl/tilec/energy.

NEWS

New research institute SES: Centre for Sustainable Enterprise and Society

SES, Tilburg University's newest research institute, was launched on 1 October 2009. The institute's main research themes will be sustainable development and corporate social responsibility. Led by Aart de Zeeuw, Professor of Environmental Economics, the centre's first job will be to concentrate the sustainability research of the Faculties of Law and of Social Sciences, Economics and Business Studies and of the Telos research institute (Brabant Centre for Sustainable Development), and bring them into contact with each other. Then new research and new activities will be developed.

'Now is the time to invest in the biobased economy'

The 'biobased economy', in which the economy and the environment reinforce each other, tends to be viewed with scepticism. But according to the authors of the book 'Agribusiness clusters: bouwstenen van de regionale biobased economy?' [Agribusiness clusters: buildings blocks of a regional biobased economy?] this is the right time to develop sustainable initiatives. The book was compiled by Frans Boekema of Tilburg University in collaboration with Huub Smulders and Maikel Gijzen.

It is not only the credit crunch which is playing tricks on us, but also the food, energy and climate crisis. The whole production and consumption system is under debate. "Our society is in transition from a 'fossil-based economy' to a 'biobased economy'", say the compilers of 'Agribusiness clusters'. According to them it is now time to build on sustainable initiatives for a 'biobased economy'. The main focus in this economy is on reciprocity between economics and environment, and dependency on fossil fuels like oil and gas will come to an end. Agribusiness, for the production of new energy sources such as wheat and maize, will play a major role. However, in the Netherlands innovation of this traditionally strong sector will have to be tailored, because of the small amount of space and the ground-intensive nature of agribusiness.

This book discusses the opportunities, threats and future prospects of the 'biobased economy'. The authors, including former agriculture minister and Tilburg University professor Cees Veerman, discuss this economy from different points of view. Various agribusiness clusters are highlighted, such as the green ports in the Netherlands and success stories about regional 'biobased activities' such as Biopark Terneuzen, Ghent Bio-Energy Valley and Greenport Venlo, all initiatives which regions use to distinguish themselves in relation to sustainability. To an increasing extent sustainability is becoming an integral part of regional economic policy.

Frans Boekema is Professor of Economic Geography and Endowed Professor of European Regional Management at Radboud University in Nijmegen and Tilburg University. Maikel Gijzen has worked as a policy assistant for Economic Affairs at the municipality of Moerdijk and as a freelance researcher and consultant. Huub Smulders works as a consultant at European and Regional Affairs Consultants (ERAC) in Boxtel. 'Agribusiness clusters: bouwstenen van de regionale biobased economy?' (2009) is published by Shaker Publishing in Maastricht.

How can you stimulate sustainable development?

Diederik Stapel and Marret Noordewier of research institute Tiber have landed a 200,000 euro grant. The grant provider is Nationaal Innovatieprogramma Transforum, a forum which aims to provide the Dutch agro-sector and green space with a more sustainable perspective.

Stapel and Noordewier's research focuses on various ways of stimulating sustainable development. Their study examines the inconsistency between attitudes and behaviour. Many people are positive about sustainable developments and are in favour of sustainable initiatives such as organic farming, green power and reducing carbon emissions. However, in many cases their behaviour is not consistent with these ideas and attitudes; for instance, they still opt for incandescent bulbs, battery eggs or petrol-guzzling cars.
Previous research by Tiber, the Tilburg Institute for Behavioral Economics Research, showed that people do not like this kind of inconsistency and feel better if there is consistency between attitudes and behaviour. On the basis of this fact they are investigating the possibilities of developing interventions to draw people's attention to this inconsistency.

Cleaner technologies may lead to more pollution

An alternative that has been proposed to the Kyoto agreement (which is riddled with 'free-riding' issues) is a set of treaties: one promoting cooperative Research and Development and the other encouraging the collective adoption of new, cleaner technologies arising from this R&D. Tilburg University researcher Amrita Ray Chaudhuri and Hassan Benchekroun of McGill University in Montreal (Canada) have developed a model which shows that the adoption of cleaner technology may leave all countries worse off.

Benchekroun and Ray Chaudhuri analyse a scenario in which two identical countries emit pollutants. Both countries suffer damage to social welfare from the stock of pollution they build up over time. If both countries cooperatively set their individual emission levels to maximize joint welfare, then welfare would increase in response to the implementation of cleaner technology. However, if the countries do not cooperate, each country's response to using cleaner technology is to increase its output, without taking into account the negative impact of the increase in pollution on the welfare of the other country. At a certain level of emission the welfare in both countries falls as cleaner technologies are implemented. The researchers conclude that the need for international cooperation does not necessarily diminish with the development of cleaner technologies.

The TILEC Discussion Paper 'On cleaner technologies in a transboundary pollution game' by Benchekroun and Ray Chaudhuri (DP 2009-14) is available on-line at www.tilburguniversity.nl/tilec/publications.