

Anexo 10. Boletines Convenio de Diversidad Biológica

REPORT ON NATIONAL EVENTS OF THE INTERNATIONAL YEAR OF BIODIVERSITY

We hereby present the Executive Report of the events that have taken place in Colombia during the International Year of Biodiversity and their scope. We expect to continue joining efforts with the purpose of involving the community, institutions and government to achieve the goals set.

26 January 2010,

Official Release of International Year of Biodiversity

Statement by Eugenia Ponce De León, on the occasion of the official launch of the International Year of Biodiversity in Colombia.

“Today in Colombia we launch 2010 as the International Year of Biodiversity.

Now, in 2010, we have to admit, as the General Secretary for the Convention on Biological Diversity did, that our efforts aimed to decrease the biodiversity loss have failed. They have not been enough and instead the biodiversity loss mechanisms increase in a worrying way.

What is this fail about? Due to the human activity, currently we are losing a thousand more times species that we used to by natural causes.

Within the last twenty years, the world has lost third of its mangroves, those on which fishing community depend to feed their own.

Many of them still ask, what has this to do with me? The answer is so simple. Every one lives and takes advantage of biodiversity, and as the Executive Secretary of the Convention on Biological diversity said, the required changes won't come from other people, they must come from ourselves.

In 2010 we hope to begin dealing with the political sector, with the private sector and general public. There are positive experiences; we have to spread them throughout the whole country. This requires everybody to keep in mind that biodiversity makes life on Earth possible. In www.2010colombia.com, you can find a statement in support of biodiversity, which calls for a 2020 reverse in the loss of this vital resource.

We need a new target, a new wave, and a new commitment. The International Year of Biodiversity is a new chance to start over again”.

23 February 2010,

Presentation of the International Year of Biodiversity to Slow Food Association

In this presentation, led by the Humboldt Institute, the restaurant community associated with Slow Food Association was invited to join the International Year of Biodiversity. During this event, topics were covered such as food safety, the importance of including in the restaurant's menus messages relative to biodiversity and raise customer awareness about the importance of knowing Colombia's biodiversity and include it in the food options. One of the objectives of this presentation was to get the audience involved in the intention for IYB: *"from the restaurants you can help customers begin to understand what*

they are eating and why it is important to care about all that food systems". Restaurant owners think that the key is to get local communities involved and to be aware of their interests. In the discussion that followed, Slow Food leaders commented that the Association has a Foundation that fund food production projects targeted at different local market products, *"we must support communities that produce food so that those communities achieve sustainability"*.

**25 February and 4 March 2010,
A Policy for the Conservation of Biodiversity in the Capital District (Bogotá).**

The objective of this workshop, led by Conservation International – Colombia and Bogotá's Secretary of the Environment, was to present the State of Biodiversity in Bogota, and to build a Policy of Biodiversity for the capital city,. This event included topics concerning the importance of regional context in the development of the Policy for the Conservation of Biodiversity in the Capital District as well as the advances in the consolidation of a draft of Ecological Connectivity Guidelines in the District area.

As a diagnosis, a balance of the state of biodiversity in the city, and the importance of the areas adjacent to urban areas was presented. Juan Antonio Nieto, Secretary of the Environment, explained that the factors that affect biodiversity have been identified, among them overpopulation, habitat destruction due to mining, infrastructure projects, road development, pollution and species introduction, that have produced a dramatic loss of fauna and flora.

Researchers who presented their projects, as well as the audience, agreed that the plans for the building of a Biodiversity Policy in Bogota should be framed within the National Biodiversity Policy. Also, scientific contributions must continue to develop in order to know what the existing biodiversity wealth is and thus make decisions and develop action plans.

**25 February and 26 February 2010,
Lecture "Biodiversity, ¿Why are we losing it?, ¿How can we get it back?" by Sebastian Winkler**

The lecture conference of Environmental Economist Sebastian Winkler was conducted by the Humboldt Institute. The opening ceremony was hosted by Eugenia Ponce, Director of the Humboldt Institute, and it began with a reflection on what the objective was for 2010 and a series of questions about scenarios around that goal. "¿What are institutions doing regarding the issue of biodiversity loss? It seems that the goals set for 2010 to significantly reduce biodiversity loss, have become an ideal, a dream".

Winkler began his lecture by stating that this year is a unique opportunity for Colombia as a Megadiverse country to begin positioning itself in the field of biodiversity. He explained the importance of setting an economic value to biodiversity resources, and referred to biodiversity as "*our life*" and as a source of goods and services for humankind.

As the event unfolded, Winkler noted that there is an urgency to act globally to reduce biodiversity loss, *"we must have more information in terms of biodiversity, we have to*

understand the relationship that exists between the different components of biodiversity; we must act urgently against the loss of biodiversity, and this should include the interaction between biodiversity, economy and business.”

Researchers in the audience, although agreeing on the general issues, warned about the difficulty of reaching consensus on biodiversity management plans from different institutions and on global issues such as climate change, as Dr. Angela Andrade, conference commentator, quoted. In Colombia, the main difficulty is that there is no management strategy for environmental services and no recognition of the importance of these services to the economy.

The lecture raised a complex question that ultimately involves all the questions we, as human beings, have, *¿How can we contribute to achieving the goal?*. For Luis Guillermo Baptiste, a researcher at the Humboldt Institute and Professor at Universidad Javeriana, the challenge is to reach the individual consciousness, project it into the discussion and integrate it with others'. “Many of these visions are current expressed only in small groups; the idea is to connect them with others who have the same interests. The construction of policies is essential, as well as a proactive and convergent attitude”. Winkler ended up with a reflection for humankind and countries alike: *¿If not now, when? ¿If not us, who? ¿If we don't act together, how?* 2010: a real and unique opportunity.

REPORT ON NATIONAL EVENTS OF THE INTERNATIONAL YEAR OF BIODIVERSITY

During March, the companies involved have responded to the call from the International Year of Biodiversity (IYB) in Colombia and have given their materials, documents, workshops, photographs etc, to be included as part of the efforts Colombia is making to meet the targets set for 2010, their projection into the future and the diffusion and involvement with the national community. The active participation of the academic community, that, searching for the improvement of the state of natural resources, also has joined and generated positive actions, must be highlighted.

This document reports the events that have taken place in Colombia during the IYB and their scope. Knowledge of the celebration of IYB has expanded during this month, as the number of interested parties, allies and events increased.

03 March 2010,

First Seminar of Biodiversity Monitoring in Silvopastoral Systems- Fundación Natura

Fundación Natura presented methods used to monitor biodiversity in silvopastoral systems. They stressed the importance of maintaining native plantations in these areas for the permanence and stability of local flora and fauna, and the importance of plantations that provide shadow for coffee crops, amongst others. In one of the interventions, the speaker emphasized on environmental campaigns and educational programs for local populations,

mainly farmers, considered as useful and necessary tools for the care and knowledge of local biodiversity.

Clara Solano, Assistant Director of Conservation and Research of Fundación Natura, ended the seminar, indicating that there are few financial resources, decision makers are quite impatient to provide these resources, but information is not being generated quickly and decisively enough for them to finance projects. *"The research process is complex because we are trying to understand how complex systems behave. These investigations should be made to make decisions in the territory to be included in the territorial approach to local development, so the information must be clear and convincing"*. She also highlighted that information should guide consumers to buy green products on the market, and so influence the way consumers behave, but this cannot be achieved if the producer has no information on green products. *"Eventually we hope to collect all the information that was generated during this event in a memoir to be disclosed to entities and stakeholders"*.

