



Humankind's impact  
Ban Ki-moon speaks  
on our new quest



Ending the war  
How we can make  
peace with nature

**MEDIA  
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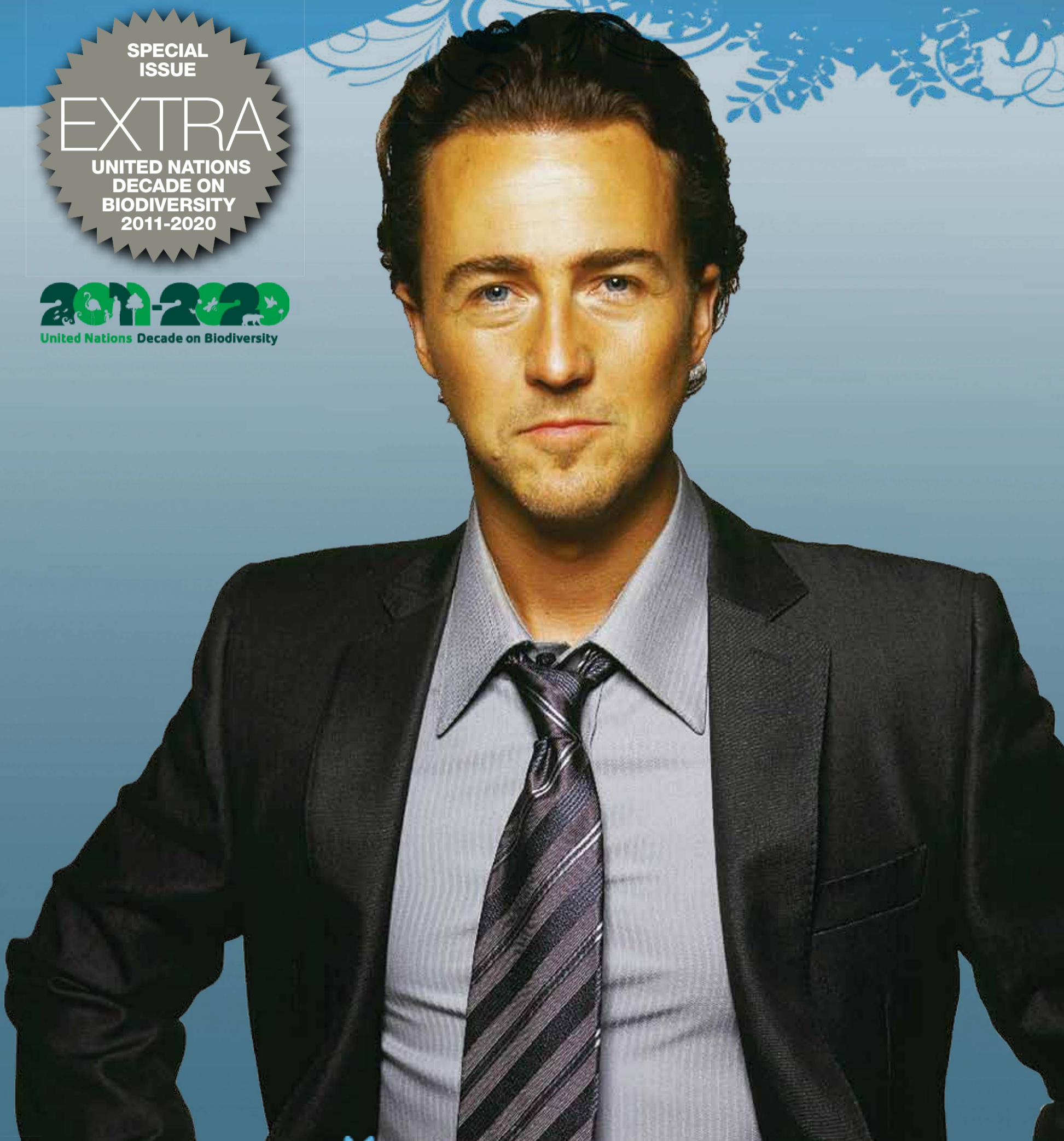
November 2011

# SUSTAINABILITY

SPECIAL  
ISSUE

## EXTRA

UNITED NATIONS  
DECADE ON  
BIODIVERSITY  
2011-2020



# SAVING THE DIVERSITY OF LIFE

United Nations Goodwill Ambassador for Biodiversity **Edward Norton**  
urges global leaders to halt the crisis facing nature

PHOTO: GLEN WILSON

## OUR COMMITMENT:

BALANCING ENVIRONMENTAL, SOCIAL AND ECONOMIC  
CONSIDERATIONS IN ALL OUR ACTIVITIES



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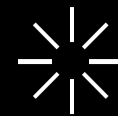
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## CHALLENGES



**AN INTRICATE SYSTEM**  
The three levels of biodiversity: ecosystems, species and genetics.



## WE RECOMMEND



**Business and biodiversity**  
Growing from dependency to create opportunities

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“This is the ‘portfolio effect’ at work, whereby species represent a portfolio of stocks...”

**A hand-in-hand initiative** p. 4  
Hubert Reeves discusses biodiversity and the impact of humankind.

**At the forefront** p. 7  
The story behind biodiversity impact mitigation.

**Creating a symbiotic relationship with nature takes a global initiative**—and the responsibility rests with each of earth’s citizens to enforce positive change.

# Sustainability: A human quest

**T**he human quest to enjoy health, wealth and well-being depends fundamentally on the goods and services provided by biological diversity. These riches include our food, building materials and medicines, as well as protection from natural disasters and the projected impacts of climate change.

We are weakening this fragile yet essential infrastructure—and acting as if we ourselves are not part of the planet’s rich web of life. Unsustainable consumption is causing widespread biodiversity loss, threatening precious genetic resources that will never return. Majestic and invaluable ecosystems—including rainforests, coral reefs and fresh-

water systems—are close to scientific tipping points from which they may never recover.

We have the power to change this scenario. If we so choose, we can enjoy the riches of nature in a sustainable manner. We can restore degraded ecosystems and build a green economy that places a real value on natural capital.

