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PLANET HOT-SPOT



© Mark Bakker

Poster by Mark Bakker (The Netherlands), one of the laureates of the student contest organized by the International Year of Planet Earth.

"Scholars have not paid adequate attention to the equity implications of climate change", says Indian scientist Rajendra Pachauri, Chair of the Intergovernmental Panel on Climate Change (IPCC), 2007 Nobel Peace Prize. And he explains: "Thus far research has largely focused on the physical science aspects of climate change, the vulnerability aspects as well as on the options for mitigation. Now, however, there is growing awareness about equity as an ethical issue related to climate change."

"It is unrealistic to think we can suddenly reduce emissions drastically to stabilize concentrations at the current level or even to attain lower levels," adds Italian climatologist Filippo Giorgi. Member of the Intergovernmental Panel on Climate Change and head of the Earth System Physics Section in UNESCO's International Centre for Theoretical Physics Abdus Salam International Centre for Theoretical Physics (Trieste, Italy).

«Even according to the most optimistic forecasts, we will have to use twice our planet's resources by the year 2050», adds Mathis Wackernagel (Switzerland), giving alarming examples: «The United States uses twice what they have, whereas Egypt, Italy and Switzerland use three times as much as they have.».

Experts agree: we are at a point where we «manage the unavoidable and avoid the unmanageable,» to quote Filippo Giorgi. However, there still is hope, as the entire planet is becoming aware of global warming and its dangers.

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As evidence, the student contest organized by the International Year of Planet Earth which shows how much mentalities have evolved with respect to environment. The Courier presents the essay of Irish student Nikita White as well as a series of drawings from different parts of the world.

The issue also presents two international programmes aiming to preserve our environment: the Global Network of National Geoparks and the Biosphere Reserves.

Our features include the fascinating story of the book in Amsterdam, nominated 2008 World Book Capital by UNESCO, as well as an interview published posthumously of our colleague Tchicaya U Tam'si (1931-1988), considered one of the greatest African writers of the French language.

Jasmina Šopova

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Turn off the lights please!

Each one of us can show more respect towards Mother Nature, by changing his or her lifestyle, believes the 2007 Nobel Peace Prize Rajendra Pachauri. A follower of the Vasudhaiva Kutumbakam philosophy, who considers the universe like a family, he chairs the Intergovernmental Panel on Climate Change (IPCC).

Interview by Jasmina Šopova



© J. Lingaraj

Rajendra Pachauri.

At the end of last year, the Nobel Peace Prize was attributed to IPCC which you chair and to America's former vice-president Al Gore. Could this be seen as a sign of change in the world's attitude towards global warming?

Indeed the award of the Nobel Peace Prize to the IPCC and Mr. Al Gore is an important statement on what the Norwegian Nobel Committee sees as a danger to peace arising out of unmitigated climate change. Since the Nobel Peace Prize and the significance attached to it get a great deal of attention and coverage worldwide, hopefully people's attitude towards this issue will be affected as a result.

What are the impacts of climate change on peace?

The impacts of climate change on peace can be numerous. First, the availability of water is decreasing, water resources are under high stress in several parts of the world. Second, extreme events such as heat waves, floods, droughts and extreme precipitation, coastal flooding as a result of sea level rise, can lead to population movements on a sizeable scale. The migration of large numbers of people can have an impact on peace, since the locations where such people move to may find this to be an unacceptable imposition. Finally, the impacts of climate change on agriculture could also lead to large scale malnutrition, hunger and deprivation, which could end in conflict within communities and further movement of large numbers away from areas where food is scarce.

In your Nobel lecture, you highlight that scholars do not pay enough attention to the inequities arising from these changes, although they are part of the most significant aspects of the impacts of climate change. Could you develop this idea?

Scholars have not paid adequate attention to the equity implications of climate change because thus far research has largely focused on the physical



© Thamirez Nogueira Magalhães (Brazil)

Drawing by Thamirez Nogueira Magalhães (Brazil), one of the laureates of the contest organized by the International Year of Planet Earth.



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Sign to raise environmental awareness, Island of Gorée, Senegal.

science aspects of climate change, the vulnerability aspects as well as on the options for mitigation. Now, however, there is growing awareness about equity as an ethical issue related to climate change.

You head The Energy and Resource Institute which developed a germ that breaks down petrol. Can you explain how it works and what the results are?

We have a major biotechnology programme in The Energy and Resources Institute, and some of our work has resulted in the development of microbes that consume petroleum products. This technology is being used now quite extensively for cleaning up oil spills and oil sludge deposits. Once the oil has been completely eaten up, the microbes perish without any environmental effects.

You subscribe to the philosophy of Vasudhaiva Kutumbakam, which means the whole universe is one family. What is the role of Indian traditional culture in your work?

It is difficult for me to identify what role Indian tradition and culture play in my work, but having been brought up in this country and holding Indian tradition in great respect, I suppose everything I do is influenced by my upbringing and beliefs.

You believe that each one of us can do something for a better and safer world. What advice would you give our readers?

Each one of us can do a great deal to make this world better and safer. First, we must develop a belief in the need for protecting the environment. We must also realize the danger of treating Mother Nature with disrespect and of damaging the earth's ecosystems and natural resources. We could then find ways to minimize our footprint on the earth's natural resources and ecosystems. This would involve simple things like switching off lights when we leave the room, using efficient energy consuming devices, using energy efficient transport such as public transport, promoting the use of renewable forms of energy... We can bring about a lifestyle change in which we reduce reusing and recycling products that we have become accustomed to. Technology will also bring about change towards lowering the intensity of natural resource use, which in turn should be supported by policies. But lifestyle changes are important too.

“If I was a grown up I would do something about it”

All is for the best in the best of worlds. So thought little Killian before his older sister, Nikita, decided to “have a little chat” with him. The laureate of the student contest organized by the International Year of Planet Earth (IYPE) tells us how she initiated her brother to the facts of the Planet.

The outline for this essay emphasized a ‘creative’ approach – I shuddered in the face of this task! This isn’t a concept I’m hugely familiar with. Creativity was never something I could claim credit for. One might call me a cynical empiricist but I prefer the notion of an analytical observer! It is imperative for us to judge the matters we take the time to note. Passive observation is a crime that we cannot allow ourselves to commit, especially in relation to planet earth. [...]