10 March 2010

Presentation of the World Drawing Contest "Paint for your planet"

Bayer - Colombia

Through this contest, Bayer invited children from Colombia to reflect on the care of the environment through drawings to interpret biodiversity. During the opening event, students and teachers from the Instituto Técnico Industrial Francisco José de Caldas attended Bayer's call and participated actively, drawing for the welfare of their country and their planet.

The event opening was in charge of Ximena Bedoya, Bayer Social Responsibility Coordinator and Dr. Germán Fernández, Andean Region Communications Manager. Ms Bedoya, said that this initiative is expected to spread to new generations so that they learn about Bayer's environmental purpose worldwide. She hopes to extend the invitation to many children around the globe so that they join this contest and work for a better life.

Dr. Fernández said that Bayer as an international company gives great importance to the issue of environmental care as one of the most important commitments in the world. Bayer worldwide has associated with the United Nations Environment Programme (UNEP) because this alliance can help Bayer increase its efforts. Part of the activities developed within this alliance is the children's painting contest, which has been created so that more children approach to environmental issues through aspects related to biodiversity, which is a relevant topic of public agenda.

The presentation also featured Dr. Carlos José Herrera, District Secretary of Education, who believes the "Paint for your planet" contest is a high impact event that should be supported. *"We are convinced that if a child is given a canvas, a piece of paper, paint and a brush maybe he or she will never hold a weapon. But if you also use the canvas and brush to try to send messages to teach how to stop climate change and to develop sustainable alternatives to the planet, the effort will be twice as important"*.

The best drawings will be selected and children will receive their awards in April.

17 March 2010

Launch of the “Avoided Deforestation, REDD Guide + Colombia” book and “The challenge of climate change adaptation” video

The first presenter was Dr. Ken Yamashita, who announced the interest that national institutions in Colombia show in developing functional alternatives to mitigate the effects of climate change. For Colombia, the issue of climate change is relevant because it has effects on biodiversity balance, ecosystems and the stability of local communities because of the impact of this phenomenon. *“The purpose is to reduce deforestation and at the same time to provide opportunity for communities to use land in a productive and sustainable way”.*

The Executive Secretary of the REDD (Reducing Emissions from Deforestation and Forest Degradation in Developing Countries) workgroup, Mr. Oscar Bonilla, said that the REDD guide contains technical information and development projects focused on mitigating the effects of climate change. It reports inter-institutional actions and targets, and with its publication the establishment of policies and techniques framed in REDD are expected, together with institutions such as the IDEAM, USAID, INVEMAR, Conservation International, Fundación Natura, Patrimonio Natural, various international environmental NGOs. *“This first publication is a methodological technique that seeks to strengthen institutions and stakeholders in the concept of REDD.”*

The event also included the participation of IDEAM director, Dr. Ricardo Lozano, who reaffirmed that scientific capacity to monitor deforestation should be strengthened in order to quantify this process and determine the content of carbon in forests. To this end, reliable data and products must be available. *“This is the basis of a national monitoring program of forests and carbon”.*

As for the participation of Colombia in the mitigation of the effects caused by climate change, this country has worked on this issue since 2006; Dr. Lozano highlighted the support for the development of a group of specific adaptation programs to offset the effects of climate change in the country. *“Colombia is responding to global warming by joining forces to build a civic environmental culture from the perspective of environmental education.”*

Dr. Carlos Costa, Minister of Environment, stated that REDD is a tool that recognizes the work that has been developed in the field of conservation, but cannot be regarded as the only instrument in the protection of forests. *“There is a big misunderstanding of what is REDD, that should be clarified in order to achieve the desired objectives”.*

In the framework of the implementation of the strategy that has already taken its first steps, the involvement of people’s work is expected. *“The key is the coordination with different sectors: public, private and international NGO’s within the REDD initiative”.* Closing the

event, Minister Costa congratulated the workgroup for developing foundations and encouraging the country to be in the best position to take advantage of REDD.

At the conclusion of the event, IDEAM, together with entities involved in the INAP project (Proyecto Piloto Nacional de Adaptación al Cambio Climático), presented the video *"The Challenge of Adaptation to Climate Change"*, which shows different testimonials from communities and residents of regions in the country, referred to the actions taking place to counteract the effects caused by climate change on ecosystems. It describes the activities that fall within the INAP project carried out to mitigate the effects caused by global warming in regions of the country. These specific activities are:

- A. Formulation of adaptation programs. Production of information on the variability of climate change.
- B. Implementation of priority measures for the adaptation - High Mountain Ecosystems
- C. Monitoring and evaluation system - Continental and Insular Oceanic areas.
- D. Answers to tropical vector-borne diseases (malaria and dengue) induced by climate change - Human Health.

18 March 2010

Lecture "Visualizing Territory, Envisioning Landscape Transformations", by Dr. Kellie B. Vaché - Biological and Ecological Engineering, Oregon State University

Professor Vaché, presented **ENVISION**, a tool developed to address questions of environmental management in complex areas and in different landscapes. This tool seeks to provide an approach to future scenarios of landscapes, from the knowledge of factors within it.

Dr Vaché explained that possible alternatives in services that can be offered by an ecosystem. *"Initially, we must be aware of the type of landscape to be modeled in order to generate the actual modeling process; here, different socio-economic and socio-ecological aspects are involved"*. Among the most influential concepts in the modeling process is biological complexity, defined as a series of biological and ecological systems that make up the landscape.

Ecosystem services are modeled with the decision of actors; this aspect is essential for decision-making in the landscape. The goals of the landscape depend on the coordination of policies and actors, considering the policies as a plans or actions to fulfill a desired result. The challenge of using a modeling program as **ENVISION**, is to know how they can make the results obtained from the approach to the future operational.

Professor Vaché, explained the use of the program from two examples of landscape modeling in two areas of the U.S., showing the landscape changes; all decisions depend on the actors involved. The lecturer ended by stating that *"alternative future assessments depend on the customer"*. A key is to have knowledge of population growth, development of landscape, ecosystem services and their interaction, as included in the socio-ecological systems of the landscape.

Andrés Guhl, lecture commentator, said that the landscapes processes are complex and it is extremely difficult to create models to understand the behavior in time. *"Those who make the modeling of the landscape are capable people; programming these tools is extremely difficult because of all the elements of the landscape, it is turning something complex into something simple and it implies a great effort."* For Guhl, within the landscape, there are clear boundaries but there are boundaries that are gradual, there are variables that can be very difficult to perceive or to define, *"this is one of the biggest challenges for people who have worked in modeling"*. Certainly the actors are autonomous and decide what they will do in its territory or plot, but the actors are somewhat independent and there are factors that influence their behavior.

Andrés Guhl exposed various comments and questions regarding the use of tools to visualize alternative futures in a landscape and approaches to the display of landscape in Colombia, considering the cultural, social, environmental, and law policies of the country to indicate the difficulties that might be present in the visualization of a future landscape in the national territories.

REPORT ON NATIONAL EVENTS AND ACTIVITIES OF THE INTERNATIONAL YEAR OF BIODIVERSITY

The call by Colombia and other countries that celebrate the International Year of Biodiversity (IYB) for people to participate in this initiative, has transcended favorably, achieving the active participation of civil society, willing to include in their actions key steps to benefit the environment, natural resources and biodiversity.

The participation of students within the academic calendar events of Humboldt Institute, as well as events at IYB partner entities, has increased over the year. During April, there was a significant participation of college students, indigenous people, and other groups not necessarily related to biological, conservation and environmental sciences. These communities were able to acquire knowledge and tools to raise awareness on the proper use of natural resources, biodiversity and the services ecosystems provide, knowing in advance how these resources and services can be accessed.

