Europe on the edge

Professor Jacqueline McGlade

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The European Environment Agency (EEA) has 32 member countries ranging from Iceland to Turkey, and including Romania and Bulgaria as well as the countries of the European Free Trade Association (EFTA). Greenland has just applied. More and more people see the Agency as a necessary conduit rather than an easy way into the European Union: they have to get through the Environmental Acquis before they are accepted. We seem to be in the front line of the new Member States, and we also work in the Balkans and the Caucasus.

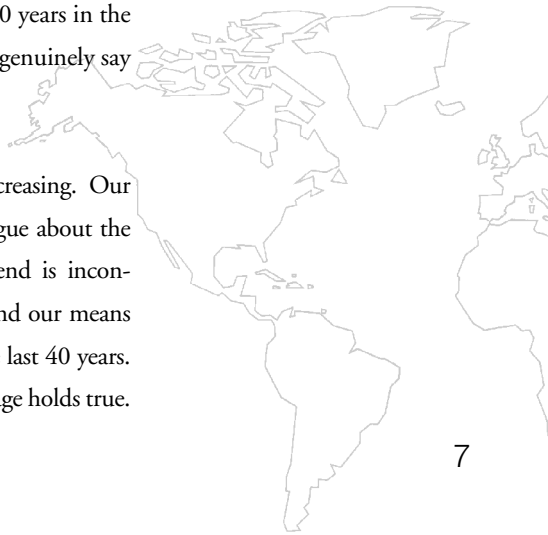
What is fascinating about the Agency is that over the last two or three years it has grown from a body that in a sense reported on the past, to one which is beginning to take on the big agendas: the economy, the social fabric of Europe, cohesion, transport, energy and agriculture. There is not one single agenda in today's politics that is not premised on the environment.

When we interview the public (we have 450 million citizens under the stewardship, so to speak, of this Agency), they are pretty sure that the environment is up there alongside health. So our task is to translate that sense of urgency into political action, an area where we see the public ahead of the politicians.

When we talk about the environment, we are really talking about unsustainable patterns of consumption and production. Globally we see environmental pressures increasing – climate change, land use, resource use – and every one of those pressures is also seen in Europe.

What is fascinating about having so many member countries, ranging from the high Arctic to the Middle East, is that we really do see the impact of this excessive consumption. And after 30 years in the business, putting legislation into effect, looking at how it really changes behaviour, we can genuinely say that we are significantly better off today than we would have been without it.

Nonetheless, our footprint, our use of resources from the rest of the world, is increasing. Our population is going down but our demand on the world's biocapacity is rising. We can argue about the absolute numbers, and we can argue about how the footprint is calculated, but the trend is incontrovertible, making it a useful communication device to tell people that we are living beyond our means within the borders of Europe. This has happened in rather a short period of time – over the last 40 years. Whether we look at our acquisition of fossil fuels, our nuclear footprint or fisheries, the message holds true.

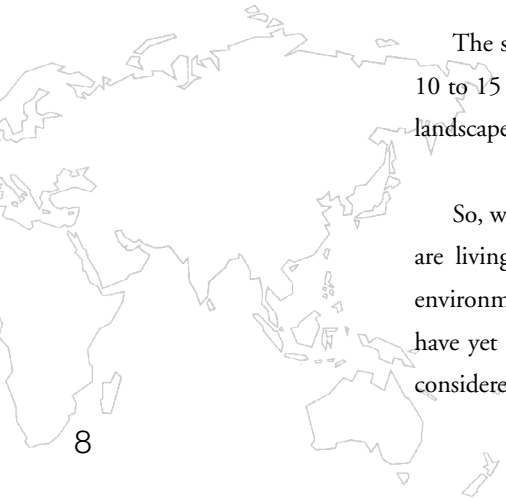


China is in much the same situation as Europe 30 to 40 years ago, and the same trends are emerging – a continuing demand for fuel and energy to keep the economy going, and the 'liquidation', if you like, of its considerable environmental assets. On a per capita basis, of course, each individual in China is using much less than the average European. Nevertheless, the large size of the population, 1.3 billion people, means that in absolute terms China's reach is beginning to dominate much of the world's biocapacity.