Here are a few thoughts. What about when a baby cries out for food, you feed it. When the dog bounds around the house practically running up the walls, you bring him for a walk. When you are feeling tired, under the weather, you might take a rest, put your feet up. But what about a planet that is in need of a rest? What about a planet that needs to exercise itself? What about a planet that is being starved? This is what the International Year of Planet Earth is about for me. It’s about listening to our planet. It’s about doing something about what our planet has to tell us. It is simply about giving our planet back what it has given us: life.[...]

What we are in for if the current trends in planetary exploitation continues is beyond anything that we will have seen before. If ever we do happen to catch a glimpse of it, we know we have reacted too late. We hear about cities disappearing underwater, polar bears drowning, animals liable to extinction, environmental refugees- the list is endless. There are endless suggestions about adaptation and mitigation measures. This is where we are asked to start using our imaginations because the reality of these potential outcomes can never be realized. It is pivotal that we use our imagination at this stage to understand the extent of the impending consequences and prevent them from ever occurring.



© UNESCO/Cyril Bailleul

Nikita White reads her essay during the launch of IYPE on 12 February 2008 at UNESCO.

Creativity exists in a different part of the brain - a part that someone very close to me still taps into everyday. His creative streak is enviable, but so too are his skills with the Playstation! His passion for mythical creatures and plastic wrestlers is something



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"The ultimate test of a moral society is the kind of world it leaves for its children", Dietrich Bonhoeffer (German theologian).

I have never seen equaled. Meet Killian, my eight year old brother.

Explaining climate change to children

We use both our imagination and our methodical thinking to understand the potential outcomes of a planet that is abused; floods, droughts, storms, disease, and inevitably death. It doesn't always require imagination as these things are currently happening in some form but its grasping the threat they pose to both us and our planet in the future that requires us to think bigger. I decided what I would do was share some facts with Killian and encourage him to use his imagination to engage in some meaningful dialogue with his big sister. The following is the very insightful conversation that followed.

We sat down and I told him I wished to have a little chat. He was immediately suspicious but as a young boy whose teacher's major complaint is that he never stops talking, he wasn't too reluctant for a chance to babble on! [...]

Considering his penchant for the sun, like most other people, I ask him can people affect the weather and if they could, should they interfere? "No they can't but if they could they should leave it cos it wouldn't be fair to people who like winter". I'm pleased he is showing such consideration for people like myself who have a mild aversion to anything over ten degrees Celsius! He tells me it doesn't need to rain but it does as summer is for sunny weather and winter is for cold. He carries on to disclose the fact that he would love to go to France as it looks nice and he thinks its sunny. His favourite animal is a dog. He had never heard of extinction and couldn't tell me what the environment actually was. He told me that cars had no effect on the environment. He didn't know where the heating and electricity for our house came from. He believes that nothing is wrong with the planet. Interestingly though when I asked him what was the worst thing he could imagine happening to our planet he replied, "the largest thunderstorm in the world that would destroy all the cities and towns."

"It's not gonna happen in years"

Well I should definitely try and point out where I'm going with all this. I wanted Killian to think about the living things around him. I wanted him to consider the interaction between these things. Climate change demonstrates these facts clearly. I then did possibly the most unimaginative of all things, typed "explaining climate change to children" into Google. Welcome Tiki the Penguin to the conversation! Along with this extremely informative creature I used some material devised by the British embassy in Brussels for the purpose of educating Belgian school children.

Firstly we went through the embassy's animations. They explained the effects that cars and electricity had on the environment. After going through them both I asked Killian was he worried about how much people used cars? "No, I don't feel scared. It's not gonna happen in years". This, you should note is from a young boy who gets dropped to and picked up from school by his mother in our family car everyday. A slightly self-interested answer indeed!

I enquired further asking him to specify when he thinks it will happen?
"A long time away. I don't really think it's happening" he responds. It seems that even a child with the most active of imaginations finds it difficult to fathom our impact on the planet.

I elaborated further with Tiki. This presentation was a lot more comprehensive in that it was very explicit about our actions and their consequences. He seemed to think about it more this time. He agreed that it was not right for businessmen to make money if they don't care about the environment as "it won't be fair for places where it is cold". He concurred that we need to stop global warming as "it wouldn't be fair to the penguins and the polar bears...oh and all the poor people too."



© Guy F. Raymond

«No, I don't feel scared.» says little Killian.

The most important question I think was "What is the one thing you think we need to do to stop it?" His answer was one that we need to listen to: "Whatever you have to do". Even if it meant not making lots of money? "Yes even if it meant not making lots of money. If I was a grown up I would do something about it."

This text is drawn from the essay of the Irish student Nikita White, one of the 6 laureates of the student contest (18 to 22 years of age) organized by the International Year of Planet Earth.



© Francisco Ferreira de Campos (Brazil)

Drawing by Francisco Ferreira de Campos (Brazil), one of the laureates of the student contest organized by IYPE.

Refugees of the future will be "climate refugees"

All countries – rich and poor – will have to sit around the same table to find a solution to the problem of climate change, believes the Italian climatologist Filippo Giorgi. Member of IPCC, the Intergovernmental Panel on Climate Change (Nobel Peace Prize 2007), Mr Giorgi is also the head of the Earth System Physics Section in UNESCO's Abdus Salam International Centre for Theoretical Physics "Abdus Salam" (Trieste, Italy).

Interview by Jasmina Šopova.



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Floods in New Orleans after Katrina in September 2005.

According to the IPCC Fourth Assessment Report (2 February 2007), "most of the global average warming over the past 50 years is very likely due to anthropogenic greenhouse gas increases". You have said that one of the big challenges today is to "manage the unavoidable and avoid the unmanageable". What does this mean?

Some further human induced climate change is unavoidable, because it is unrealistic to think we can suddenly reduce emissions drastically to stabilize concentrations at the current level or even to attain lower levels. This will require implementing adaptation policies. However, it is even more important to stabilize greenhouse gas concentrations under the danger level at which the earth's climate can be profoundly affected and in turn can profoundly affect human societies and natural ecosystems, especially for the next generations which will inherit the environment we leave them.