IYB Academic Calendar – Instituto de Investigación de Recursos Naturales Alexander von Humboldt

8 April 2010,

“Cooperation and Competition in the Economics of the Biodiversity”,

Juan Camilo Cárdenas. Professor, Faculty of Economics - CEDE. Universidad de los Andes – Colombia

PhD Environmental and Resource Economics – University of Massachusetts Amherst

Dr. Cárdenas initially thanked the entities that supported him to conduct his research, specially at the Humboldt Institute, that funded much of the proposals focused on rural communities about biodiversity and economy. A special acknowledgment was given to the

Institute, because it supported the academic community and took the risk to finance the implementation of this project, although 10 years ago it was not well known. He also thanked the Faculty of Economics at the Universidad Javeriana and the Studies Center of Arizona.

Cárdenas tried to explain why we must think of cooperation in Colombia, as a way to solve the dilemma of biodiversity conservation. This proposal should be examined from different points of view: "*cooperation is necessary, not enough but necessary*".

The most important points discussed during the conference were:

Why cooperation evolves and why it is important to understand its evolution?

Cooperation in Colombia:

Threats to the possibilities of cooperation:

- War and armed conflict in Colombia.
- Loss of interpersonal trust
- Loss of inter-institutional system
- Markets: *e.g.* prices and market of fossil fuels determining prices of biofuels, mining and food.

Protected areas as collective lands.

Cárdenas said that in the world there are approximately 100,000 protected areas. The entire planet is dedicated to establish protected areas with the main objective of protecting biodiversity.

There are currently four types of collective lands:

- National Parks
- State Reserves, or civil society reserves
- Maritime Areas
- "Resguardos"

Legal frameworks defining such spaces have significant potential but also significant limitations.

Approach to the problem of lack of cooperation

- The need for models that fit in the country's collective reality.
- Best models of human behavior
- Best model for analysis and institutional design.

Cost-benefit analysis

- The group effort of resource use is the sum of individual efforts of resource extraction in a territory.
- The benefits then tend to become zero; any further efforts will not produce anything for society.
- The cost will increase with the efforts
- Where costs and benefits are equal there is an equal distribution of income from natural resource exploitation.

Tragedy of the Commons:

- Society has free will to take and use natural resources.
- Local Optimal: The social optimum maximizes local benefits.
- Global Optimal Negotiation between local and global.
- Optimal level of mining: welfare for all

Institutional system

- National Environmental System: commands and controls the local users on how to intervene.

- National and international NGO's: they are control entities in some levels of the environmental hierarchy.

Of the many challenges organizations face, one is the complexity of monitoring and control capability, because there is not enough money. On the other hand NGO's have a limited capacity of control, especially in areas where they have possessions.

22 April 2010,

Special Event Earth Day

Environmentalism and Biodiversity: 50 years of activism in Colombia.

On the Earth Day, the Humboldt Institute, invited five of the major environment representatives in Colombia, so they tell the audience, the history of environmentalism from their different experiences and points of view.

Panel participants: Gonzalo Palomino, Universidad del Tolima. Rafael Colmenares, Ecofondo. Alegría Fonseca, Fundación Alma. Néstor Ocampo, Fundación Cosmos. Julio Carrizosa, Academia Colombiana de Ciencias Exactas, Físicas y Naturales.

Eugenia Ponce de León, Director of the Humboldt Institute, began acknowledging the guests for having responded to the call from the Institute in the framework of the International Year of Biodiversity. She stressed the importance of having events to commemorate the actions of those who have paved the way to what currently exists. *"Those of us who have some kind of belief in environmental issues, feel quite honored to have today these five guests, to thank them for everything they have made and the path they have opened and we are grateful that they are still working with us. "*

The stories they told, showed the different scenarios in which each one has played, the way they have succeeded in different scenarios in the struggle for the environment and how they have fought for including environmental issues in political discussions.

IYB events in Colombia

07 April 2010,

Selection of winning drawings for World Children's Painting Competition

"Paint for your planet" BAYER - Colombia

Hundreds of drawings covered the halls of Bayer offices, conveying a message of biodiversity conservation to all members of the company, from the perspective of Colombian children.

The response was positive, children from different places in Colombia joined the initiative and painted by their country. Winners were chosen by Bayer Communications Manager, Andean Region, Dr. German Fernandez, Angela Aldana and Adriana Mosquera of Consumer Care - Bayer, Alma Guevara, Specialist of the Bogotá Secretary of Education and Natalia Rincón, Assistant to the International Year of Biodiversity of the Organization for Education and Environmental Protection (OpEPA). Each one of them had the opportunity to choose four drawings, and they reached an unanimous decision about the five winning drawings.

The brand Redoxitos gave the awards to the winners: a trip to the Amazonas for the first position, Xbox consoles for the second and third places and mountain bikes for places fourth and fifth.

09 April 2010,

Sea Museum Reopening – Universidad Jorge Tadeo Lozano

After a long period of adaptation and technology implementation to improve the conditions of the Sea Museum, it opened its doors to the students and all those interested in learning more about the biodiversity of ecosystems, species and life that characterizes Colombia's marine realm.

Dr. Elvira María Alvarado, Director of the Sea Museum, thanked the participants, students and all the people who supported and participated in its adaptation. She especially thanked the industrial design students who developed innovative attractions for the Museum that will enable visitors, especially children and young students to get closer to Colombia's biodiversity.

She extended the invitation for stakeholders to participate in a tour of the museum and to spread the news to Colombia's academic environment.

13 and 14 April 2010,

Wednesday of The Museum

Experiences in Studies in Biological diversity in Venezuela, from La Salle Foundation

Natural History Museum at the Universidad La Salle, opened a space to discuss issues relating to biodiversity, conservation and environmental issues, which included the participation of different national and international personalities, who discussed subjects of scientific and collective interest. In this first meeting, the Museum invited Dr. Josefa Celsa Señaris, who spoke about the experience she has had as director of La Salle Natural History Museum of La Salle in Caracas Venezuela.

Josefa Celsa Señaris has many years of experience working in conservation biology, the study of natural resources and has also made a great contribution to the field of museum work.

Dr. Señaris made a complete and specific description of the history of biological collections in La Salle Museum in Caracas - Venezuela. She also included technical aspects of collections management, limitations and successes that have been achieved over many years of collecting and researching. She made different comparisons with the biological components of Colombia and showed how, in an organized and articulated work can achieve valuable and accessible information to avoid restrictions and unnecessary paperwork. She also remarked the value of biological collections as part of the natural and cultural heritage of nations and emphasized the importance of properly keeping them.

During the second session, Dr. Señaris discussed about rapid ecological assessments, community assessments of ecosystems in specific places, with the study of certain indicator groups. Dr. Señaris, explained her position and personal experiences about the places where it has been possible to make such assessments in Venezuela.

22 April 2010,

Forum: After Copenhagen

¿How are we in terms of climate change?

Within the framework of the celebration of International Earth Day, the magazine ECOGUIA, together with Universidad del Rosario and the support of Universidad de Los Andes, organized this event which was aimed at knowing the prospects of Colombia in the next climate change summit. Also, an analysis was made on the results obtained in Copenhagen, assessing the shortcomings and benefits that resulted.