In 2010 world leaders agreed on a set of goals called the Aichi Biodiversity Targets, which provide a clear path to this sustainable future. In this United Nations Decade on Biodiversity I urge all governments to work to achieve these targets and create a legacy that we will be proud to pass on to our children.

**BAN KI-MOON**  
editorial@mediaplanet.com



**Ban Ki-Moon**  
Secretary General,  
United Nations

## Biodiversity targets pave the way for action

**Next week, over 600 experts on biodiversity from around the world will come to Montreal to take action on biodiversity and sustainable development. Delegates will meet at the Subsidiary Body on Scientific, Technical and Technological Advice of the United Nations Convention on Biological Diversity.**



**Ahmed Djoghlaif**  
Executive Secretary,  
Convention on  
Biological  
Diversity

**■ Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society:**

Demographics, economics, technology, politics and culture determine the demand for natural resources which in turn has a direct impact on biodiversity. Under this goal, targets seek to integrate biodiversity into national development policies and strategies and economic activity. There is emphasis on communication, education and public awareness. The economic value of biodiversity and incentives, and the use of planning tools such as strategic environmental assessment are also addressed.

**■ Goal B: Reduce the direct pressures on biodiversity and promote sustainable use:**

Ultimately it will only be possible to reduce or halt the loss of biodiversity if the drivers and pressures on biodiversity are reduced or eliminated. Targets under this goal address the need to reduce the loss of habitats, reduce pollution that leads to eutrophication in our riv-

ers and lakes, control dangerous invasive alien species and ensure that the harvest of our oceans, our agriculture, aquaculture and forestry practices are managed sustainably.

**■ Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity:**

Under this goal, governments have agreed to protect 17 percent of terrestrial and inland water, and 10 percent of coastal and marine areas through well-connected protected area systems that are effectively and equitably managed, and ecologically representative. Governments will prevent the extinction of known threatened species and improve the conservation status of those most in decline. They will also protect the basis for global food security—the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives.

**■ Goal D: Enhance the benefits to all from biodiversity and ecosystem services:**

Biodiversity provides food, clean water, and protects us from the impact of extreme weather events. The loss of biodiversity reduces these important ecosystem services. Governments have committed to management strategies to enhance ecosystem services and to the restoration of degraded systems. All of this will help to achieve

the Millennium Development Goals and contribute to climate change mitigation and adaptation. Governments will also work to implement the Nagoya Protocol on Access to Genetic Resources and in so doing, will help mobilise biodiversity in the service of equity.

**■ Goal E: Enhance implementation through participatory planning, knowledge management and capacity building:**

Most actions to protect biodiversity are initiated and carried out at the national or sub-national levels through biodiversity strategies and action plans. These national strategies need to be consistent with this strategic plan and must be implemented through action plans involving all parts of government, society and the economy. This will require improvements in knowledge management as well as substantial increases in capacity in all countries, especially developing countries.

The action taken over the next decade to implement the Strategic Plan for Biodiversity 2011-2020, and the direction charted under the Convention on Biological Diversity are crucial. I call upon each and every citizen and stakeholder to take those actions that are needed to assure a future of life in harmony with nature.

**AHMED DJOGHLAIF**  
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## MEDIA PLANET

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### DID YOU KNOW



### What is the Convention on Biological Diversity?

**Healthy ecosystems provide many types of services that humans depend on.**

The Convention on Biological Diversity is an international treaty for the conservation of biodiversity, the sustainable use of the components of biodiversity and the equitable sharing of the benefits derived from the use of genetic resources. Opened for signature at the Earth Summit in Rio de Janeiro in 1992, and entering into force in December 1993, it now has 193 Parties—near universal participation among countries. The Secretariat of the Convention on Biological Diversity is located in Montreal. For more information visit: [www.cbd.int](http://www.cbd.int).

Courtesy of the Secretariat of the Convention on Biological Diversity



INSIGHT

**FACT**  
**1**  
**ECOSYSTEM SERVICES PROVIDE THE BASIS FOR ALL ECONOMIC ACTIVITY.**

**Question:** Why are the environmental measures taken in cities so vital for the well-being of its citizens?  
**Answer:** The physical and psychological removal from nature that occurs within a municipality proves to be damaging—the more densely populated a city is, the more it depends on the equalizing effects of nature.

# MUNICIPAL INITIATIVES FOR SUSTAINABILITY ON THE RISE

**How dependent are municipalities on natural resources and ecosystem services?**

The planet's cities are the densest concentrations of humankind. Each individual citizen is dependent on nature for their existence and, therefore, the more people there are within a city, the more dependent is that city on nature. Municipal services are dependent on, and complemented by, the ecosystem services that nature provides. At the same time city life physically "removes" people from nature and studies have shown that this physical separation leads to psychological separation.

**What are the demographics and natural resource consumption trends for urban municipalities world-wide? In Canada?**

Cities are now home to just over half of the world's population, and that proportion is increasing rapidly, especially in the developing world. Urban populations are responsible for a disproportionate amount of resource utilization and waste production - close to three quarters in fact. In developed nation cities, the per capita ecological footprint is far larger than it is in developing nation cities. Canada, unfortunately, is among the world's "worst offenders" in terms of ecological footprint,



**ENVIRONMENTAL ADVOCATE**  
Cadman speaks on the issue in Montreal.  
Right: Wetlands surround the Brooklyn Bridge, New York City.  
PHOTO: LEANNE RAYMOND

even when compared only to other developed nations.

**How does sustainable procurement bring financial savings and help achieve environmental, health and social goals?**

Sustainable procurement is a medium to long-term investment in natural capital. By giving preference to the products and services that best support or conserve the environment, a municipality is indirectly supporting itself, especial-

ly if the resources relied upon are close by. This creates a culture of sustainability, automatically encouraging companies and individuals to be more sustainable than each other. ICLEI's Procura Campaign is designed to help drive the mainstreaming of sustainable public procurement.