And the picture is the same for India. The way we are developing here in Europe, and in China and India, are interconnected. We can no longer extricate ourselves from the economies of other parts of the world.

In the summer of 2006 the European Union described itself very much in terms of the sustainable development strategy. It said, and I will quote: 'the sustainable development strategy, the Gothenburg Agenda, is going to be established as the overarching framework in which economic, social, and environmental objectives can reinforce each other, and these need to advance together'.

But while the EU may have recognized that sustainability is one thing it cannot do without, it has not yet faced up to what Europe itself is really like. Every single part of Europe is suffering urban sprawl. Europe seen from space at night – an image with which many are familiar – gives the impression of suffering from some kind of epidemic, it is so peppered with lights. We are undermining the natural functions of Europe's territory in order to deliver the economy that we see as essential to keep up with the rest of the world.



The same can be said of countries generally considered rural, like Ireland for example, which after 10 to 15 years of development have become peri-urban. Roads and infrastructure are fragmenting our landscapes, reshaping them to support our population within a particular economic model.

So, where is the environment in all of this? Towards the end of the decade most people in the world are living in a city. We are an urban species, and as more and more people withdraw from the environment, it is becoming ever harder to convince them that they need to protect and preserve it. We have yet to bring environment in from the edge, where it is a sidecar to economic and social issues, considered separate even within sustainable development strategies.

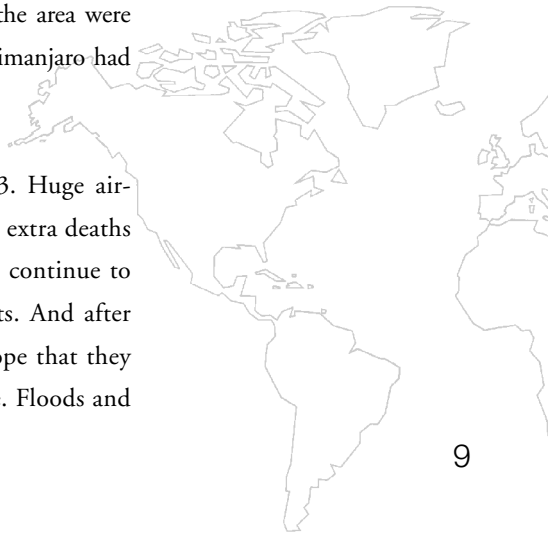
It is time to think clearly about how we are going to value our biocapacity, our underlying ecosystems and environmental services. We all appreciate a beautiful resort or a pristine place, but we have never really worked properly on pricing resources, so we sometimes get the market values catastrophically wrong. We have undervalued people, jobs and employment in relation to the resources that keep the economy going. If we are to bring environment from the edge to the heart of Europe we will need overarching fiscal reform. Not just green taxes, but a revision of the whole fiscal paraphernalia, the mechanism through which we raise taxes and run our economies.

I am going to take one example: climate change. The signals are pretty clear, and everyone in Europe has by now heard of climate change. We have all sorts of evidence of increasing carbon dioxide levels. And while there is still some debate on whether these levels are natural or manmade, we are in the realm of a 98 per cent consensus that much of the rapid increase is down to anthropogenic effects.

What does climate change actually look like? If you go to the margins of Europe, Greenland for example, it is happening before your eyes. We took a group of journalists up onto the Greenland ice sheet and presented them with evidence that is quite staggering to anyone who has been near any of those glaciers in the last five years. One glacier, in particular, has already retreated 10 kilometres at a point where it is 2 kilometres thick.

It is at the margins of Europe that these changes can be seen so clearly, but there is also evidence of such change in the heartland. In Finland, in an area just north of Helsinki, a glacier has completely disappeared. I think there was an article in *Le Monde* suggesting that photographs of the area were merely alarmist. Others have suggested that images of the disappearing snow cap of Kilimanjaro had somehow been digitally made up.