The most important points that were discussed during the forum were:

1. Statement by Dr. Gabriel Silgado, Dean of University Environment at Universidad del Rosario

"We've met today to talk about the inclusion of the global climate issue on the political agenda of the world". During the event, he proposed a review of what happened in Copenhagen Climate Summit last December. *"We intend to do so from the dual perspective of institutional negotiation of the United Nations COP 15 and the participation of civil society, represented in Copenhagen by more than 500 organizations that met in the parallel summit "Climate Forum 09".*

2. Presentation of the book "La Generación del Cambio Climático" of researcher Manuel Guzmán Hennessey.

Professor Guzmán developed his reflection asking himself and humanity ¿how is reality, what is reality, and how we see human beings? *"I think that the main sin of positive science and the main sin of logical positivism have been to teach a different form of reality."*

Nature always moves in Order – Chaos cycles. If we understand these cycles, we can approach the climate change problem from the perspective of science.

The book comprises three chapters; order, chaos I and chaos II. *"The first chaos cycle represents the natural movement of cycles, the second chaos cycle is*

an artificial cycle created by man, which is hard to start to walk and this is the cycle where the climate change generation will have to act."

3. Statement by Dr. Angela Andrade, senior president of Ecosystem Management Committee and Coordinator of International Conservation Policy for Colombia, and member of the delegation of Colombia to the COP 15 and Fabio Arjona, Executive Director of Conservation International – Colombia.

Dr. Andrade spoke about articulation between biodiversity agreements and climate change as a new challenge. She approached the concept of adaptation to climate change and how this issue is of paramount importance in society, particularly in terms of actions due to the changes that have occurred in ecosystems.

Fabio Arjona talked about Colombia's efforts to reduce greenhouse gas emissions, and its performance that we must achieve in the next climate change summit. *¿How is Colombia preparing to go to Mexico? "Colombia may not be the first country to have projects of climate change mitigation, in part because we are not amongst the more polluting countries, but neither we are the last country. We are currently developing some mitigation projects that have taught us how to respond to the effects of climate change".*

Meetings and Activities

The Humboldt Institute initiative as leading entity in the celebration of International Year of Biodiversity in Colombia included, among others, presentations in several institutions on the intention of the IYB, as well the involvement of civil society actions on the benefit of biodiversity and natural resources conservation. Thus, the Institute has offered opportunities for participation, where it has been possible to convey the IYB message and also to create opportunities for the development and support of projects aimed at building information and developing strategies that benefit ecosystems and biodiversity in Colombia.

The meetings held in April were:

1. Carrefour
Date: Tuesday April 13, 2010
Time: 02:30 PM
Contact: Dr María del Pilar Ochoa, Coordinator of Social and Environmental Responsibility.
Location: Av 9 # 125-30. Carrefour administrative headquarters
2. EXITO Group
Date: Wednesday April 14, 2010
Time: 09:00 am
Contact: Dr Angely Garcia, Environmental Management Coordinator
Location: EXITO Calle 80, Av 68, second floor administrative office

3. Gas Natural

Date: Friday April 16, 2010

Time: 09:00 a.m.

Contact: Dr Johana Valencia, Social Responsibility Department

Location: Calle 71A No. 5-38 Chapinero

On Monday, March 26, a meeting with Alejandro Calderon, manager of the Clearing House Mechanism of Alexander von Humboldt Institute, was held in OpEPA (IYB associate). During the meeting, the need to create a participation space was raised, where civil society has the opportunity to present its views on the subject of biodiversity and how biodiversity benefits humankind and life on earth.

Based on the initiative, two main proposals were raised. The first one is to open a space where people who are interested express their thoughts about the benefits that biodiversity provides to them, by recording short videos in which each person shows their face and talks about what biodiversity means to them.

On the other hand, it is expected to open a call in order to generate a "Flashmob" social movement alluding to the International Year of Biodiversity. This proposal intends to gather people to coordinate the building figure made of humans, in this case the official logo of the 2010 IYB, which can be formed in a public and busy place in Bogotá. This initiative aims to discover the intention of IYB to society, the meaning of the celebration and how everyone can act protecting the planet's biodiversity.

REPORT ON NATIONAL EVENTS AND ACTIVITIES OF THE INTERNATIONAL YEAR OF BIODIVERSITY

International Day of Biological Diversity

Biodiversity, Development and Poverty Alleviation

Although efforts that have been made for the recovery of ecosystems and to decrease species loss, for the Organization of the United Nations it is necessary to implement new visions that address environmental issues and the biodiversity crisis. A first step is to enhance the importance of participation by world leaders in the achievement of negotiations and agreements, in order to reduce species loss, and to frame the intention of the International Year of Biodiversity.

Colombia, as one of the megadiverse countries in the world, has considered the importance of conserving its ecosystems that are a source of environmental goods and services for rural populations, which include a high percentage of the total national population.

As part of the Celebration of Intentional Biological Diversity, May 22, 2010, the recognition of the value of biodiversity for human well-being has been the key issue, highlighting the importance of biodiversity conservation as a means to eradicate hunger, poverty and stimulate human development in all global sectors.

06 May 2010

Ecosystem-based adaptation: Links between biodiversity and climate change. New challenges.

Angela Andrade. (Deputy Chairman of the Commission on Ecosystem Management, IUCN and Policy Coordinator, Conservation International.)

Dr. Angela Andrade noted that ecosystem-based adaptation is essential to conceive the relationship of climate change with biodiversity. On one hand, climate change is seriously affecting populations, communities and society in general, and on the other hand, ecosystems have a significant impact on the magnitude of climate change.

Likewise, if climate change is not controlled, it is difficult to mitigate biodiversity loss and, if ecosystems and associated species are not protected it will be very difficult to meet the goal of reducing emissions consistent with this scenario. Failure to comply with both purposes, will lead to efforts being lost in the fight against poverty and hunger in the world.

It is pertinent to consider the use of biodiversity and ecosystem services as a basis for adaptation and to do this we must reduce ecosystem vulnerability and increase ecosystem resilience, taking into account:

- Implementation of ecosystem management actions.
- Consolidation of Protected Areas System, requiring the responsible institutions to redefine the role of protected areas.
- Diversification of agricultural systems
- Joint participation: Involving different sectors

The concepts on the National Climate Change Policy, were approached by Dr. Giampiero Renzoni, who said that this document provides an institutional framework, which associated with the assembly of a National Climate Change document, that defines actors and financing mechanisms, allowing to articulate the different strategic lines.

A proper management can generate best-preserved ecosystems to provide services efficiently and thus reduce the vulnerability attributable to climate change impacts. The central hypothesis of ecosystem-based adaptation, says that it should focus numerous efforts into the public policy on ecosystem management.

20 May 2010

**Health and biodiversity: The silent link
Celebrating the International Day of Biodiversity**

Aaron Bernstein, M.D., M.P.H. Coauthor of the book “Sustaining life” (with Eric Chivian, recipient of the Nobel prize). Professor of Human Health and Global Change. Harvard Medical School

In his speech, Dr. Bernstein, ratified the importance of including health within the issues of biodiversity and stated that health depends directly and indirectly of biodiversity and natural resources.

To identify some reasons why biodiversity is key to the welfare of human health, Dr. Bernstein referred some examples where species have become key elements for human welfare.

In addition to the services biodiversity can provide to humans, the balance of biodiversity within an ecosystem, allows it to be developed efficiently; however, when there is loss of biodiversity and species and habitat destruction, failure to provide ecosystem services affect human health.

Statement by Dr. Silvia Ziller PhD. Latin American Representative. Global Invasive Species Programme - GISP.

Countries that signed the Convention of Biology Diversity are committed to preventing the introduction of alien species and to control and eradicate invasive species that may affect habitats or species.

Some exotic species can become useful to humans; many are profitable as ornamental species and other play a role as species for reforestation or are a source of food. *"The challenge is to understand precisely which species is useful and which can be used but in balance with nature in order to cause no harm."*

One of the strongest impacts caused by invasive species the reduction of ecosystems resilience, considered as the ability of environments to experience a disturbance, and then return to balance. Once invasive species dominate an environment, they create a disturbance in it. Systems alone do not have the ability to remake and restore, making human intervention necessary.