**Why is the creation of a global green urban economy imperative?**

The world is driven by economics. However, this system

is utterly dependent on social capital, which is, in turn, utterly dependent on natural capital. These hard facts have traditionally been ignored in economics; instead the planet is mistakenly treated as an infinite source of free resources and an infinite sink for waste. We need to switch to a system in which nature forms an integral part of the accounting. This is a big task, but the idea is catching on.

**What does ICLEI's biodiversity program consist of?**

ICLEI's "Local Action for Biodiversity" (LAB) program, run by their Cities Biodiversity Center, has been the first ever opportunity for local governments to collectively contribute to conserving biodiversity and ecosystem services, internationally. Participating cities are guided through a process to produce essential deliverables, while receiving technical support as well as networking, profiling and international advocacy opportunities.

**What is the best case scenario for local governments in regards to biodiversity in 2050, the worst case scenario?**

The best case scenario is that every sector of society, and every department within every management



entity, integrates environmental concerns into its functioning and is sufficiently aware of global change to make the right adjustments. The worst case scenario is the stuff of disaster movies... a world that will support only the hardiest species, of which Homo sapiens is certainly not one.

**DAVID CADMAN**  
Councillor, City of Vancouver  
editorial@mediaplanet.com



## Working toward liveable and committed cities

**Cities are continuing to attract people who are searching for jobs, a stimulating living environment and an interesting future for their families.**

Heat islands, air quality and other such problems exist and will continue to grow in urban environments. To overcome these problems, cities must act together with their commu-

ities who are key to the reflection and mobilization process. To survive, the cities of the future will have to be green, vibrant, inclusive and sustainable. Montréal is fortunate to be home to the Secretariat of the Convention on Biological Diversity (SCBD) and is well aware of the challenges for the future.

**Natural riches**

Southern Québec, with the province's highest population, is an area rich in biodiversity. The Montréal urban agglomeration is made up of a variety of landscapes, including fields, brushland, woods, streams and rivers and wetlands, as well as a mosaic of communities. The area boasts a large number of indigenous plant and animal species with more than 1,000 species of vascular plants and 270 butterfly species. It is also home to at-risk species, as well as woods that have been designated as exceptional forest eco-

systems by the Québec ministère des Ressources naturelles et de la Faune. We must realize that these valuable resources are vulnerable. We cannot remain indifferent and do nothing, because we are all affected. To achieve a balance between development and conservation, we must continue in a planned effort to devise and implement innovative solutions.

**The human impact**

In the presence of the President of the International Council for Local Environmental Initiatives (ICLEI), I recently signed the Durban Commitment, through which we recognize that biodiversity is closely linked to human health and offers a multitude of ecological, economic and social benefits. We have agreed to promote biodiversity through various measures and actions having an impact locally, in natural environments, city centres and dense-

ly populated neighbourhoods. Our plans and policies also include considerations involving nature conservation. We therefore agree with the Aichi Targets regarding the preservation of biodiversity within healthy ecosystems for the benefit of the community and with the involvement of society's key players.

We should celebrate the decision taken at the 10th Conference of the Parties of the CBD, to invite higher levels of government to seek involvement of the cities in the review and implementation of their strategies and action plans in the field of biological diversity. Let us work together to achieve our common goals of building green and liveable cities that everyone can enjoy.

**GÉRALD TREMBLAY**  
Maire de Montréal  
editorial@mediaplanet.com

### To solve the toughest problems you have to look at the world differently.

By focusing on recycling and recovery, we find cost-effective ways to transform industrial residues back into valuable products. For example, last year at our Ville Ste-Catherine Facility, we recovered 68,000 tonnes of lead from used car and industrial batteries through a process that uses less energy than mining. There are better ways to think about waste.

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## INSPIRATION



PHOTO: GLEN WILSON

**Edward Norton, UN Goodwill Ambassador for biodiversity** and award-winning actor, speaks on changing the public mindset on nature: it's imperative to recognize the symbiotic relationship between our environment and economy.

## Edward Norton advocates for biodiversity rights

### For the United Nations Decade on Biodiversity, what are the key messages that you would like people to remember?

That biodiversity isn't an abstract concept; it's a critical part of the "natural technology" that supports our lives. The diversity of animals and plants that we have been intertwined with for the whole existence of the human race play a fundamental role in our survival. That we have to move away from thinking of Nature as something with just spiritual value and start to wake up to how much of our whole economic system is built on the services that nature provides. Loss of biodiversity has economic consequence...this is indisputable.

### As an entertainer, what are some engaging components of biodiversity that you would personally emphasize, to ultimately help people understand its value?

Our food comes from that diversity, our clean water, our medicines... I think it's good to highlight specific examples, like bees,

"...we have to move away from thinking of Nature as something with just spiritual value and start to wake up to how much our whole economic system is built on the services that nature provides."

which are in decline. No bees, no pollination of flowers (which can't be done by machine at a mass scale) so no fruit for us to eat.

### Do you think the film industry can help to reach the Aichi targets of the United Nations Decade on Biodiversity?

No, this has to happen in the realm of national and inter-

national policy and regulatory framework and it has to happen fast. There's no time for 'soft' engagement with these issues. We need leadership from national political leaders.

### Do you plan to star in or produce a movie/documentary that addresses biodiversity? If yes, can you please describe the key components that this film would address?

I made a series for PBS/National Geographic called "Strange Days on Planet Earth" that discusses this very directly. It's an excellent teaching tool.

### Biodiversity also entails cultural diversity; what are some of the threats that ethnic groups are experiencing from around the world?

I don't agree with that statement—I think they are separate issues and separate challenges. I think the only link between those two ideas is that biodiversity represents genetic storehouses that have huge value to certain industries like agriculture and drug manufacturers and indigenous communities have

historically been cut out of the economic benefit flowing from the biological and genetic diversity in their lands. Benefit sharing from industries that use biodiversity is a critical part of getting communities to protect biodiversity.

### In your opinion, what are the most effective incentives for corporate and political decision makers to prioritize biodiversity conservation?