Europe is suffering. Paris was unable to cope in the summer heatwave of 2003. Huge air-conditioned tents in the city were just not enough. Whether it was 23,000 or 32,000 extra deaths that resulted, it was a lot of people. And many are still at risk because governments continue to regard heatwaves as unusual and unexpected. But these are no longer one-off events. And after three years of summer heatwave the public is becoming aware of the risks, so we hope that they will cope better in future; likewise for Spain and many other countries across Europe. Floods and



droughts also still take people by surprise. There are many sorry stories about the ways in which we have exploited our resources, not just in Europe, but particularly in Europe, where we should have known better. Had we been aware of the cost of inaction, we might have anticipated some of this.

We are beginning to see some movement in the transition from the unexpected to the expected. Once again the public, generally speaking, is ahead of the politicians. Bringing environment in from the edge into the heart of Europe on the back of catastrophic losses is getting easier and easier. The United Kingdom has recently carried out a campaign warning people that they cannot avoid floods, so must prepare for them and adapt.

In the face of desertification in southern Spain, the environment minister has taken a very brave stand, deciding that all information related to water licensing and abstraction is to be published and brought into the public domain: every farm, field and crop; how much a given farmer receives in subsidy; and the amount of abstraction. Of course this has raised an enormous debate in Spain because they have too many tourists, too many British people with second homes, and not enough water. How much water is there? Is there less of it? In fact there is, and why do certain people get access to water before others? For the first time in post-Franco Spain we are seeing a public debate about a resource and its absolute price. It is a shame that we had to arrive at the point of desertification for that kind of debate to get going.

So, thresholds will be crossed. I mentioned the dramatic changes in Greenland, but there are many other more subtle changes: biodiversity losses and altered agricultural patterns are happening all around us. The press in the United Kingdom has been full of articles talking about late blooming, early blooming, early arrival, and all sorts of species turning up unexpectedly. We are getting signals from all directions. Catastrophically, what is happening at the poles is likely to swamp all those signals. But we do not want to be alarmist, to suggest that we might as well give up now, because if the Greenland and Antarctic ice sheets were to melt we would be facing a 12-metre sea-level rise. That is not really going to help. What we want is for people to engage today, not to have a 2020 agenda, nor a 2050 agenda, but a 2010 agenda. We want political targets and we want delivery. We want to mobilize people towards those objectives. Otherwise we will all be lost.

Unfortunately, much decision making gets sidelined by issues of subsidiarity. The United Kingdom, for example, often talks about Europe interfering, sending clear messages not to meddle in national affairs. But such large environmental issues have nothing to do with national sovereignty. They are European and global issues, and subsidiarity will not get far in tackling them. This is happening at every single level, resulting in an inability to focus on the relative and relevant action that is required to mobilize people globally.

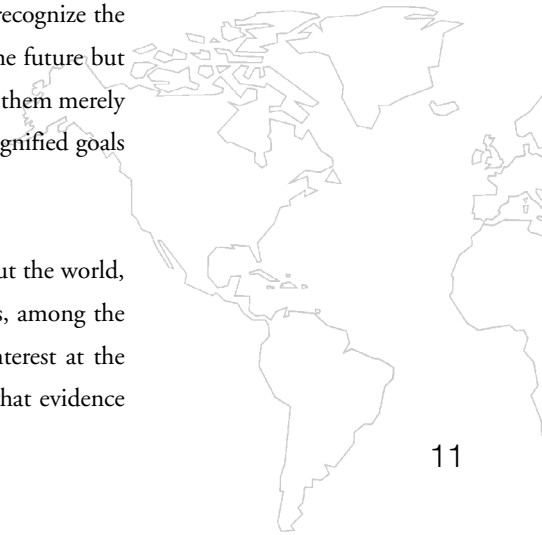
We tend to respond to major events very effectively. Hurricane Katrina led, if a little belatedly, to a massive inundation of well-being, with money pouring in and people trying to fix things. But an accumulation of smaller events can cause far more damage and entail far higher accident and death rates. Reacting in an *ad hoc* way means that we lose sight of the connectivity of events.