Statement of Dr. Clara Ocampo PhD. Coordinator of Medical Entomology Program CIDEIM

For Dr. Ocampo, linking health and biodiversity is a challenge, mainly because human beings have learned to separate them, but it is really necessary to understand this link. Saving biodiversity is essential, because forests are natural defenses against disease. The more chemical controls are generated, either to eradicate pests or vectors, the more pests will have the ability to develop resistance to insecticides. Biodiversity could be used to identify new drugs and insecticides to control these diseases.

Statement of Dr. Salua Osorio. Coordinator of Health Component in the National Pilot Project Integrated to Climate Change Adaptation - INAP.

Dr. Salua Osorio defined the concept of the connection between biodiversity and health, describing the way that the health sector has become increasingly involved in this issue.

To understand the different situations of disease transmission, one must consider the issues and implications within a global perspective to address the problem, and propose integrated solutions. The health sector can generate simple steps to achieve the reduction in vulnerability. Among the actions to do this are the strengthening of primary education and public health, the improvement of surveillance systems, immunization programs, health conditions and the increase of research to reduce uncertainty.

In the integrated public health plan, they have tried to integrate data from other systems that can better explain the design of disease control strategies, using tools as statistical modeling and dynamic modeling, where all transmission vectors are involved in order to understand what is happening, and to predict future situations.

Statement of Dr. Teofilo Monteiro PhD. Environmental Health and Healthy Environments Advisor. Pan-American Health Organization - Colombia.

There is increasing human pressure on the environment, including the effects caused by climate change, ecosystem change, deforestation, and change in vegetation cover, loss of biodiversity, pollution of water bodies and changes in coastal systems.

Significant direct impacts on health:

1. Heat waves
2. Floods
3. Water scarcity
4. Soil erosion
5. Increasing exposure to ultraviolet radiation
6. Exposure to pollutants

Health impacts related to ecosystems:

1. Infectious diseases
2. Food Production
3. Malnutrition
4. Depletion of natural medicines
5. Mental Health
6. Impoverishment

Indirect impacts on health:

1. Population movements
2. Formation of slum areas

Cycle of conferences of the Banco de la República's Library Network and Humboldt Institute.

Monday May 3

Conference: Biological invasions as a cause of biodiversity loss in Colombia, its effects and possible actions

By: Maria Piedad Baptiste

Biologist. Research Assistant Conservation Biology Program and Use of Biodiversity of the Humboldt Institute.

Thursday May 6

Potential habitat for the jaguar: a tool for biodiversity conservation

By: Angelica Benítez

Biology of the Pontificia Universidad Javeriana (PUJ) and MSc in Management and Conservation of Tropical Forests and Biodiversity of the CATIE (Costa Rica)

Monday May 10

Conference: Stories of “bocon”: social vulnerability, popular environmentalism and lessons for biodiversity management in the Colombian-Venezuelan Orinoco

By: Sebastian Restrepo-Calle

Manager of Environmental and Natural Resources and MSc in Environmental Management. Program Assistant Researcher, Socio-economic Dimensions of Use and Biodiversity Conservation, Humboldt Institute.

Monday May 24

Conference: Biodiversity and Human Welfare: An institutional vision

By: Felipe Quevedo

Economist, specialist in negotiation and international relations and MSc in Political Science. Fellow Program Policy, Legislation and supporting decision making of the Humboldt Institute.

Thursday May 27

Conference: Socioecological Modeling to support decision making

By: Carlos Sarmiento

Geographer. Associate Researcher at the Biodiversity Information System (SIB) of the Humboldt Institute.

Monday May 31

Conference: Páramo: conservation and management of disputed territories

By: Carlos Tapia

Sociologist at the Universidad Nacional de Colombia, MSc in Sustainable Farming Systems Development at the Pontificia Universidad Javeriana (PUJ) and PhD Candidate in Geography at the University of Georgia, USA Andean Páramo Project Coordinator of the Institute Humboldt.

IYB events in Colombia

12 May 2010

Seminar on wildlife trafficking

A threat to Colombian Biodiversity

National Strategy against Trafficking of Wild Fauna and Flora. Statement by Dr. Miriam P. Salazar. Ecosystem Management. Ministry of Environment, Housing and Territorial Development

Among the great pressures on natural ecosystems in Colombia, is the extraction of wild species for illegal activities. The Ministry of Environment, Housing and Territorial

Development has been implementing the National Strategy document for the Prevention and Control of Trade of Endangered Species, a program released in 2000.

The document seeks to estimate the trafficking problem and to identify the most sensitive taxonomic groups. In the years 1992 -2004, they found that the most threatened group was birds, followed by reptiles.

The National Strategy for Prevention and Control of Trade of Endangered Species provides various courses of action where the Ministry of Environment has become involved with authorities and civil society:

1. Monitoring and control: prevention, monitoring and control of wildlife trafficking.
2. Promotion of productive alternatives: viability of the species for commercial use in sustainable activities.
3. Management and disposal of confiscated specimens: arrest / seizure protocols, for both fauna and flora.

Environmental and economic costs of the activity of illegal wildlife trafficking. Intervention by Juan Ricardo Gomez. Professor, Ecology and Planning Department, Faculty of Environmental and Rural Studies. Pontificia Universidad Javeriana

When it comes to trafficking, the issue is complex for a number of reasons; the first is the profitability that characterizes this activity. Illegal trafficking is one of the most profitable illegal economies in the world. There is a demand that is addictive, variable and is not exclusive. There is also a high mortality rate in catching, handling and captivity, due to the high levels of stress of the animals.

Colombia also receives traffic from other places, but in general, is an exporting country. Professor Gomez said that in Colombia internal traffic is underestimated because people do not have a deep knowledge about inter- or intra-city traffic.

May 12 2010

Wednesday of the Museum

Forum: Cultural and Biological Diversity

Intervention of Mariluz Lopez. Food Engineer. Food Engineering Educational Program at the University of La Salle

In the celebration of the International Year of Biodiversity, food security becomes an important issue in biological and cultural diversity. Ensuring food security is paramount to all the people in action. According to the FAO, in the World Food Summit in 1996, food security exists when all people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences in order to lead a healthy and active life.

Intervention of Leonardo Arias Bernal. Veterinarian. Professor University of La Salle. Director of Jaime Duque Zoo.

Colombia has one of the largest percentages of endemism of the world. For this reason, effects such as fragmentation of ecosystems, human settlements, pollution, environmental

changes, grazing activities and emerging diseases, among others, represent a serious threat to wildlife.

These are challenges that conservation medicine face, which is a discipline that seeks to combine biology, anthropology, veterinary science and human medicine in order to create healthy environments; this is ecosystem health, animal and human welfare, resulting in a welfare state, in which all living things have intrinsic value.

Meetings and Activities

The Humboldt Institute is developing a massive campaign, which may be made available through pictures, shapes and logos alluding to the AIB, the concept of biodiversity and its importance for human survival and the key role that society plays in protecting natural resources. A proposal was sent to Valtec Marketing Director, Mr. Álvaro Pachón, in order to arrange a meeting to consider the option of including such a campaign within the images that are continuously exposed in the Transmilenio and Eucoles system in Bogotá. This meeting will take place on the second week of June.

The Humboldt Institute, also included in its activities for the year the linking of different institutions and stakeholders to make part of the FlashMob movement (<http://www.humboldt.org.co/chmcolombia/boletin.html>), which aims to raise awareness in civil society about the importance of biodiversity conservation and natural resources for human welfare and life on Earth.