Economics—period. Loss of biodiversity is going to carry enormous consequence to the international economy. It's already happening. Look at the impact of the collapse of global fisheries due to over-fishing. The best thing I've read recently that responds to this question is the TEEB Report (The Economics of Ecosystems and Biodiversity). It's absolutely brilliant.

EDWARD NORTON  
editorial@mediaplanet.com

### PROFILE

#### What is the United Nations Decade on Biodiversity?

■ **The United Nations** General Assembly at its 65th session declared the period 2011-2020 to be "the United Nations Decade on Biodiversity, with a view to contributing to the implementation of the Strategic Plan for Biodiversity for the period 2011-2020" (Resolution 65/161).

The United Nations Decade on Biodiversity will serve to support and promote implementation of the objectives of the Strategic Plan for Biodiversity and the Aichi Biodiversity Targets. Its goal is to mainstream biodiversity at different levels. Throughout the United Nations Decade on Biodiversity, governments are encouraged to develop, implement and communicate the results of national strategies for implementation of the Strategic Plan for Biodiversity. For more information see [www.cbd.int/2011-2020](http://www.cbd.int/2011-2020), ■ [www.facebook.com/UNBiodiversity](http://www.facebook.com/UNBiodiversity)

### NEWS IN BRIEF

## Biodiversity and humankind: A hand-in-hand initiative

### What are the main reasons that push us humans to wage war against nature?

It isn't an intended war: no sudden declaration but rather an invasion of the planet by our species, an appropriation of terrestrial treasures (some of them ages old) until they gradually disappear, with our species in the end acting to its own detriment. Fortunately, we are realising that. And everything can change to achieve better harmony with biodiversity.

### Are living organisms the most complex elements in the universe?

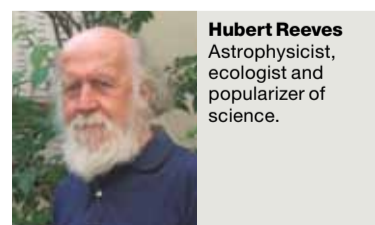
The life of the stars, Earth's existence, that of the biodiversity that human-

ity is part of and depends on—these are all chapters in the same story: the fantastic history of our genealogy, which goes back to when the stars exploded.

Evolution has created a growing complexity, from the atom to the human brain; it has taken billions of years. But what an astonishing result! And what will tomorrow bring? Will it demonstrate that it is not trying to lead us to our extinction? That is THE question.

### How does the reduction in biodiversity affect the Earth's health?

Our rocky planet does not suffer. It is Earth's inhabitants who suffer. The erosion of biodiversity affects the liv-



**Hubert Reeves**  
Astrophysicist,  
ecologist and  
popularizer of  
science.

ing world, and Homo sapiens is the threatened destroyer.

### What will the last signs be that we can't turn back, so that humanity can understand that Nature's capital is the most precious of all?

When you play pick-up-sticks, you can pick out one or even several sticks with no problem. In an ecosystem, eliminating a few spe-

cies may have not too much consequence, but no one can say just how much! The risk increases steadily over time, and that is true of the stakes as well. Invasive species can be very disruptive. You can't know what may happen. You have to live with the uncertainty, but without making the situation worse.

### What tools do we need to reverse the mass extinction of life on Earth?

We just need to make better use of our brain. It has already helped us make progress: we've realised that if we continue on without making any changes, we will run into a wall. We have to admit that there are dangers. We have to make it work in our best

interests....

### What is the right ethical behaviour toward humanity's natural heritage?

To politicians male and female, I would say increase your range of perspective, which is necessary to govern well beyond the next elections. Because they are the people who have the crushing burden of making valid decisions for both the short and the long term; that's like squaring the circle! But they can surpass themselves. That is the best way to live on in history.

HUBERT REEVES  
Astrophysicist  
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NEWS

**FACT**  
**2**  
SCIENTISTS ESTIMATE THAT AS MANY AS 150 SPECIES OF LIFE BECOME EXTINCT EVERY 24 HOURS



NEWS IN BRIEF

**Jean-Pierre Sauriol**  
President, CEO, Dessau

Leveraging social responsibility for a brighter future

**“Our goal is to be recognized as a leading engineering firm in terms of sustainability within five years,” states Jean-Pierre Sauriol, president and CEO of Dessau, one of Quebec’s most prominent engineering-construction firms.**

Across the province, companies have developed strong social responsibility standards in response to demands for increased environmental protection. Today, their challenge is to put social and sustainability principles into practice every day, in all their activities.

**Quebec, a pioneer in sustainability**

“For years now, we have been incorporating sustainability as well as social and environmental responsibility into our corporate culture,” says Sauriol, explaining that the company was one of the first in its field to offer environmental studies and site remediation services.

Recently, however, companies from across the province have stepped up their efforts, incorporating sustainable solutions into their projects as well as their operations. “When a company as large as ours improves its supply chain or reduces its waste, the impact is huge,” notes Sauriol, adding that enhanced efficiency often translates into financial savings.

**More than just the environment**

Corporate social responsibility goes far beyond protecting the physical environment—it extends to challenging the private sector. When asked about its social track record, Dessau points to its recent success in the Dominican Republic, where the firm participated in a major wastewater treatment project. Not only was Dessau responsible for the environmental and social studies, but the company also implemented a number of different social consultation initiatives that ultimately led to improved project acceptability.

The field of engineering is also seeing a rise in the number of women graduates joining the workforce, especially in environmental engineering where the gender ratio is close to 50 percent. Large firms will need to adapt to this emerging trend to properly engage its employees and satisfy their customers.

Moving forward, it will be increasingly important for companies to ensure that projects are well integrated into communities, as this helps guarantee their success. Ultimately, the goal for all engineering firms is not just to meet the needs of clients, but also society as a whole.

**RICHARD CLOUTIER**  
**SHAWN-PHILIP PRICE**  
editorial@mediaplanet.com

**Businesses are becoming increasingly concerned with their biodiversity impact,** and are recognizing the value of increasing the diversity of species in local communities. New messaging is in place to help companies craft their own biodiversity action plan.