There is now much talk in the scientific world about events, whether there are more of them, or less, and whether they are more intense. It is important that politicians do not miscommunicate such things, but work to knit them all together so that we get some coherence in action. It is worth reminding people how connected the planet is, something that John Schellnhuber and others have been working to achieve.

What we consume in Europe must be addressed. Otherwise we will end up with a lot of people, not just within Europe's borders but all over the world, becoming marginalized, unable to participate in what – in principle – could be a very healthy and wealthy life, with access to water, education and so on.

But by working in a reactive way we actually fail to do four major things. We fail to recognize the very real dangers of continuing on our current unsustainable course. We fail to plan for the future but instead plan with reference to the past. We fail to use investments for improvements, seeing them merely as strategic platforms. Worst of all, we fail to see the economy as a means towards more dignified goals but rather see it as an end in itself.

Even in the face of climate change, and knowing that its impacts will be felt throughout the world, it is still really hard to mobilize people to work together. All of us know, within the press, among the public, and at national level, that there is a great desire to move forward. But vested interest at the highest level is blocking the kind of global movement that we want to see. No matter what evidence



there is of climate change and its effects, some parts of government are just unable to react and make the kind of shift that we need.

The most disturbing part of it is when the potential loss of human life and well-being is dismissed on the grounds that people are poor anyway, or are old and going to die anyway, so at least their pensions will not have to be paid. These are some of the appalling ideas that are voiced in debates, not just amongst politicians but amongst very senior civil servants. This is what we are up against: the kind of bean-counting approach to life that will get nowhere in moving this agenda forward.

So, where are we? I believe we have arrived at a calm period, a moment in time when there is so much going on that we just have to sit down and think about it all. We have globalization. We have world trade issues but are failing on the Doha Round. We have climate change. We have massive commercial activity with China. We have an energy crisis. We have wars. In fact, so many things are going on that there is a sort of fatigue. But actually I am an optimist: instead of just letting it float us away, we must tackle it head-on.

World trade is driving consumption inexorably to a point where we will not be able to sustain the kind of lifestyle that we currently operate. And there will be constraints. Cheap airline prices, for example, will disappear. We have really got to think about the instabilities in the system and identify the crisis points, isolate them, and have the necessary debate.

Let us take fuel as an example. Consider the European flag, imagining the blue representing our consumption of petrol and the yellow our production of petrol. This is not a happy story, but why has it happened? The biggest growth in energy consumption is domestic. The EU commissioner for energy recently announced far-reaching policies related to the 'stand-by' mode of household appliances, asking industries to introduce energy-efficient models that could reduce Europe's demand by 20 per cent by 2020. Such a saving represents EUR120 billion of expenditure, and it makes sense. If we achieved it, based on past experience, Europe would be leading the world in that particular sector. As the world's largest economy, we know that China and the United States, and any other country manufacturing such products, will conform to European standards. One way or another, we lead the rest of the world by having very high regulatory standards.

So, isn't it good for everybody? Well, no. The sectorial response is that it will require too much change and cost too many jobs. We get piecemeal 'lobbying', especially at the national level, when actually we need to work collectively. In reality this is a major opportunity to put Europe's industrial sector at the forefront, able to respond to the global challenge and perhaps make us slightly more energy secure. I have been very happy to see that all the commissioners, even Mr Verheugen (Enterprise and Industry), agree.