In addition, because greenhouse gas can stay in the atmosphere a long time and because of the inertia of the climate system, what we do now will be felt for many years, so action is needed now. This will require strong and urgent mitigation policies to reduce emissions in the next decades. Adaptation and mitigation have to go hand in hand; the one cannot be the solution for the other.

The IPCC Fourth Assessment Report also states that "warming of the climate system is unequivocal". Did this statement lead to a revolution in our minds, concerning our responsibility? Did you notice changes in climate policies this last year?

I feel that this is the statement that really made the difference. For the first time the scientific community expressed a certainty that the global warming problem is real.

The public perception of this problem has really changed, especially in the United States and Australia and in countries, such as China and India. In Europe there has been a high consciousness of this problem for some years, although it has also increased in recent years. A number of factors contributed to this change in public perception.

The 2003 European heat wave and hurricane Katrina [United States, 2005] made people realize how vulnerable even industrialized countries are to climate, regardless of whether those events can be directly linked to climate change or not. The Stern report [Stern Review on the Economics of Climate Change, 2006] pointed to the incredibly high potential costs of climate change. Some high visibility media events brought attention to the problem: the movie "The Day After Tomorrow" [Roland Emmerich, 2004], Michael Crichton's book "State of Fear" [2005] and of course Al Gore's movie "An Inconvenient Truth" [2006]. And then our report gave scientific solidity to all these messages.

Will climate change increase the divide between rich and poor?

Climate change will not be felt by all countries in the same way. Developing countries are more vulnerable because of their lower capacity to respond to climate change. This will likely enhance the large imbalances across countries we see today and increase friction. In some cases, expected changes such as sea level rise and widespread increase in drought conditions might lead to massive population migrations, the so called climate refugees, and this will of course increase tension.

However, the solution to the climate change problem requires a probably unprecedented global cooperation effort across countries, so it offers a great opportunity for international collaboration and coordinated action. All countries will have to sit at the same table to solve the problem.

According to the "Climate Change Index" you published in September 2006, the Mediterranean and North-Eastern European regions are the most prominent "Hotspots"? Why?

The index is based on changes in the averages and the variability of temperature and precipitation. The Mediterranean and North-Eastern Europe emerged as the most prominent hotspots, but not for the same reasons.

For the Mediterranean the main problem, indicated by model projections, is important warming and a marked reduction in precipitation in the spring and summer seasons. This is due to a northward shift of the storm track (storms increasingly travel north of the Mediterranean) and the intensification of local soil moisture-precipitation feedbacks (decreased precipitation leads to drier soil and warmer conditions, which in turn inhibit precipitation etc.). The models also project an increase in variability during the warm season, which implies a relatively large increase in the occurrence of extremely warm and dry seasons (even warmer and drier than the summer of 2003). This would lead to severe increased aridity and perhaps even desertification, especially in the southern Mediterranean countries.

In North-Eastern Europe, the main effect is a large increase in precipitation related to higher frequency and intensity of storms, conditions more prone to flood events, and important warming in the cold season. The latter is due to the melting of snow, which decreases surface reflectivity and induces a higher absorption of solar radiation, thereby intensifying warming.

You seem to be particularly concerned by the effects of land-use changes.

The problem is that current model projections of climate change do not include land-use change and for some regions this is an important source of uncertainty that needs to be better addressed in the future. We have indications that land-use change can have large effects, even larger than greenhouse gas warming in particular in some specific regions, for example West Africa. But at the global scale the effect of land-use change is minor compared to that of greenhouse gases. I also think the effects of atmospheric aerosols and dust may be important at the regional scale and need to be better addressed in the future.

A personal question at last: after the announcement of the Noble Foundation, in October 2007, you declared to the Italian journalist Fabio Pagan: "Il mio sogno? Andare a Oslo per la cerimonia del Nobel". Did you realize your dream, attending the Oslo ceremony?

I did not get to go. It was a relatively small delegation, 25 people, and only 4 slots remained for a draw including several hundred IPCC bureau members and authors. I unfortunately did not win. Maybe another time!



© Massimo Silvano, ICTP Photo Archives.

Filippo Giorgi.

Neanderthal man at the seaside

Before Agatha Christie and Charles Darwin, the English Riviera was visited by the Neanderthal man! So many celebrities in the United Kingdom's new geopark, the first in the world entirely located in an urban zone! The new Global Network of National Geoparks, launched in 2004, is one of the tools under the aegis of UNESCO that aims at preserving our environment.



© UNESCO/Peter Coles

View of Torbay with raised beaches in cliffs showing signs of past sea level change.

Torbay – alias the English Riviera - on south Devonshire coast is a gentle arc of pink sandy beaches and red cliffs, linking three towns that could hardly be more different. At the southern tip of the bay, Brixham, home to Britain's largest fishing fleet, still looks quaint, with its cottages and shops huddled under the steep cliffs of Berry Head. Opposite, Torquay's Victorian elegance has acquired a rougher, urban edge, as though every square inch of land, even impossibly steep hills, has been built on, with little attempt at coherence. And, in the middle, Paignton, with its wide lawns, palm trees and former gentleman's club, resembles a once beautiful old lady, now relying on powder and rouge.

For local historian, John Risdon, "Torbay's three main towns, Torquay, Paignton and Brixham owe their very existence to their geology, which created sheltered beaches and harbours".

On a balmy summer's day, as children paddle in the sea with their buckets and spades, it is hard to imagine that this was once arid, equatorial desert, or that corals had flourished here in tropical waters.

It is equally hard to conjure up a picture of early humans, a few hundred million years later, chasing mammoth over the cliffs, then competing with hyaenas for the meat. But these are some of the time warps that, with the right guide, are clearly visible in what, in September 2007, became the latest addition to a new Global Network of National Geoparks, under the aegis of UNESCO.

The concept of geopark is recent. "Culture and biodiversity have well-established programmes to make sure they are valued and protected," says Margarete Patzak, of UNESCO's Division of Earth Sciences, "but, until 2004, when the geoparks initiative was launched, our geological heritage had largely been overlooked." Since the network has been

<<< The Global Network of National Geoparks

The Global Network of National Geoparks, under the umbrella of UNESCO, was launched in 2004 as a platform for active cooperation between experts and practitioners in geological heritage.