# BUSINESS AND BIODIVERSITY

**The idea of an ecosystem may seem abstract, but biodiversity scientists in Quebec are looking to forge a clearer picture of how businesses affect the services nature offers.**

The Quebec Centre for Biodiversity Science (QCBS) at McGill University is aiming to educate and inform businesses of all types in the province as to the direct relationship between biodiversity and socioeconomics, so they better understand how losing species or degrading ecosystems affect the cost of doing business.

“The message is that biodiversity is changing and businesses are partly responsible for those changes, but it’s very difficult if you can’t communicate what those changes are and what they mean for them to act,” says Andrew Gonzales, director of the QCBS. “We’re trying to facilitate the exchange of information and make the process simple and transparent, so that anyone in any business can take the tools we generate and adjust accordingly to create an action plan.”

**A strategy for sustainability**  
Gonzales suggests that it’s not that

businesses are unwilling to affect change, they just don’t know how to do it effectively. This leads to sustainability, where a company can go in with a short-term vision to sustain its resources without taking biodiversity impact into account.

“Being aware of how you impact your ecosystem leads to a more sustainable vision of how to maintain a business strategically, much like how water is becoming an issue for a company like Coca-Cola, for example,” he says.

Biodiversity erosion triggers fluctuations in the ecosystem, making return on investment riskier and less predictable, he adds. This could invariably lead to higher operating costs for agricultural businesses dependent on environmental factors.

“This is the ‘portfolio effect’ at work, whereby species represent a portfolio of stocks,” he says. “In biology, many species average out all the variation in our ecosystem, much like how many stocks in a portfolio average out the variation in the market.”

**TED KRITSONIS**  
editorial@mediaplanet.com



“The message is that biodiversity is changing and businesses are partly responsible for those changes...”

**Andrew Gonzales**  
Director, QCBS

# Renewable energy creates a cycle of prosperity

**EXAMPLE**  
**The Charlevoix Dairy is a well-known cheese producer in the region of the same name; it’s also a success story, boasting an exciting sustainable development project.**

This project enables the dairy to save 65,000 litres of fuel oil per year within its operations, while ecologically treating the residues produced by processing milk into cheese—whey and wash waters. The company opted for biomethanation in order to generate biogas from its production residues, which they then put toward their energy requirements. The liquid residues from the cheese dairy pass through ponds filled with plants, algae, snails and fish—a wonderful filtering marsh that swallows up nitrogen and methane, producing purified water.

“They recycle their residues while generating their own energy on a self-sufficient basis,” says Jean-François Samray, director of the Quebec Association for the Production of Renewable Energy (AQPER). In his opinion, this case demonstrates how biogas can be a major source of renewable energy in order to reduce our dependence on fossil fuels and our greenhouse gas emissions, while recycling waste and improving company competitiveness at the same time.

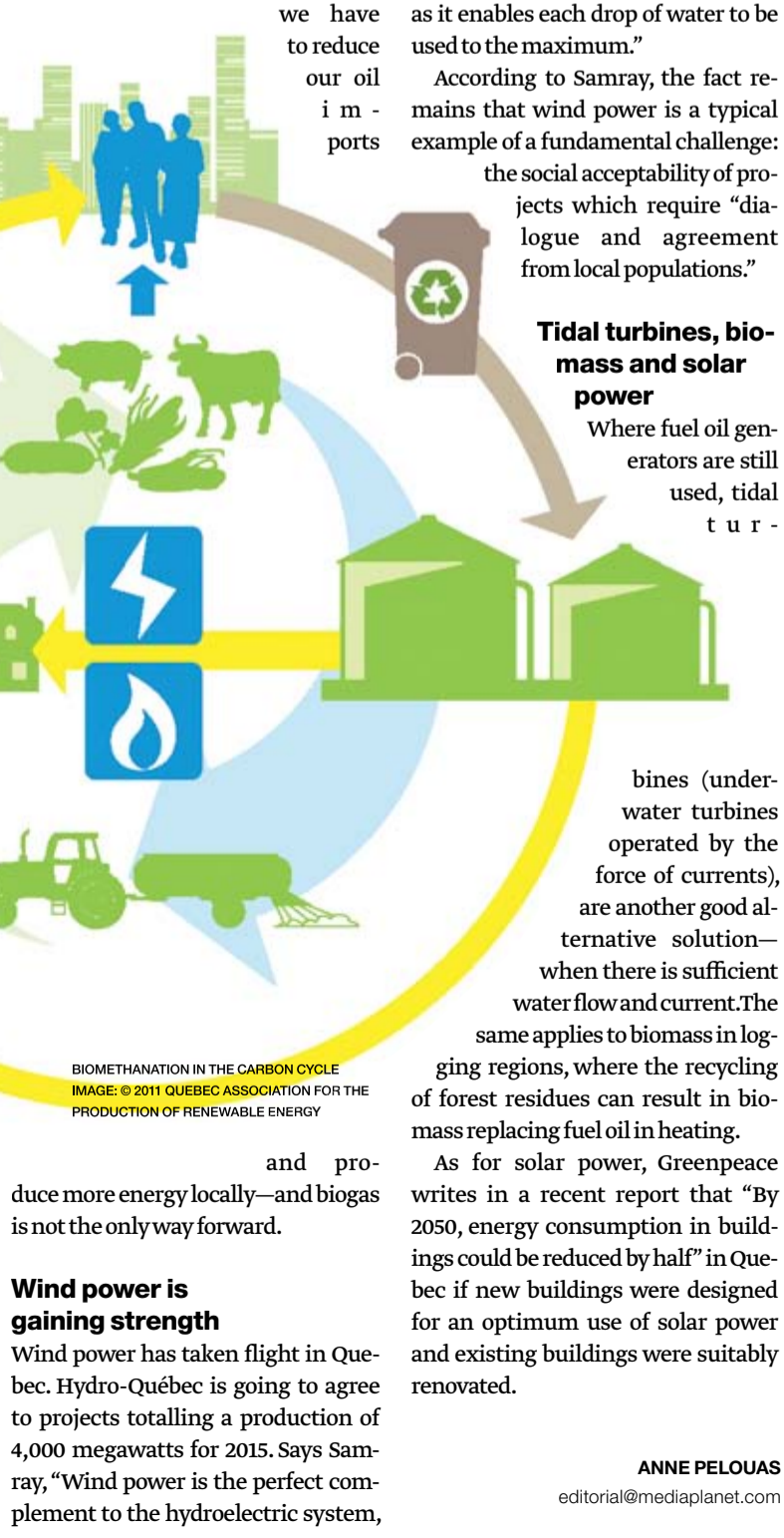
**Biomethanation in the carbon cycle**

Municipal dumps are also greatly involved in this form of recycling, as Quebec is requiring municipalities to remove 65% of organic matter from