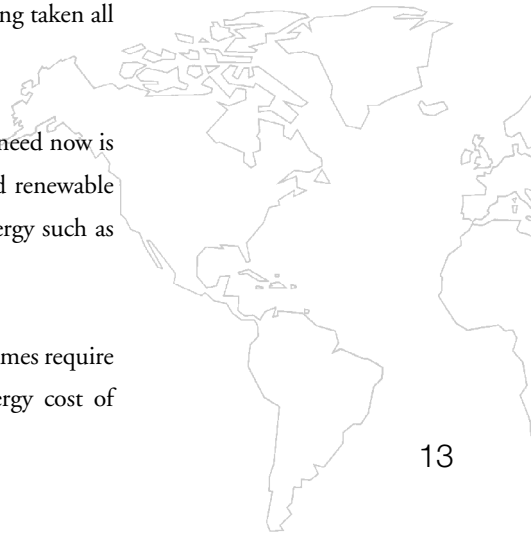
There are some things that can be done more effectively at a national level than at a European or global level, but energy is not one of those. We have an unstoppable consumption process and very aggressive companies. Ikea, for example, sells enormous amounts of products that are manufactured in China and elsewhere and reimported here. But the public is largely unaware. Labels carry messages such as 'Designed and quality insured in Sweden', and then in very small print 'Made in India', 'Made in China', 'Made in Egypt'. Steel coat-hangers are just one of the many items that we transport around the world. We are doing the most crazy things to perpetuate our unstoppable consumption patterns.

Another example: herrings are taken out of the water by a Faroese fishing boat, then shipped by Maersk to China to be filleted, then brought back to the Faroes and put in a plastic bag labelled 'from the Faroes', and sold to the European market. This is only possible because Maersk offers shipping for EUR6 a tonne. Goods and services are getting cheaper and cheaper.

In addition, our leisure time is taking us to a different kind of consumption. When we travel we take our consumption patterns with us, so the growing demand that we see in Europe is being taken all over the world.

I mentioned earlier the well-known image of Europe's lights seen from space. What we need now is not lights but enlightenment. There are many who are really excited by eco-efficiency and renewable energies. Most governments love to talk about how much they are giving to renewable energy such as solar power. And this is great because it is hopefully going to help the environment.

But what governments do not do is life-cycle analysis. Energy-saving technologies sometimes require more energy to generate a product than they will save in its operation. The actual energy cost of



construction and transport can mean that systems have to operate for 50 or 60 years just to reach the neutral point. So we have to make sure as we assess different technologies that we do the full accounting. If we had a formal, transparent and widely available system for accounting resources there is no reason why any technology could not be set into that context to see whether it is worth investing in – for companies, countries, nation-states, and Europe as a whole.

An interesting thing about all this is how we spend our subsidies, where our taxes actually go. Take the energy sector: traditional fuels are now subsidized to the tune of EUR32 billion a year, renewable energy by around EUR5 billion. That translates into EUR82,000 per German coal miner, and coal is still an enormous resource in a place like Germany. Sweden, through its power company Vattenfall, is actually moving into the business of carbon sequestration, and currently has a coal-powered plant running this way in Germany. It is a profitable business and I suspect it will be rolled out. If you are smart, things that do not look so promising at first glance can be major opportunities.

Vattenfall made a fundamental decision to create the most resource-efficient power station possible – in construction and operation – and we all benefit because of the carbon dioxide being trapped. Now that is a very Swedish approach. It has been the making of Vattenfall in particular, but I could say the same for many Scandinavian countries, preeminent in this area because they have done resource accounting for many years and operate 10-year tax subsidies to help transform their businesses.

There are possibilities all over the world. If we really want to address issues of energy security and the environment, we should focus on how to ensure that carbon dioxide sequestration and storage is carried out efficiently and cleanly. Europe would do very well to subsidize the technology and ship it out across the world. In a sense, it is cheaper for us to fix problems elsewhere than take domestic measures here. The pain is less and the gains would be considerable.