To qualify for membership of the network, a proposed Geopark has to be an area with a significant geological heritage, and have a coherent and strong management structure, with a sustainable economic development strategy. A Geopark creates enhanced employment opportunities for the people who live there, bringing sustainable and real economic benefit, usually through the development of sustainable tourism.

The Global Network currently features 54 selected, high quality National Geoparks from 17 countries (Austria, Brazil, China, Croatia, Czech Republic, France, Germany, Greece, Ireland, Italy, Iran, Malaysia, Norway, Portugal, Rumania, Spain, United Kingdom). >>>



© UNESCO/Peter Coles

Nick Powe, Managing Director of Kents Cavern, holding reconstruction of Neanderthal skull.

running, the 53 national geoparks so far designated have brought private sector, public and research communities together in a number of innovative local and national projects.

A stage set worthy of Agatha Christie

There is probably no better place to get to grips with the extraordinary history in the English Riviera Geopark than underground, in Kents Cavern, now buried among the houses, shops and hotels coating the steep hills of Torquay, on the northern cusp of Torbay.

About 375 million years ago, this part of England was under the sea, south of the equator, before the tectonic movements of the Earth's crust thrust it north, forming today's continents. Over millions of years, shells and bones from marine organisms formed the cave's sedimentary limestone rock. A series of ice ages and warmer, interglacial periods, starting about 2.5 million years ago, hollowed out the caves providing shelter for animals and early man.

"The cave has an uninterrupted sequence of human occupation going back half a million years," says Nick Powe, Managing Director of Kents Cavern and great grandson of Francis Powe, who bought the cave in 1903. Francis's father in law, George Smerdon, had been foreman on pioneering excavations there, led by William Pengelly in the late 1800's. By candlelight, Pengelly, a teacher from a small town in Cornwall, systematically dug away the floor of the cave, formed by debris after each ice age, turning up evidence of human occupation 500,000 years ago, alongside bones from cave bears, cave lions, mammoths, woolly rhinos and hyaenas.

Charles Darwin, who wrote the finishing chapters of his Origin of Species at Meadfoot Beach in Torquay, was in regular correspondence with Pengelly whose discoveries shook the orthodox scientific community in London, which adhered to the Biblical theory that God created Man about 6000 years ago.

A fragment of human jawbone found in the cave, recently estimated to be 35-40,000 years old, is the oldest record of modern man (Homo sapiens) Europe. Now, DNA from the fragment is being studied by the UK's Natural History Museum. It may, after all, be from a Neanderthal skull, and therefore a crucial link in the history of human occupation of the United Kingdom, proving that Neanderthals and modern man coexisted there.

Kents Cavern also inspired one of Britain's most famous crime writers, Agatha Christie, who was born and grew up in Torquay. In her murder mystery, The Man in the Brown Suit , Agatha Christie's heroine, Anne Beddingfeld, describes her palaeontologist father spending his days in Hampsly Cavern, "bringing to light portions of cave bear and woolly rhinoceros".



© UNESCO/Peter Coles

Fossilised coral at Hopes Nose, Torquay, Devon.

Sustainable development is more than concrete and cranes

Although the geoparks initiative is aimed at preserving our global geological heritage, explains Margarete Patzak, "it is also very much about people". The initiative has even led to a new concept of "geotourism" as tool for sustainable economic development. "Geologically interesting places like the Antarctic or deserts would not be considered for geopark status," she says, "as they are too inaccessible".

For Mel Border, Geopark Officer and Education Ranger for Torbay Coast and Countryside Trust, being located in an urban area, the English geopark has direct benefits for the local community, not least through its potential for job creation. "There is extreme deprivation in the Torbay area," she says, "since the decline in tourism in the 1970s. Some local children have never even been to the beach."

The geopark now has a network of local teachers developing curriculum-based coursework to be made available online to teachers across Europe. "Economic development comes from the roots up," adds Nick Powe. "It's about educating children. It's amazing how some schools have taken to the geoparks idea."

The English Riviera Geopark Organisation (ERGO) is now actively developing its partnerships not just with schools and universities in the region, but also with other geoparks through the 32-member European Geopark Network. Local experts regularly give guided walks and lectures for the public. About 3.7 million tourists visit the region each year. Meanwhile, ERGO is building private sector involvement through branding and a code of practice. "Sustainable development is more than concrete and cranes", says Nick Powe.

Peter Coles, British journalist.

How much can we spend?

Ecological Footprint consists in measuring how much land it takes to meet a person's needs according to lifestyle, consumption versus regeneration. It was developed by



© UNESCO/Michel Ravassard

Mathis Wackernagel (to the right) and Roni Amelan, at UNESCO.

Mathis Wackernagel (Switzerland), Executive Director of the Ecological Footprint Network.
The Network, a non-profit organization that promotes ecological, social and economic sustainability, compiles national footprint accounts, measuring the ecological resource use and resource capacity of nations over time. Wackernagel told Roni Amelan of UNESCO's Bureau of Public Information about the purpose of the network.

The Global Footprint Network was established in California in 2003 and its main goal is to end our shooting ourselves in the foot. Our metabolism has become

overburdened, we consume more than we can generate. The most visible sign of that is climate change. It is possible to sustain this for some time because of existing stocks but we are heading towards ecological bankruptcy.

When do you expect the stocks we rely on to run out?

In some parts of the world we have already reached bankruptcy. Haiti and Darfur for example are areas where everything comes together: civil wars are the result of many factors including, not least, shortage of resources. In Darfur, we see that there is no wood in a radius of ten kilometres around the refugee camps. Dramatic situations, including conflict and even war, are becoming increasingly frequent in some poor parts of the world where the inhabitants cannot pay for the resources they lack.

Even according to the most optimistic forecasts, we will have to use twice our planet's resources by the year 2050. Fisheries are already collapsing, there is a growing water problem in Australia with rising salinity in the water table. Meanwhile water levels are going down alarmingly in Yemen, for example, from ten metres 50 years ago to 800 metres now. Libya is investing in huge projects to try and overcome its water shortage.