Some results have been received, where institutions have taken the decision to act in favor of sending the message of conservation. As a response to the FlashMob initiative, health workers from Rafael Uribe Uribe Hospital who have sent their messages have used their creativity and ingenuity by creating human figures and sending messages to society about the importance of biodiversity to health and human welfare .

Likewise, the Humboldt Institute, together with the Clearing House Mechanism - CHM Colombia, is structuring a proposal to allow Colombians to share their views on the importance of conserving biodiversity as a source of life, health, food, housing, and fun. As a result, a site on the web was created called "My biodiversity. Colombians talk about biodiversity" (<http://2010colombia.mirocommunity.org/>). It is expected that during the course of the year it will continue to receive messages, and this campaign will become a space for reflection and awareness of the biological and cultural richness of Colombia and all the benefits granted by it.

REPORT ON NATIONAL EVENTS AND ACTIVITIES OF THE INTERNATIONAL YEAR OF BIODIVERSITY

The planet is becoming increasingly vulnerable to climate change effects because the pressure generated by people on ecosystems. It causes them to lose the capacity of resilience following a reduction in number of species both flora and fauna present at the earth.

In this month, as part of the celebration of World Environment Day was unveiled several initiatives to conserve biodiversity. In these alternatives, importance of generating awareness regarding ecosystem services was highlighted. The main cause of negative impacts on the environment is lack of knowledge of the goods and services provided by ecosystems.

Ecological Footprint is one of the best tools to measure the impact on the environment generated at individual, local, national and global level. This parameter allows a quantitative view of ecological pressure that people make on ecosystems, through the use of natural resources for industry, food and household chores, among others.

It is necessary to know and understand how ecosystems work, and what is the biophysical capacity of each of them. In this way, people would not exceed the supply of ecosystems, achieving with this a sustainable management of natural resources.

IYB Academic Calendar – Instituto de Investigación de Recursos Naturales Alexander von Humboldt

Thursday, June 24, 2010

Conference: Climate change and endangered species

By: Stuart Pimm

PhD Conservation - Ecology - Policy and environmental sciences – Conservation and marine science

Guest Commentator

Carlos Jaramillo

PhD Paleobotany - Smithsonian Tropical Research Institute

To understand how species behave today and what we can do for them, it is necessary to take into account aspects such as, species extinction, deforestation of tropical forests and climate change effects. Thus, it is possible to have a greater impact on the conservation of different species of flora and fauna.

Extinction of species

The tropics are the most biodiverse region, where it concentrates a large number of species producing a small distribution range, which causes a high level of vulnerability, where these species are more prone to extinction, compared with those who have a greater range of distribution.

It is assumed that extinction events happen in places that have a high richness of species with a narrow distribution range.

Deforestation

Deforestation has been very great, greater than 100,000 km² per year and has been excessive in places where diversity is greatest. It has recorded the highest rate of deforestation in Central America, northern part of the Andes and Madagascar, leading to a drastic reduction in tropical forests.

Climate change

The effects of climate change are most dramatic in those species that have adapted to living at high altitudes. An example of this is the bird species *Tijuca atra* and *Tijuca condita*, which inhabit such heights, where the temperature reaches 2 ° C. After a temperature increase this type of fauna is in great danger of extinction as habitat for the maintenance of these is lost.

For this reason it is necessary to emphasize that the effects of climate change has a greater impact at altitudinal level than latitudinal level, in other words, there isn't a latitudinal temperature gradient but if altitude temperature gradient.

What can we do?

First, we must stop deforestation and to advance connectivity processes fragmented forests, especially those found in low areas with high altitude.

On the other hand, it is necessary to encourage investment in research, monitoring of species and ecosystems, as well as the incorporation of land acquisition programs that are used in livestock and other production systems, in order for activities in conservation and reduction habitat fragmentation.

A very important factor, climate change is the inclusion of government in the creation of laws to condemn indiscriminate deforestation of forests. Given that deforestation is a major cause of species loss.

Comentator

Carlos Jaramillo

How the rain forest has responded to climate change in the last 140 million years?

Most forests do not exceed a temperature of 28 ° C, however, in the forests of tropical rainfall maintain a maximum temperature of 27 ° C, creating the right environment for plant maintenance.

In the Cretaceous are the first flowering plants, angiosperms, in response to high CO₂ levels that made the atmosphere at that time. Angiosperms have a higher photosynthetic capacity, which regulates levels of CO₂ in the atmosphere, in compliance with this a very important role in climate stability.

The oldest tropical rainforest is known after the meteorite impact in the Yucatan peninsula, is from the Paleocene epoch, which was recorded a temperature of 29 ° C, this has been deduced according to the fossil record found belonging to that era. *Titanoboa cerrejonensis*, Paleocene own boa, found in the Cerrejón, Guajira, Colombia; reveals morphological characteristics, which highlights a body with 1 meter in diameter. Such features not only gives evidence of the size of the fauna belonging to the time, but, taking into account the physiological relationship of the reptiles to keep the heat and size of these animals, it is possible to infer the high temperature characterizing the geological era

In the geological history there have been two global warming, one in very fast time scale and a very show. In the Paleocene-Eocene warming occurred first, which took place in a fast time scale, lasting 100,000 years, in which the temperature rose 5 ° C, while increased rainfall, making room for more biodiversity. Global warming is presented in this era happened 10 times slower that the current warming.

In the early Eocene period, the second heating occurs, this is done in a longer time, 10 million years, in which warming as the temperature rises above 5 ° C, leading to larger rainfall and explosion in diversity.

In these two global warming has been the land, the ecosystem has been able to balance generating large benefits in terms of biodiversity . Most plants that are abundant in the tropics today, evolved during times of global warming, with temperatures up to 4 degrees warmer than today. Unlike the warming that is being done now to prevent deforestation of tropical forests to cope with temperature change, endangering the majority of plant species, since the characteristic flora of this region can only live in maximum temperature at 27 ° C.

Cycle of conferences of the Banco de la República's Library Network and Humboldt Institute.

Monday May 31, 2010

Conference: Páramo: conservation and management of disputed territories

By: Carlos Tapia

Sociologist at the Universidad Nacional de Colombia, MSc in Sustainable Farming Systems Development at the Pontificia Universidad Javeriana (PUJ) and PhD Candidate in Geography at the University of Georgia, USA Andean Páramo Project Manager of the Institute Humboldt

Páramo ecosystems are designed as spaces to be protected from human intervention; therefore, they must stay without presence of people. This concept has brought difficulties to generate and put into action management plans on Páramos. Carlos Tapia, Andean Páramo Project Manager of the Alexander von Humboldt Institute (IAvH), explains “*Some of the problems that we have to deal with its management are the wrong image or perception we have of the páramos. It should be noted that the páramos are built spaces that are part of the established relationship between society and nature*”. Therefore, there are different ways of looking at páramo ecosystems and built according to different cultures.

A holistic perception of páramos is essential to incorporate conservation strategies in these ecosystems. It is necessary to understand how human beings are related with each other and the environment because the value or significance of a páramo differs from one researcher, a rural population, and an indigenous population. In this way, ensures that management plans are consistent with communities that habit in them, making the community to appropriate conservation initiatives.

The Andean Páramo Project of the Alexander von Humboldt Institute (IAvH) seeks to maintain biodiversity and global importance of the Andean paramos through the support of conservation and sustainable use of this ecosystem promoting community participation. This project extends into Colombia, Venezuela, Ecuador and Peru. In Colombia, four areas were prioritized for working: Páramo de Rabanal, Páramo de Chiles, Páramo de Belmira y Páramo del Duende. Integrating the community in this project is a key factor because it allows incorporation of alternatives of conservation and sustainable use of their lifestyles. Finally, they are who give a use for this ecosystem.