landfill sites between now and 2013. Recycling this organic matter into energy is now the main challenge for them and for the agri-food sector which wants to develop this “green” system! Mr. Samray notes that the Quebec government still has to really get behind bio-

methanation, and the association is campaigning for a minimum standard for biomethane in the gas distribution network and for electricity production using biogas. Quebec has taken giant steps in renewable energy generation, achieving more than 50 percent of total energy production. According to Samray, “We need to continue in this same vein. There is the potential to gradually increase this share, even if, paradoxically, the availability and low cost of energy in Quebec stands in the way.” However, he states that it is clear that

we have to reduce our oil imports as it enables each drop of water to be used to the maximum.” According to Samray, the fact remains that wind power is a typical example of a fundamental challenge: the social acceptability of projects which require “dialogue and agreement from local populations.”



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## INSIGHT

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## Jean-Claude Belles-Isles

Environment Director, Quebec Mining Association



INSIGHT

**The mining industry has always been a driving force for economic and social development in northern Quebec.** This reality will be reinforced in years to come. That is why sustainable development is such an important topic of discussion.

### Mining: The renewal of a traditional history

**K**nown worldwide for its vast expanse, Quebec took an early interest in the exploitation of its natural resources.

As one of Quebec's oldest industries, Quebec mining efforts have focused on gold mining since 1920. Building on this tradition, this solid industry became a leader at the international level. According to Jean-Claude Belles-Isles, environment director of the Quebec Mining Association, "Quebec has long been ranked first in the world as an invaluable investment

location."

#### Always looking to improve

Constantly on the lookout for the best health and safety practices, as well as being a strong supporter of sustainable development, the industry has the support of numerous universities and private research consortia. "Biodiversity is something that is relatively new for any industry; not just mining. However, the Quebec mining industry is at the forefront of sustainable development," says Belles-Isles. The application of the new BNQ 21000 governance standard, a means of regulating and monitoring environmentally sustainable practices, is an example of how Quebec's mining industry is taking charge and striving to stay as environmentally aware as possible. By regrouping all of the industry's major stakeholders, this initiative allows all key players to actively take part in any sustainability effort.

#### Growth to come

While currently in expansion, the

mining industry will experience additional growth in the coming years due to Quebec's "Plan Nord" project. Presented by the Quebec government as the "project of this generation", this plan will unfold over a period of 25 years. As stated by the government of Quebec, this initiative will "lead to over \$80 billion in investments during that time and create or consolidate, on average, 20,000 jobs a year."

With the issue of how to further develop these valuable territories surfacing, new challenges and opportunities will surely present themselves. As stated by Jean-Claude Belles-Isles, "It takes an integrated transport and energy network. This campaign cannot brave the Canadian north by strictly relying on generators. We must innovate and diversify our energy portfolio to reduce our footprint. We must approach this in a different manner."

RICHARD CLOUTIER  
SHAWN PHILIP-PRICE  
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# Rio Tinto



## From tailings to biodiversity...

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FACT  
3  
THE VALUE OF GLOBAL ECO-SYSTEM SERVICES IS ESTIMATED AT \$16-\$64 TRILLION PER YEAR.

A GLOBAL RESPONSIBILITY  
Every organization can find a unique way to counter their damaging environmental output.



# At the forefront of biodiversity impact mitigation

**Question:** How have mining companies accepted environmental accountability for their operations?  
**Answer:** Through a renewed focus on restricting impact, this industry aims to change its public perception.

**Mining companies haven't always been known for environmental stewardship, but public pressure and a renewed focus on sustainability may be changing the industry's image.**

The Iron Ore Company of Canada (IOC) has been operating a mine in Labrador West since 1962. For years, the tailings—non-toxic and chemically inert—stored in a natural lake (Wabush Lake) has coloured the water red and produced fine sediment that covered the bottom of the lake. The new Tailings Management Project



**Julie Gelfand**  
Vice President, Environment and Sustainability, IOC Canada

“There are methodologies and technologies mining companies can use to minimize their environmental footprint.”

(TMP), which has been named “From Tailings to Biodiversity” is an example in which IOC goes beyond the regulatory requirements and also meets community expectations.

## Restricting the impact

Through the TMP, IOC continues to place tailings on an active beach that results in deep-water deposition of most of the material. Consolidation of all discharges to a single front and flocculation of the tailings slurry have assisted to carry and confine the fine tailings material within a naturally occurring deep trench (over 100 m depth). This has resulted in significantly reduced levels of discoloration of the lake water and occurrences of red-water, which will improve conditions in Wabush Lake.

The reclaimed emerged tailings, that presently cover approximately 550 hectares, have been revegetated and sculpted into ponds, hills, valleys, and wetlands and is suitable to support plants and wildlife in a new diversified terrestrial habitat. “As a result, we improved the recreational and ecological value of the lake by reducing our foot-



**Patrick Lauziere**  
Manager, Environment and Sustainable Development, IOC

“As a result, we improved the recreational and ecological value of the lake by reducing our footprint.”

print,” says Patrick Lauzière, manager of Environment and Sustainable Development at IOC.

**Going beyond the call of duty**  
Julie Gelfand, vice president of En-

vironment and Social Responsibility at IOC, suggests that a mining company's purpose doesn't end at extracting minerals, it also requires foresight into maintaining an ecosystem's biodiversity. Local grade four students are brought on-site annually to learn about the wetlands, and how mining companies can work to protect biodiversity.