Twenty years ago Gro Harlem Brundland [former Prime Minister of Norway, now serving as the UN Secretary-General's Special Envoy on Climate Change] spoke about sustainability for future generations, but now we are talking about sustainability for our own generation.

Do you feel that we are preparing ourselves effectively for the imminent shortage of resources?

To a certain extent, some rich countries are taking necessary measures, but too slowly. In some cities for example car traffic has to be reduced on some days because of poor air quality. But such necessary steps can only be taken in cities that have a reasonable public transportation network. Fifty percent of the world's population live in cities but cities account for 70 percent of the CO2 emissions. Cities are very intense consumers of energy, but they could be more efficient. There could be great economy of scale, because of their compactness. People who live and work in cities travel over shorter distances and heating is more effective in large buildings than in detached houses.



© Martin Baran

Slums, Port-au-Prince, Haïti.

In Houston (Texas, U.S.A.) three times more resources are used per inhabitant than in Sienna (Italy), for example. Yet the quality of life in Sienna is no less good than in Houston. Sienna is more efficient because of the way it was built. Being resource efficient does not necessarily mean reducing the quality of life.

Can we reasonably expect to achieve a balance between resource consumption and supply?

Finding ways of cooperating for the well-being of all is not unprecedented. This is already being done among small groups and in some countries with respect to environmental consideration. Clearly much remains to be done to adapt such activities to the global scale. But I am convinced that this dream is possible.

The dichotomy between developed and developing countries is becoming outdated because the current model of development is reaching breaking point. The future will offset countries that use less resources against those that use more than they have, which will become weaker.

The United States uses twice what they have, whereas Egypt, Italy and Switzerland use three times as much as they have. Switzerland can afford to pay

for this but that's a liability. Either the prices of everything go up or supplies are disrupted.

Have you observed any improvements in resource expenditure?

Being able to talk about it is already a great thing considering that we have denied this problem for so long. For years, there has been great resistance to talking about climate change. Every city faces the risk of a break down, like an overburdened bridge that resists for some time but finally collapses. As resources become more expensive and their supply gets disrupted, cities will not be able to operate. To avoid this we will have to, among other measures, reduce our dependence on private cars, improve energy efficiency. Countries with stable or declining populations will be able to survive better, not least because they will be spared the need to expand their infrastructure.



© Qin Tongchun

Drawing by Qin Tongchun, China, one of the laureates of the IYPE student contest.

Boost for biosphere reserves

They've been called "the lungs of the planet" or "sustainable development laboratories" and both depictions are accurate. But biosphere reserves are above all pioneer areas where the needs of humanity and nature are reconciled. The International Year of Planet Earth provides an opportunity to give one of UNESCO's emblematic scientific programmes a boost.

Eighty-five kilometers along the Madrid-Brugos highway, a sign on the right points to the small road that leads to the Sierra del Rincón biosphere reserve. There, an expanse of 15,230 hectares is home to 193 species of vertebrates, 694 species of vascular plants (holm oak, downy oak, beech, birch and pine) and 139 species of non-vascular plants (lichens, mosses and mushrooms). Fifty-five of these species are endemic and four of them are in danger of extinction. Accepted into the global network of biosphere reserves in 2005 for its "natural and landscape values", the Sierra del Rincón incorporates five municipalities with a population count of 818 inhabitants, only half of whom live there year-round.

The month of February is just beginning, but the sun is shining brightly. On the main square in La Hiruela, one of the reserve's villages, four or five locals are sitting in the sun chatting. When asked, they all say they're proud to live in an area with the prestigious label of "UNESCO Biosphere Reserve".



© UNESCO/Lucía Iglesias

Sierra del Rincón Reserve, Madrid.

The place is so quiet it's hard to believe there's a bustling city of three million people only 90 km away, with its problems of air pollution, urban waste and lack of greenery.... "Being close to a big city is both an advantage and an inconvenience," says biologist Elena de Mingo, head of the reserve's technical centre. "On the positive side, residents have access to a wide range of infrastructures and social services – hospitals, schools, etc – near by, which is not the case in more remote reserves, even in Spain. The proximity also makes it easy for people to come and visit on weekends. And of course when it come to attracting conservation and research projects, we are lucky to be considered a jewel in the crown of the Community of Madrid." The latter does indeed finance environmental protection projects and initiatives. "In short, we represent a priority area for a government with means at its disposal, and that's very positive," she adds.

Humanity and nature

"But we also come up against certain problems," de Mingo admits, "such as having to organize tourism down to the tiniest detail, so that it won't have a negative impact on what we're trying to safeguard. That's why we have hikes on ecological trails that always follow the same route. The other side of the coin is that the younger generations have trouble staying, because building new houses is prohibited. All that stands in the way of renewing the demographics and creating employment".

The balance between human activity and environmental protection is precisely the major challenge of UNESCO's Man and the Biosphere programme. From Yellowstone Park (USA), on the list since 1976, to the recently-inscribed Rostovsky reserve (Russian Federation) the global network of biosphere reserves today counts 531 sites located in 105 countries. It includes arid and semi-arid lands, mangroves, tundra, snowy peaks and seascapes. What do all these sites have in common? What threatens them?

Laboratories for climate change

The third World Congress of Biosphere Reserves, held in Madrid last February and attended by over 800 delegates, was organized around these questions. "The goal was to revise the entire management strategy in order to deal with new challenges, such as loss of traditional know-how and cultural diversity, population growth, decrease of arable land or climate change," explains Miguel Clüsener-Godt, Programme Specialist in the Division of Ecological and Earth Sciences at UNESCO. "It's a fact, climate change is upon us, and we are feelings its effects. Biosphere reserves are the ideal places to study consequences and look for ways to mitigate them." This is precisely the aim of the Madrid Strategy, which consists of 31 goals organized into 65 actions. Among the measures planned are promoting the incorporation of urban landscapes into the biospheres; organizing training on different kinds of ecosystems; establishing



© Luiz de Mog

Mata Atlantica, Brazil.

biosphere reserve pilot sites to measure their economic contribution to local economies; increasing the involvement of the private sector; and promoting incentives for creating products with the "biosphere reserve" brand.