I return now to the issue of Europe recognizing its responsibility for wrecking other people's environments, not just our own. This is no longer a minor issue. It is affecting the environmental quality of life of many millions of people all over the world. The business sector has generally accepted that technology has to be developed, but there is a need for investment on a very large scale. It is no longer about one nation-state investing in carbon sequestration technologies for its own sake. We have to do

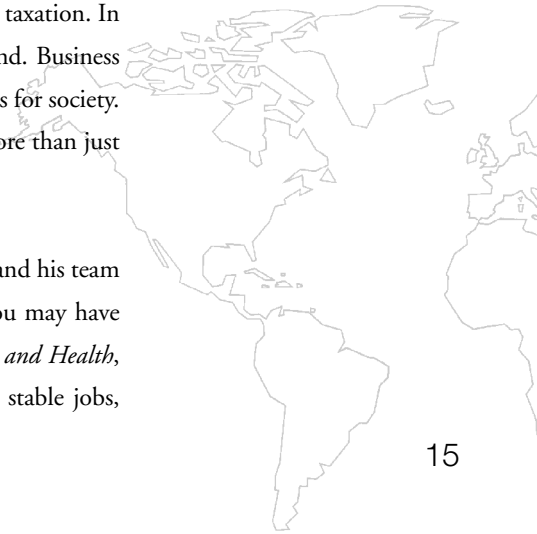
this at a European level, even at a global level. We have to think how to invest and how to use our taxes for the greatest global good.

Europe spends a lot of money on what is called the Clean Development Mechanism, or CDM. This puts carbon at the heart of development all over the world, and we are doing some rather interesting projects, but they will not necessarily deliver the carbon sequestration that we need. Once again, individual Member States are not collectively getting the economy on an appropriate scale. Much more needs to be invested.

Slowly, the debate about how to bring about physical reform across the world to meet some of these global agendas is taking place. Many people understand what a sound environment is, and most of the public surveyed put it close to the top alongside health and education. They do not want to live near polluted landscapes or on landfill sites; they do not want to be unsure of the quality of the water they drink. But when we look across Europe we see more and more people in urban ghettos, exposed to an increasing burden of chemicals, narcotics and various other substances. In the end these factors will lead to early deaths and a decline in life expectancy. In the overuse of our natural capital and the environmental die-off that this is bringing about, we are in danger of creating a very empty world.

So how do we get to a full world? We need healthy happy people living in a quality environment, and to achieve this we have to engage everyone. Interestingly, the chemical industry has gone through quite a genesis over REACH, the legislation requiring that industries register all the toxic chemicals they are producing. And the sector is responding to the pressure, in this particular case linked to taxation. In addition they were given certain incentives – subsidies – to slash their basic energy demand. Business must make sense in business terms, but it also has to be coupled with the wider implications for society. This is what it means to bring environment from the edge into the heart of things. It is more than just a question of GDP.

A recent study done by the European Science Foundation, led by Sir Michael Marmot and his team at University College London, looked at what makes people live a long time. Some of you may have read the books: *Status Syndrome: How Our Position on the Social Gradient Affects Longevity and Health*, a nice popular book, or the famous *Whitehall Study*. These looked at civil servants with stable jobs,



where you might expect an even level of well-being, but the thin salami slicing of the civil service meant that people who were just one grade apart actually had on average half a year's difference in their life expectancy. They discovered that social status directly affects life expectancy. Worse than that, if you are not connected to other people you really are in bad shape. If you compare a very well-off individual, a single man for example, with a nice old lady, head of the knitting club in Devon perhaps, you can guarantee that she will have a longer life, not so much because she comes from Devon but because she is part of a club – she is respected, she has a place. Study after study has demonstrated that isolation is actually one of the most negative forces in today's Europe.

Income, whether at the individual or the collective level, is not as closely associated with well-being as you might expect. What really matters is how we live our lives, our social cohesion and the way in which we come together to do things. Across Europe, though, it is rather a grim picture. Greece does not even know there is a problem. Spain used to be concerned but has now gone into denial. France, Italy and Lithuania are beginning to be concerned – the riots in France have certainly triggered this. Finland, the Netherlands, Sweden and the United Kingdom have at least got a structured approach to the issue. We are beginning to see how the fabric of life is every bit as important as GDP as a social indicator.