“There are methodologies and technologies mining companies can use to minimize their environmental footprint, and in some cases, close a mine and make it look like there never was a mine there to begin with,” Gelfand says. “The legacy of mining companies hasn't been very good, but that is changing. We have a more sustainable business model, and we need to begin to communicate the good work we're doing.”

**TED KRITSONIS**  
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# HIGHER BIODIVERSITY RESILIENCE FOR BETTER BUSINESS PERFORMANCE

## QUESTION & ANSWER

**What ecosystem services do Canadian businesses depend on the most?**

Canada was originally settled for, and continues to benefit from, its vast natural and renewable resources: forestry, fishing, fur and agriculture. Of more fundamental importance to business and to all Canadians are the underlying ecosystem services, including fresh water, clean air, productive soils, pollination, climate regulation, carbon sequestration and nutrient cycling, among many others. These cannot be prioritized as all services are interdependent on others and if one is degraded or reduced it negatively impacts others.

**How would corporate profits be affected should the loss of ecosystem services continue in years/decades to come?**

With degraded and decreased ecosystem services, businesses run the risk of losing the natural resour-

ces and ecological support they depend on to remain viable businesses. The cost of artificially supporting, substituting or recreating degraded services in the future would increase the cost of doing business and could make many businesses unsustainable. The monetary value of ecological services is currently the subject of much discussion among policy makers who are aiming to find ways to incorporate ecological services value into the cost of producing goods and services. Those who act now to decrease their impact will benefit from a future competitive advantage.

**Why is the protection of biodiversity a good business practice?**

In addition to cost savings and enhanced employee enthusiasm through in-house conservation, businesses that take into account biodiversity in their operations, as well as beyond their operations, stand to benefit in many ways. These include becoming a company of choice for eco-savvy consumers, enhanced corporate sustainability,

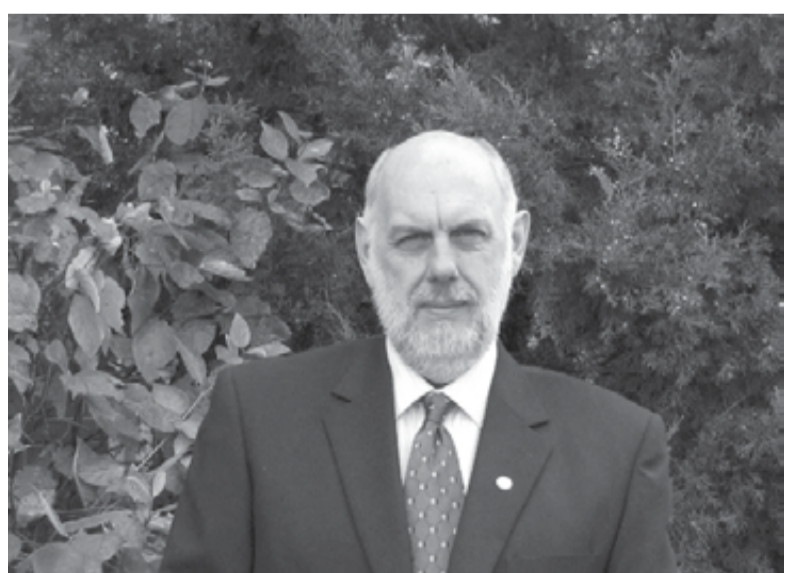
enhanced investor confidence, improved relationships with governments and regulators, improved community relations and reduced compensation and conflict-related costs. These will all help a business in facilitating and keeping its legal and social license to operate indefinitely into the future.

**How can Canadian businesses assess their dependencies on biodiversity and identify new opportunities?**

This is a key initial planning step for most businesses. By determining biodiversity dependencies and risks, opportunities may arise for both conservation and corporate benefits. Tools such as the Corporate Ecosystem Services Review developed by the World Resources Institute and The Ecosystems Services Benchmark developed by The Natural Value Initiative will help businesses through this process.

**Why is it crucial to communicate biodiversity performance and share experience?**

A business needs to share infor-



**SUSTAINABLE PRACTICE Reg Melanson, Executive Director, Canadian Business and Biodiversity Council**

mation as part of its risk management. Both the objectives and the results of corporate plans, regardless of whether they are positive or negative, need to be communicated regularly and openly to employees, investors, local communities and other stakeholders: transparency is key in reporting on biodiversity results. The sharing of know-

ledge helps build morale among employees, trust within the local and environmental communities and credibility with regulators and investors.

**REG MELANSON**  
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## NEWS



**SUSTAINABLE SEAS**  
Lemire's expedition is expected to last for three years.  
PHOTO: SEDNA

# 1000 DAYS FOR THE PLANET EXPEDITION

NEWS

Actions you can take

## Make responsible food choices

**1** Eat local and/or organic food when possible (buy in bulk from farmer's markets and then can or freeze the produce for winter use).

## Use smart transportation

**2** Carpooling to work will save you money and is a great solution to reduce air pollution! In metropolitan areas, take public transportation as much as possible. This will reduce your CO2 emissions. Walking and/or bicycling are also good methods.

## Use non-polluting household products

**3** Avoid buying clothes and household linens that need to be dry-cleaned. Detergents with large quantities of phosphates and chemical solvents have serious repercussions for your local biodiversity and health.

## Respect biodiversity

**4** Re-use, recycle, and reduce waste!

## Take political action

**5** Stay informed and vote for the candidates who demonstrate support for long-term ecological sustainability.

## Make your home and/or your school nature-friendly

**6** Build nesting and feeding boxes for birds, install a house box for bats, make a garden with fruit and vegetables, plant flowers that will attract bees and butterflies, and install a pond for frogs.

## Dispose of chemical waste accordingly

**7** Take care with paint and toxic cleaning products. This will reduce the chances of harmful chemicals being poured into rivers and lakes. For more information, please contact your city counselors as to where to dispose of them.

## Start composting!

**8** Compost your food scraps and this will reduce garbage waste, so fewer collection garbage trucks will be on the road. It makes excellent nutrient-rich fertilizer, which helps the soil keep its moisture. Plants will love it!