The MAB Programme 2008-2013 will be run according to the Madrid Strategy and such representative sites as the Brazilian Atlantic forest, which covers 4.5% of Brazil, Mount Kenya or the French Camargue will benefit. Elena de Mingo at Sierra del Rincón sums up what's at stake: "The balance between humans and nature still exists for now, but safeguarding it is a delicate task." The Madrid Strategy, adopted this International Year of Planet Earth, will certainly be a valuable tool to make that task possible.

Lucía Iglesias Kuntz



© Yiting Liang

Fontainebleau Forest, near Paris.

Focus

Amsterdam: a paradise for book-lovers

A collection of poems sold rapidly at 50000 copies. This doesn't happen every day. And not just anywhere. Especially in the middle of the 17th century! And yet it did happen in Amsterdam, appointed World Book Capital by UNESCO this year. After Madrid, Alexandria, New Delhi, Antwerp, Montreal, Turin and Bogotá, UNESCO appointed Amsterdam World Book Capital, thus acknowledging the role it played since its golden era, in the 17th century, to this date. Events started on 23 April this year, World Book and Copyright Day, and will last until 22 April 2009.

Serge van Duijnhoven, Dutch writer and historian living in Belgium, tells us the story of the book in Amsterdam.



© Serge van Duijnhoven

Amsterdam's municipal library welcomes a million visitors a year.

Since twelve years I live, as a Dutch writer-in-residence, in the centre of Brussels. And there is much to be said for living in this multi-faceted, slightly surrealist capital of Europe. Whoever agrees with Lautréamont's definition of beauty as "the coming together of an umbrella and a sowing machine on an operating table", will definitely feel himself at home in this bilingual city on the vault-line of North and South, East and West.

However, I always feel a great excitement and, to a certain extent, relief, when I take the train and travel north to Amsterdam. Compared to the arid atmosphere of Brussels, as interesting as it may be, with three ugly Dutch bookstores (and one beautiful one that had to close down because of lack of sales),

Amsterdam is like a paradise for book-lovers. The city on the Amstel houses all important publishers, countless bookstores, and weekly or even daily second-hand book-markets, like the ones in Oudemanhuispoort and Spui-square where in the afternoon many writers gather in the surrounding café's.

Only recently, the jewel was put on the crown of this city with the opening of a magnificent library building boarding on the docks of the IJ and overlooking the age old city centre. The building, a sublime construction of architect Jo Coenen, offers seven floors, 25.000 meter shelve space, 28.000 square meters, comfortable foyers and study corners, exhibition spaces with books on display, a café, theatre and restaurant on the top floor. A temple of books as I have never seen before, where one immediately feels at ease and wants to stay as long as possible.

Sanctum of free speech

Amsterdam has a strong reputation of intellectual freedom that it tries to honour with the upcoming festivities of being World Book Capital. Ever since the end of the sixteenth century, the city was a place of refuge for free speech and the written word. In

Amsterdam, an open book!

Dancing with your favourite poet in a library, surrounded by 5 million books! This is just one of the attractions at this year's Book Capital, Amsterdam.

David Grossman (Israel), Samir El-Youssef (Palestine), Vikram Seth (India) and Ingo Schultze (Germany) are only a few of the numerous well-known writers expected in Amsterdam to celebrate books between 23 April 2008 and 22 April 2009.

This year Amsterdam is paying special tribute to Spinoza, who spent most of his life in the city; to Ann Frank who wrote her famous Diary here, hiding in an attic with its entrance concealed by a bookcase; and to Annie M. G. Schmidt, whose Miss Minnie made her famous among children all over the world.

This year's slogans are Open book , an idea encompassing exchange of knowledge in areas as varied as copyright, neo-censorship and digital media, and Open doors , to indicate that the programme is not reserved for an audience of specialists.

With information technology having opened a new debate on the relationship between copyright and access to information, exclusivity and free competition, digitization and privacy, a symposium will be held on the theme The Book in the Internet Era (21-23 April, Public Library).

Those who believe censorship is a thing of the past in our democratic societies may think differently after attending the International Symposium on Neo-Censorship (18-20 September, De Balie Centre). It will examine the consequences of new forms of censorship for writers and publishers. The International Publishers Association's Freedom to Publish Prize will be presented during the symposium's opening ceremony. The Prize, awarded to persons or organizations for exemplary contributions in upholding freedom of expression, was presented for the first time in 2006 to Shahia Lahji, first woman to open a publishing house in Iran in 1983.

Amsterdam intends to be a book capital that is open to all. Public events will be held both within the city and in the suburbs, and activities of all kinds will be organized in libraries and schools. Picture, for instance, a "traveling tent" going from one library to another in Amsterdam's suburbs, inviting pupils from primary and professional schools to develop their reading appreciation. It will be called Kinderboekenstad , the centre for young people's books.

The books will be accompanied everywhere by music, particularly during the International Literature Festival (24 to 27 April), which will allow the public to meet famous writers from all over the world, and why not, to dance with their favourite authors. The new Public Library has made all the necessary arrangements!



© Serge van Duijnhoven

A library to stay in.

Holland, people opened themselves to the sea and to everything that came from afar, while those on the sandy soil of other provinces turned their backs on it. Tolerance was in Amsterdam not a mere principle but a practical necessity: the open merchant city, being the meeting place of all sorts of different cultures, could not allow itself to indulge in the large-scale prosecution of those adhering to different beliefs. Whilst throughout the continent books were being burnt, in Amsterdam books were being fabricated and traded.

With the fall of Antwerp in 1585 (when the King of Spain, Philip II, took possession of the city) tens of thousands of immigrants came to Amsterdam from the southern Netherlands, bringing with them their trading expertise, their capital, and their goods, as well as their appreciation of art, culture, their verve, their language and literature. It was largely by their efforts that Amsterdam's publishing trade acquired its international reputation.