Talking about social indicators, the unthinkable of course happened when the Soviet Bloc broke up. The unthinkable is happening, in fact, within our borders. The Southern Caucasus – Georgia, Armenia and Azerbaijan – had a population of 16 million in 1991. About 4 million people have fled their homes over the last years, with half of them in Azerbaijan and the other half split between Georgia and Armenia. Three million are now refugees living in camps, surrounded by nuclear waste, ammunition dumps, minefields, landslides, deforestation and contaminated soils, with no access to drinking water. And those are just the environmental problems. It is a catalogue of collapse. But they are also our neighbours, so of course many of them are trying to come across the Black Sea, through Turkey, and through the Ukraine into Europe.

Europe's borders are under immense pressure; you only have to look at the Frontex statistics to see how many people are trying to come in, and human trafficking places enormous demands on the environment in those particular areas. It is unrealistic of Europe in its neighbourhood programme not to build this into its thinking. What ministers now need is five pages of guidance on what works:

how to solve this and other problems – how to deal with nuclear waste, how to clean up the pollution left behind by the Soviet Union. So I am alarmed that the 2007 Belgrade report on Europe's environment is such a big book.

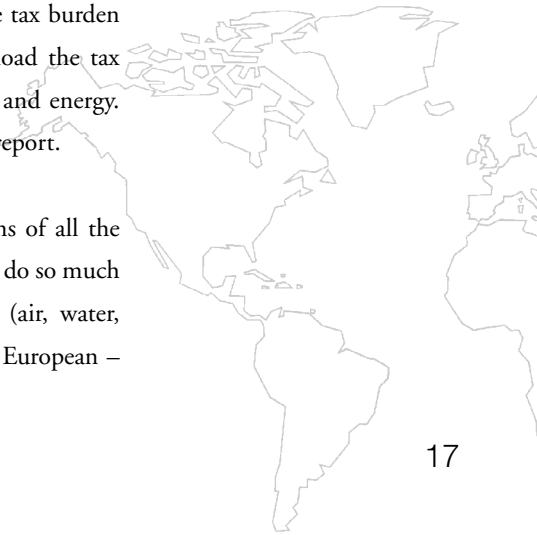
On a doorstep near you will be people from the Southern Caucasus, and many others want to move into the periphery of Europe. Turkey, for example, now has urban densities that have never been seen in Europe before, and people cannot sustain themselves in such conditions. This kind of concentration uses water, and Southern Europe needs every drop of water it can get. Turkey, as it hosts the mountains, the dams, and the waterways which feed Southern Europe, will want to use that water itself rather than ship it over the border.

The current economic model favours a single internal market in which anything can be sold (probably undersold), and competition encouraged. We have seen the effect of privatization, which has a good side, forcing people to be more careful. People in the United Kingdom, for example, became much more careful when water was priced. But it does not work like that under climate change. If there is no water, then no matter how you price it, you simply won't be able to get it.

We have to recognize that these processes are ongoing, creating huge environmental pressures at the local level but ultimately putting pressure on all of us. We have to reassess our capital assets, not just buildings, trains, railways and roads, but water, land, soil, biodiversity and air.

So how do we shift the emphasis? We must reform our fiscal approach and move the tax burden away from producing bad things to looking after good things: people. We should offload the tax burden from labour and shift it towards the inefficient use of resources, both materials and energy. That is the conclusion we came to in our most recent five-year state of the environment report.

The most interesting table in the report is in Chapter 10.1, showing the tax systems of all the countries. Some use environmental taxes extremely frequently and across every area, others do so much less. The only conclusion we can come to, having looked at all of the environment (air, water, biodiversity, and so on), is that the way forward is to revise the economic model of how European – and in a sense global – trade operates.



The report is a serious work looking at how political targets are set and then met, and contains a league table that makes pretty uncomfortable reading for a number of countries. There are many unmet targets, as well as targets that do not deliver the environmental outcomes that we want. Politicians actually do a great deal, but their targets tend to be short-term, or so long-term that those responsible for them are no longer in power when they fall due. We now have to make important environmental progress through the right kinds of political targets, and it is important to hold governments to account.