Special event of the Environmental Day in the International Fair of Environment

5 June 2010

Biodiversity: Welfare and life

As part of the celebration of World Environment Day, we tried to exalt the biodiversity and environmental services that is provide to humanity. Drawing attention to the ecological impact that the earth has suffered because of the demand generated by people on the planet, in order to meet their needs

In the International Fair of Environment, it was established a cycle of conferences dedicated to publicizing the negative environmental impacts at individual, national, and global level. Similarly, it sets out the conservation efforts and alternatives in front of climate change impacts.

The presentations were:

Conference: Ecological footprint in Colombia

By: Dr. Andrés Etter

Biologist. Msc Landscape Ecology. PhD Ecology. Professor, Department of Ecology and Territory, Faculty of Environmental and Rural Studies at the Pontificia Universidad Javeriana

Conference: Importance of ecological services in Colombia

By: Dr. Julio Tresierra

Master of Science. Global coordinator of payments for environmental and hydrological hydrological - Peru Advisor of WWF on REDD programs.

Conference: Global ecological footprint

By: Dr. Brad Swing

Research Department of Global Footprint Network. Carbon Sequestration Researcher.
Economy and Ecology Specialist

Conference: Sistemas silvopastoriles; manejo de ecosistemas y pago por servicios ambientales

By: Adriana Soto

World Bank Consultant

Conference: Proceso de actualización de la Política Nacional de Biodiversidad

By: Carlos Costa Posada

Minister of Environment, Housing and Territorial Development

IYB events in Colombia - Cycle of conferences in the international Fair of Environment

03 June 2010

New paradigms for water management

During the week of the International Fair of Environment is presented several topics relating to the management of water resources. These topics were:

Conference: Water, a global challenge that requires the mobilization of all sectors of society.

By: Francois Münger.

Head of the Division of Water initiatives in the Swiss Agency for Development and Cooperation.

Conference: National Policy on Integrated Water Resource Management in Colombia: Radical Change or logical step for the future.

By: Michael E. McClain.

Head Department of Water Engineering UNESCO-IHE Netherlands

Conference: Adaptation to Climate Change: Impact on various river basins

By: Ricardo Lozano.

General Director of the Institute of Hydrology, Meteorology and Environmental Studies in Colombia, Ideam

Meetings and Activities

The International Year of Biodiversity presents as an objective joint efforts of different public and private entities nationwide. There was established many contacts, and they were follow by meetings with different entities with the purpose to contribute to the dissemination of AIB in Colombia and also, spread the knowledge of fauna, flora and ecosystems of Colombia.

Contacts and meetings carried out during this month are shown in the following table (Table # 1)

Table # 1. ***Contacts and meetings***

Empresa	Contacto	Reunión	Observaciones
Publimilenio/Valtec/GLP	Si	Si	The meeting established a basic concept for portals and TransMilenio stations. This pending internal approval of the initiative
Bogota Philharmonic Orchestra – Park Events Programme	si		Meeting pending
CineMark	si		Meeting pending

REPORT ON NATIONAL EVENTS AND ACTIVITIES OF THE INTERNATIONAL YEAR OF BIODIVERSITY

According to Emilio Moran “changes in ecosystems caused by man are due to external factors such as technology, economic capital and government policies that encourage development of infrastructure in a given territory”. Incentives aimed at a “better quality of life” through the generation of industries rejecting the value and importance of biodiversity are unrealistic, since it is inevitable that in losing the natural resource and environmental services that they provide, human welfare is compromised.

The challenge faced globally is to begin to generate initiatives which foster the efficient use of natural resources; during this month we have seen increased investment in the use of alternative energies, trying to integrate the everyday needs of mankind in accordance with what the ecosystems can supply.

For this reason, it is of great importance to raise in the human population the need to maintain an optimal state of biodiversity and the appropriate use of natural resources is because man should not be a subject unrelated to ecosystems, but instead should be seen as part of them and understand that human welfare is inseparable from the ecosystem wellbeing.

IYB Academic Calendar – Instituto de Investigación de Recursos Biológicos Alexander von Humboldt

During this year, several conferences have been scheduled referring to the International Year of Biodiversity, in order to integrate the community and increase awareness around diversity, problems, causes and challenges faced in mitigating the negative impacts caused by man. The events held by the Humboldt Institute reports 1851 participants and 215 virtual assistants as of July 31.

During this month interest deepened in issues concerning land use change due to human migration and the understanding of what are the events that have led the tropics to foster megadiversity, focusing on Andean Ecosystems.

The events held in July were:

Thursday July 8, 2010

Human migrations and ecosystem changes

By: Emilio Moran

Profile: PhD. Social anthropology - Anthropology Director, Center for Training and Research on Global Environmental Change. His research has been directed to study the series of changes that have experienced the populations of the Amazon basin, which has led to a transformation of land use.

The construction of the transamazon highway in Brazil and the impact this has had on local populations, has been studied Dr. Emilio Moran, who highlights the interrelationship between man and the environment.

Deforestation in the Amazon and the structure of households is reflected in the changing demographics of the Amazonian populations and the transformation in land use at the lot. Field work done by Dr. Moran, was held in Altamira, where it was shown that households go through specific processes of formation, transformation and aging, as part of the process of migration and border expansion strategies that directly affect land use and environmental change.

This study demonstrated that the migration of the Amazonian populations occurs when settlers note that there is some kind of productive development or where infrastructure is being built. This is driven by the government in order to mobilize people to places where they have some special financial interest. An obvious case of this is the municipality of Altamira, that, in 1972, before the transamazonian road was built, had a secondary road and a population of 5 to 10 people; as the road was being built, the number of people increased. Ten years after, the municipality of Altamira had a population of five thousand people. The government drove the movement of mainly young people or families with teenagers, offering them benefits and guarantees for labor in the construction of the road.

Over time, the household grew in size and attempted to increase capital in several ways; one very common way is to accumulate capital in the form of livestock, which is protected as a family investment. Also, with the construction of the transamazon highway capital accumulation is performed in order to be invested on housing.

The Anthropological Center for Training and Research on Global Environmental Change (ACT) at Indiana University, founded in 1992, deals with interdisciplinary training and research on the human dimensions of global environmental changes. The ACT researchers and collaborators are focused on understanding the dynamics of deforestation using a

combination of field studies and use of tools like remote sensing and GIS in topics such as population and environmental and human ecology.

The use of tools such as remote sensing and GIS, allows to take a broader vision of the object of study that integrates all the information such as rainfall, soil, population size, etc. This way, the new tools give results that provide more accurate conclusions as to the understanding of changes in the population and its relationship with deforestation.

Changes in land use are the main source of anthropogenic changes in biogeochemical cycles on the planet, which have a huge impact on biodiversity. The magnitude of changes in land use has been estimated at six million square kilometers of forests transformed into cultivated areas, 4.7 million square kilometers of savanna converted to agricultural uses. A common myth is to blame population growth and poverty for agricultural intensification and deforestation in the tropics; it has been demonstrated that the true cause is determined by technology, capital, globalization and development policies, which allow the expansion of road system and grant concessions to logging companies, causing changes in the trend of land use.

Therefore, deforestation should not be seen only from one perspective, as a result of this study it was found that this problem is caused by all the different factors: social, economic, political, etc. which must be taken into account when formulating policy or development plans.



Dr. Emilio Moran

Thursday July 22, 2010

Where does the megabiodiversity come from?