Another wave of immigrants arrived from Portugal: Sephardic Jews who had lost their livelihoods there because of the Inquisition. These laid the foundations of the tobacco trade and the diamond industry, and also made Amsterdam famous as a centre for Hebrew typography. Religious observance was not controlled by the state; there was no oppression by the Inquisition; there was freedom to marry within the community; no one was compelled to live in a ghetto; and Jews could acquire property freely. Such freedom was unheard-of elsewhere. Money, freedom and culture pushed aside the old medieval combination of "honour", "nobility" and "heroism". The city paradoxically grew into a realization of a medieval utopia: the safe, enclosed space in which new and old citizens alike could cast off the yoke of serfdom. "This church consecrated to God knows not enforced beliefs, nor torture, nor death," the Jewish immigrants, full of trust, wrote above the door of their Portuguese Synagogue. They called Amsterdam the Jerusalem of the West.

Books sold like hotcakes

The English philosopher, John Locke, wrote his "Epistulae de Tolerantia" in Amsterdam, among other works. The Frenchman Rene Descartes found the leisure and freedom to conduct his research, just as did his home-grown colleagues Baruch Spinoza, Hugo de Groot (Grotius) and Christiaen Huygens. The great French philosopher of the Enlightenment, Voltaire, who visited Amsterdam seven times and had his work published here, remarked that it made no difference to the Dutch whether they traded in books or in textiles, and that what was written in these books did not concern them one bit as long as they made money out of them. That aside, however, he saw the city as an inspiration, as an anticipation of the utopian



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Engraving of a book market in Oudemanhuispoort (Amsterdam) by van H. Horst (1967).

spirit of the Enlightenment – or "Felix Meritis" (Happiness through Achievement) as one of the best-known art society's in the city is still called.

Apart from the notion of freedom, books made in Holland had an excellent reputation because of the craftsmanship of the engravers, the quality of the paper (papie de Hollande!) and the fair price per copy. Moreover, the Dutch printing press was extremely inventive by creating pocketbooks for the masses (the bible by Menasseh ben Israel, the world atlas by the Dutch cartographer Willem Jansz Blaeu who became famous with his richly illustrated world atlas in eleven editions).

During the seventeenth century, more books were been published in Amsterdam than in all other countries of Europe as a whole. Almost 30.000 people made a living in this field. In 1600 the city had 96 book shops; in 1699 the number had risen to 273. An illustrated book of poems by the Dutch poet Jacob Cats, written in 1655, immediately sold more than 50.000 copies, an amount poets nowadays can only dream of. Jews that were being prosecuted and chased around Europe, in Amsterdam were allowed to publish books in Hebrew, Latin, Spanish, Portuguese and even Yiddish, to such an extent that the city became the world book capital of Jewish publications.

From atop the new library building, with its splendid view on the city, the contrast between the bustling inner city and the spaciousness of the IJ River can be best appreciated.

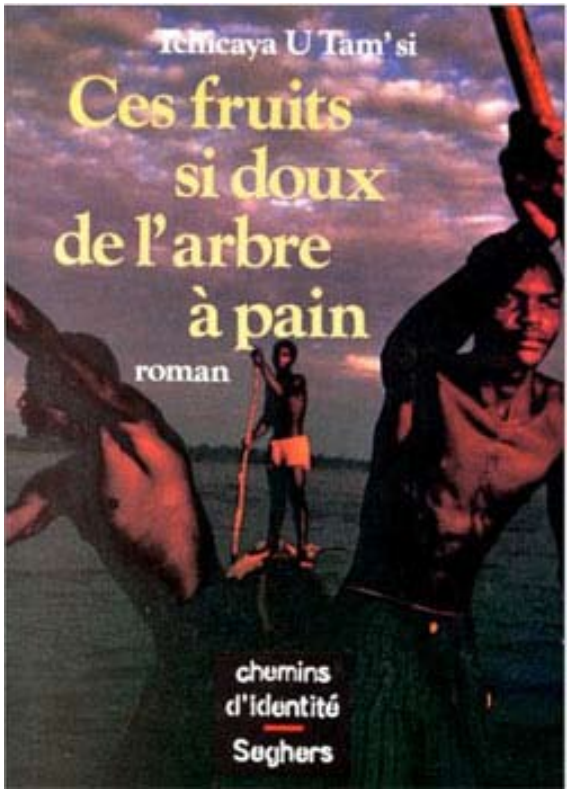
With a little bit of imagination, it is here between the atlases of Bleau, Mercator and Hondius exposed in glass boxes on the third floor, that one can see the endless row of shimmering masts, spires and sailboats lining up with cords along the wooden palisades that for centuries have marked the city of freedom and trade.

Jasmina Šopova

Landmarks

The little leaf singing its country

Considered one of the greatest writers of the French language, Congolese Gérald Félix-Tchicaya, alias Tchicaya U Tam'si (1931-1988) was an international civil servant at UNESCO from 1961 to 1985. Having come to France at the age of 16 with his father, an elected deputy of Middle Congo, he was an activist for the independence of the Congo Republic. His pen-name means "little leaf singing its country".



© Éditions Seghers

Cover of Tchicaya U Tam'si 's last novel (1987).

As a tribute to our colleague, who died prematurely on 22 April 1988, we are publishing excerpts from an interview he gave French journalist Bernard Magnier on 21 December 1979 when he was a programme specialist in UNESCO's education sector.

Twenty-five years have gone by since the publication of your first collection [Le Mauvais Sang (Bad Blood) Paris, P. J. Oswald, 1955]. How do you view this last quarter-century in African literary creation?

From the perspective of Africa, I would have a lot of difficulty, but I can try as far as my own country is concerned.



© UNESCO/Fiona Rya

African sand painting.

This quarter-century has seen the blossoming of a large number of writers who published books either right before independence, or after. At the beginning, the favorite genre was poetry. Only one author wrote prose, traditionally-inspired prose, and that was Jean Malonga. Between 1950 and 1960, the movement was launched with Jean Malonga, Sinda Maetial and then me. Then in 1960 there was Guy Menga, Sylvain Bemba, Henrio Lopes, Théophile Obenga, etc. A blossoming of names. The magnitude of this phenomenon is rather surprising. Looking at the population, the number of writers is considerable.

Sony Labou Tansi has just now published a high quality novel *La Vie et demie* (Life and a half), Paris, Seuil, 1979]. Finally, another generation with a heap of manuscripts that aren't second-rate are waiting to be published. In all the results are quite positive. These writers belong to a movement that runs parallel to "negritude". It has to do with taking responsibility for oneself and even an acerbic gaze on the country, the inner country.