We have 465 reporting obligations related to the environment in Europe, known as Environmental Acquis, so it is not surprising that everyone says we have to streamline. But there is only one small directive that I think we could actually do without. Whether we like it or not, the only way to protect the environment is through a regulatory framework. If we give up on any one of those pieces of environmental legislation, the quality of the environment will deteriorate.

But we can be smarter about how we plan things. The Urban Ways Water Treatment Directive, the most expensive piece of environmental legislation in Europe, was implemented by Denmark through an end-of-pipe solution, letting all the water go through the sewage plants and only then cleaning it up. The Netherlands went the other way, cutting down the amount of water entering the system. Today, Denmark spends six times more on water processing than the Netherlands. If you go to the source of the problem you are likely to get better and more cost-effective implementation.

Better regulation does not mean less regulation. That is where Europe really is invaluable – it can hold Member States to account and make sure that politicians deliver on their promises.

In 'European speak' there is something called the Lisbon Programme, which is about trying to combine all the sectors together – transport, energy, agriculture – and looking at the whole in the longer term. But I think we have gone way beyond Lisbon now, to a planetary dimension.

You may have come across Prelude, a scenarios activity. It has won us lots of prizes, but more importantly has won hearts and minds in ministries and parliaments as well as among the public. For the first time, it maps the future of Europe on the basis of different economic models, enabling us to

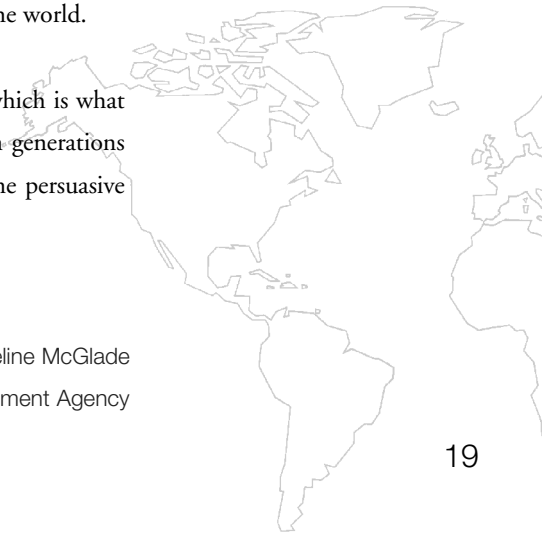
look hectare by hectare at what will happen in relation to urban sprawl, transport, energy and the environment. There are some very sobering stories. Large parts of Europe – the extreme northern and southern areas – will become uninhabitable, producing 'climate change refugees' forced into the middle of Europe, and it will happen rather more quickly than many of us like to contemplate. We can no longer disassociate the way we produce our food and move ourselves around – the way we actually go about our economy – from the ecosystems that support us.

In the end we have to help people to account for each other. And there is a quiet revolution under way that will hardly be noticed. The statistical offices of Europe, actually of the world, are now working to agree formally on the inclusion of resource accounting in the main treasury accounts that calculate GDP and tell countries how they are doing.

In two or three years time you will see not only how money moves around Europe but also how water moves around Europe. We already know that when water and land are set against money, we are doing pretty badly in terms of pricing the things that we really value. But accounting for each other and to each other, mundane though it may seem, is the way to change people and politicians in the parliamentary field. It will bring the environment from the edge into the very centre.

I hope that we will be able to save the Arctic, that we will see not a mass of interests but restraint on the part of Russia, the United States of America and Norway; that they will choose not to go in as the sea ice retreats and exploit it to feed the demand for energy, fish and shipping routes. Instead, I hope we will have a reasonable approach to saving what is probably the last pristine ecosystem in the world.

As they say in indigenous communities, it is not about sustaining one generation – which is what we all talk about in Europe – but about sustaining seven generations. By thinking seven generations ahead we have to change the way we do things today. I hope that I have given you some persuasive arguments: the new accounting is really what it is all about.



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