## Start your own nature protection group

**9** Donate or volunteer. Get your community involved and start doing concrete actions to help support local biodiversity.

## Use reusable bags

**10** Use reusable bags for shopping and groceries to reduce plastic bags usage, and print double-sided. Small changes can make a big impact!

Courtesy of the Secretariat of the Convention on Biodiversity

**Five years after the Antarctic Mission, Jean Lemire and his crew have decided to take to the seas once again! The Sedna IV, a 51-metre yacht, will set sail to follow in the wake of great expeditions of yesteryear.**

With 1,000 days to document the beauty and fragility of life, the crew of the Sedna IV are going to produce an unprecedented report on the condition of the planet.

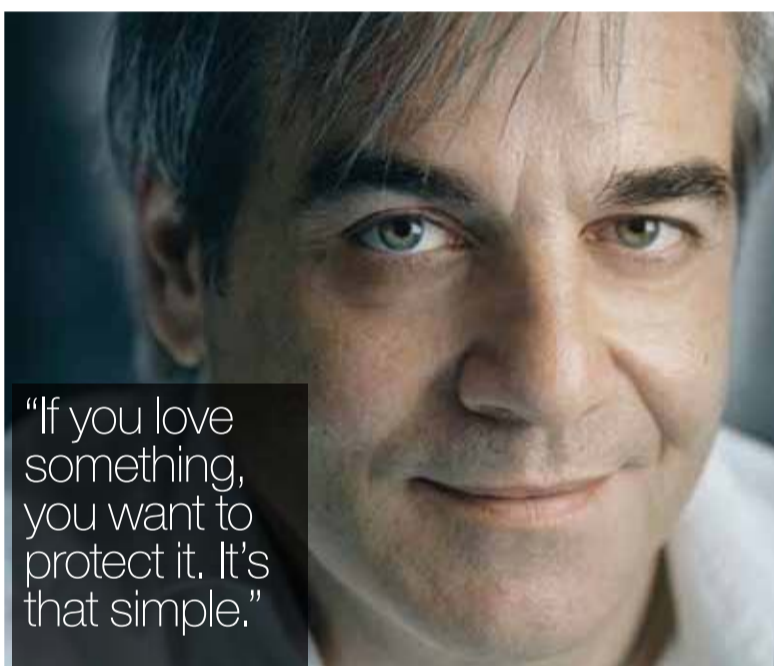
### Interview with a pioneer

#### ■ Why is biodiversity at a critical stage?

The natural, age-old harmony of the planet's ecosystems is suffering enormously at the hands of humankind. More than ever before, all over the planet, species are disappearing at a wild rate because of us. The phrase "the extinction of a species is forever" can never be repeated enough. However, the biodiversity of our ecosystems represents the best insurance policy for our survival. In order to preserve the fragile equilibrium of life, we need to re-assess the way in which we share the Earth so that all species can flourish, and so that all species, including our own, can survive.

#### ■ Three years around the world is a very long journey! What are you most excited about? What are the biggest challenges you anticipate facing?

Setting out to meet people, local populations, exchanging ideas, concepts and ways of protecting life on this planet. Travelling to the most isolated places on Earth will of course bring its fair share of challenges. Logistics, the safety of the places we visit, pirates at sea, all



"If you love something, you want to protect it. It's that simple."

PHOTO: MARIE CLAUDE-HAMEL

these aspects of a round-the-world trip to isolated regions also represent challenges.

#### ■ Do you expect to discover new species during this expedition?

We have set up an amazing research programme with our partner, the Smithsonian Institution of Washington. We are currently trying to raise funds to purchase a remotely operated underwater vehicle (ROV) which would enable us to discover marine life in the depths of the ocean. If we manage to raise the amount needed (around \$250,000—which is nothing really to discover new species on our planet), we will be able to add new species to the list of species on Earth. Anyone fancy sponsoring us?!

#### ■ Are you nervous about witnessing damaged ecosystems and lost livelihoods?

The damage we have already inflicted on our planet is glaringly obvious.

However, I want to focus positively on the future, and I sincerely believe that it is not too late. I want to show the world's beauty and to spark a sense of ownership of this beautiful world. If you love something, you want to protect it. It's that simple.

#### ■ In your opinion, how can interactive media connect the natural world with modern society?

The big revolution and changes to the mentality of our societies will occur through communication, without borders and without limits. We will shortly be launching our website which will allow Internet users all over the planet to become "virtual sailors" on our ship. Every day, you will be able to follow the progress of our mission, see photos and videos, read about the studies carried out by scientists who, scattered around the planet, will be doing all they can to help preserve life. Starting next spring, you will also be able to visit the 1000 Days for the

Planet exhibition at the brand new Centre for Biodiversity and benefit from the expertise of the Space for Life biologists. The Sedna Foundation will also be running a large educational programme which will enable schools in Quebec to participate in many of our educational programmes.

#### ■ Do you plan on adopting any species during your journey?

We will be running an educational programme in which schools will be invited to adopt a species in danger of becoming extinct. We also have a weakness for frogs and amphibians which have become victims of a deadly fungus called chytrid, currently decimating the amphibian population around the globe. It is probably one of the biggest conservation challenges at present. The very last specimens of endangered species are currently being kept in containers in Panama which are working as a sort of Noah's Ark. Is this really what we want for future generations? A few surviving species confined to sterile laboratories?

#### ■ How will this expedition change the way we perceive and understand biodiversity?

We hope that through this adventure we can touch the hearts of hundreds of millions of Internet users and viewers. If we manage to showcase the beauty and fragility of this planet, we will make a modest contribution to inspire this wind of change that is blowing harder and harder in our societies. We hope that common good-sense will triumph—that we all want to save life on this planet. Do you know anyone who wishes to see a species become extinct? It's simply about showing people the way to preserve life...



biodôme  
insectarium  
jardin botanique  
planétarium

Get closer to nature at  
Montréal Space for Life

Montréal Space for Life comprises the Biodôme, the Botanical Garden, the Insectarium and the Planetarium.

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