What was your own itinerary during this period?

My own itinerary is marked out by the books I published whose titles are significant. In 1955, bad blood, that's anxiety. In 1957, Feu de Brousse (Bush fire), that's the fire of exorcism. In 1960, À Triche-cœur, (Cheating heart), it's compromise not as a cowardly act but as the acceptance of the different parts of oneself without rejecting any. In 1962, Épitomé (Epitome), it's a historical précis, almost a summary, which comes out at a turning point.

Regarding the plays, whether it's Le Zulu (The Zulu) or Le Destin glorieux du Maréchal Nnikon Nniku (The Glorious Destiny of Marshal Nnikon Nniku) [1979], it's a reflection on power and construction that is being done or remains to be done.

There are two major themes in your work: women and the Congo. Through these themes, the reader perceives two kinds of suffering, two revolts. Don't you envisage the Congo and women as two elements of yourself?

If I can get that across, I'll have every reason to be satisfied. For the Congo, it's been recognized. In contrast, I've been portrayed as a dreadful misogynist. I don't know why.

An anecdote: the first talk I ever gave, a very long time ago, was on the topic of woman, the mother and the "matrie", that is to say the motherland rather than the "patrie", fatherland. The fatherland is the sword. The motherland is love. That's why Le Ventre [The Belly, poetry, 1964] is a return to maternal love.

The Congo is also a quest for identity, it's the circle in which I'm trying to find myself.

Isn't the quest for identity a political quest?

But the human quest is a political quest, to the degree that human beings are fundamentally gregarious. The fundamental gregariousness is sociability; it's rejecting the other's refusal.

The Congo is therefore very close to you through your work, yet you live in Paris. How do you accept this distance?

You know, I see better from far away. Needless to say if I hadn't had this distance, I would have had this perception. Of course I perceive and I would like to embrace. That's where suffering begins. Every day I would like to go back, but disenchantment begins every time I return because the dream always goes beyond the reality.

Christ is an important character in your works. Is he a symbol?

Yes. He's a multiple symbol. He's the symbol of brotherhood foretold and not accepted by others. Christ is also a prototype of the colonized.

Tchicaya U Tam'si is the author of numerous collections of poems including **Le Mauvais Sang** *(Bad Blood, 1955) and* **Épitomé** *(Epitome, 1962), of novels including* **Les Cancrelats** *(The Cockroaches, 1980), and of plays :* **Le Zulu** *(The Zulu) followed by* **Le Destin glorieux du maréchal Nnikon Nniku, prince qu'on sort** *(Glorious Destiny of Marshal Nnikon Nniku, 1979).*

Hasn't he been used as a prototype of the colonizers?

One uses him to be a colonizer. Brotherhood is also a form of colonization. If you force someone to be your friend, you make him your slave. If you respect the other's freedom and choice, there is no longer any constraint or slavery, there is only the expression of this brotherhood.

In your poems you evoke suffering, revolt, but also forgiveness....

I say, "I will no longer see my blood on their hands. I forget I'm black to forgive the world of this." This is the origin of those lines: I was a journalist in the 1950s and I had a French woman friend, a political journalist. Every time there was a political event in Africa, she questioned me. I was impassive, almost blasé, indifferent. One day, she said to me, "Gérald, one would think you're forgetting you're black!" I replied, "If I had to think about being black all the time, I couldn't look you in the face." That's why I wrote those lines.

If I have to keep thinking endlessly about the millions and millions of black people who ended up in the Atlantic, those who suffered in the New World and all those who were bled to death on the continent, I'd never be able to sleep again.

Is forgiving necessarily forgetting?

The idea of forgiving is underpinned by that of forgetting. If you don't forget, you can't forgive properly, you'll always be obsessed by revenge.

You're very ready to use humor. Comic relief but also disturbing humor...

Yes, I say "I have the laugh that kills". In Le Destin glorieux du Maréchal Nnikon Nniku, it's laughter that expels, that relieves tension and liberates. Humor preserves you. It makes you peaceful. It makes things relative, quite rightly so, to temper excessive rage, to recharge your energy.

Humor is our weapon, we who are weak. The weak laugh at themselves to disarm their foes. That's what (French writer) André Schwarz-Bart said when I interviewed him after he'd won the Goncourt literary prize [1959]. Humor is a weapon.

Like poetry...

Possibly...

You don't think of yourself as a militant?

I consider myself committed. I don't think there's any literature that isn't. What is the meaning of my commitment? Effectively everything said that goes to another carries a message, and that message contains a minimum of effectiveness. Humor is militant. Poetry is militant. Every action that projects the consciousness of being is militant.

Next month

How does access to information help the most vulnerable groups transform their lives? The question will be raised by the UNESCO Courier's next issue published in May, on the occasion of the World Press Freedom Day (3 May).



© Cyrus Farivar

Cybercafe in Mauritania.

To mark the Day's celebration in Mozambique, the 2008 UNESCO/Guillermo Cano World Press Freedom Prize will be awarded to a journalist for his dedication to the defence of freedom of expression and information. Last year it was awarded posthumously to Russian journalist Anna Politkovskaya.

Partners

A joint initiative of UNESCO and the International Union of Geological Sciences (IUGS), the International Year of Planet Earth contributes to the United Nations sustainable development targets by promoting wise use of the Earth materials and encouraging better planning and management to reduce risks for the world's inhabitants.



© Moonkyoum Kim

Drawing by Moonkyoum Kim, Republic of Korea, one of the laureates of the IYPE student contest.

Numerous Organizations are working together in the context of this international project.
A few examples:

International Union of Geological Sciences
http://www.iugs.org/
International Year of Planet Earth
http://www.yearofplanetearth.org/
The Geological Society
http://www.geolsoc.org.uk/index.html
American geological institute
http://www.agiweb.org/
International Union of Soil Sciences
http://www.iuss.org/
African Association for Remote Sensing of the Environment
http://www.aarse2008.org/index.html
International Association on the Genesis of Ore Deposits
http://www.geology.cz/iagod
European Geosciences Union
http://www.copernicus.org/EGU/

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