Sponsored by Ecopetrol

By: Antoine Cleef

Profile: PhD. University of Amsterdam - Member of the the Palaeoecology and Landscape Ecology Group, professor of the Institute for Biodiversity and Ecosystem Dynamics. His

research has focused on tropical plant ecology, biogeography and paleoecology. He serves as advisor for scientific projects and programs NWO-WOTRO (Netherlands), Deutsche Forschungs Gemeinschaft (DFG, Bonn), Mata Atlantica SHIFT BMZ (Bonn), CONACYT (Mexico) and COLCIENCIAS (Colombia). He belongs to the External Review Committee of the Alexander von Humboldt Institute, Colombia.

Guest Commentator: Santiago Madriñán

Perfil: PhD. Systematic Botany - Harvard University. Associate Professor Department of Biological Sciences, Universidad de Los Andes. Director of the Systematic Botany Laboratory, Universidad de Los Andes. His research has been directed to study the evolution and biogeography of neotropical plants using molecular methods to reconstruct phylogenies, plant morphology, diversification of flora of páramos and genetic identification of species through DNA barcodes

Colombia is at the top of global biodiversity, being first in birds and amphibians with 669 species and 1768 species, respectively, second in vascular plants with 45000 species and fourth in mammals and reptiles with 471 and 475 species, respectively.

Biodiversity in Colombia can be seen from a cultural perspective, which highlights the useful plants, through traditional crops, mainly from Oxalidaceae and Solanaceae families. Another important aspect of cultural biodiversity is the bio-trading that reflects a community's identity and proper use of natural resources through crafts, artifacts, natural medicines, dyes, fibers, etc.

Megabiodiversity in Colombia has been the product of the dynamics and gene flow of different populations, as in sub-Andean forests, which are listed as one of the most biodiverse ecosystems, reflected in the variety of species. In the páramo ecosystem, biodiversity is a result of its distribution; during the Pleistocene period, wilderness ecosystems occupied three times more territory than they now occupy, and this allowed for a continuous gene flow between populations. However, due to the current distribution, the páramos have lost connectivity and therefore gene flow was interrupted, which led to genetic isolation, causing at the same time high levels of speciation, as is the case of the genus *Draba*, of the Brassicaceae family.

Dr. José Cuatrecasas, studying frailejones, found to *Espeletia* many different genera; one of these is the *Carramboa*, which is also distributed in Venezuela. This type of frailejón comes from a tree species of Andean forest, that, in order to become adapted to the páramo, lost its leaves, forming a column of dead leaves and a rosette of leaves at the end. Perhaps the area where it happened this adaptive variation is between Cucuta and San Cristóbal, where the Tamá páramo is located, and it is likely that some floristic elements have moved to Colombia and others have stayed in Venezuela. Another particular genus is the *Ruilopezia* frailejón, which has a terminal inflorescence very similar to the “puya”. In the Cocuy mountains the *Tamania* genus is known to be endemic to this area.

Flora of páramo as Luteyn (1999) is classified as follows: 52 genera with 352 fern species, 1 genus of gymnosperm with 2 species, 101 genera and 634 of monocots and 346 genera and 2411 species of dicots.

The migration of floristic elements that contributed to the diversity of the páramos and Andean ecosystems, come from warm lands undergoing a process of evolution and adaptation to high mountain ecosystems. Among these elements are *Holarctic* taxa, which come from the north such as the genus *Halenia* (Gentianaceae). Similarly, there are species coming from the south, known as *Austral-Antarctic* taxa, represented by the genus *Oreobolus* (Cyperaceae). On the other hand, the rich biodiversity of the Amazon forests and the Pacific Chocó, have contributed to the Andean and páramo ecosystems biodiversity, considering these contributions as *Neotropical* taxa of lowlands and endemic *Montane neotropical* taxa. Páramo ecosystems also have received migrations of floristic elements from savanna ecosystems, with the taxa taking the name of the same ecosystem, *Savanna* taxa. These adaptive migrations suffered by plants became known as “Ecophysiological Filters”, this being a gradual change which has been confirmed from pollen records.

As for megabiodiversity in the Amazon, some of it has been attributed particularly to the refugia that were generated during ice ages, when a speciation dynamic took place, resulting in a large number of endemic species.

Finally, the great diversity in the tropics and enjoyed by Colombia, has its origins in the Cretaceous, 70 million years ago, when there was the great continent of Gondwana, in which there were tropical forests. On the other hand, Carlos Jaramillo, argues that an important contribution to the megadiversity of this area is a result of two global warming events suffered by the Earth in the Paleocene and Eocene, thus increasing the richness and diversity of species.



Antoine Cleef

Meetings and Activities

The International Year of Biodiversity presents as one of its objectives to join efforts of different public and private entities nationwide. Many contacts were established, followed by meetings with different entities with the purpose of contributing to the dissemination of IYB in Colombia and of spreading the knowledge on fauna, flora and ecosystems of Colombia.

BPO: In this month a meeting took place with the Bogotá Philharmonic Orchestra (BPO). The inclusion of the BPO promotes initiatives to bring the message of awareness of our biodiversity, through events that this entity organizes, such as the *At the Park* events; in this way it is possible to include society in the recovery and conservation of Colombian ecosystems.

The proposal presented to Maestro Santiago Trujillo, Deputy Director of Artistic and Cultural Scenarios BPO, consists of the presentation of IYB video, made by Gustavo Wilches, for Alexander von Humboldt Institute, between the musical performances or other *At the Park*, with the purpose of stimulating an appropriation of Colombian biodiversity and highlighting the importance of conserving natural resources not only as a luxury but as a necessity, because their protection is inseparable from human welfare.

Proposal awaiting for response.

GLP: Additionally, there was an advancement in the process with GLP for mounting the Biodiversity campaign in the mass transportation system Transmilenio stations by showing a basic concept of biodiversity and the city for 3 ecosystems close to Bogotá, for which a brief is being developed.

The campaign is planned to begin this semester as part of the IYB but it is projected to be an ongoing campaign on biodiversity issues should it be successful. We are already adjusting the graphical and trademark proposal. The idea is to use three ecosystems from Bogotá or its surroundings initially (e.g. wetlands, Andean forest, páramo) since there are three modules in each Transmilenio station. Each module will show an ecosystem with information the ecosystem itself, its species, its problems and what we (citizens) can do to help. Depending on the financial resources we gather, the goal is to reach 10 to 15 key stations initially.

Alongside the Transmilenio campaign, there will be presence on Canal Uno, Telmex Magazine, Internet and BTL spaces. We are currently refining the proposal and beginning to examine the strategy from a commercial point of view.

Proposal in progress.

Avianca: There have been attempts to connect the IYB and Avianca, however the delay by the Humboldt Institute in producing some materials, generated a significant distance from the originally established arrangements. We will continue trying to reestablish contact.

Gas Natural: Several meetings have been held, based on the Institute's disagreement with the initial requests made by Gas Natural: we are awaiting for the possibility of continuing only with the Gas Natural internal campaign on biodiversity by offering the multi-image presentation. There is a pending Save Your Logo proposal for 2011 which generated interest from Gas Natural; for internal reasons they will not review this proposal in detail until next year.

Ring Tones: The ringtone database made by OpEPA for IYB based on the bird songs recorded by the Institute. The ringtones of birds from Villa de Leyva and Sierra Nevada de Santa Marta are now available in mp3 and iPhone format through the IYB Colombia download webpage.

REPORT ON NATIONAL EVENTS AND ACTIVITIES OF THE INTERNATIONAL YEAR OF BIODIVERSITY

Biological diversity or biodiversity directly affects human culture and hence the establishment of a society. During this month we could see evidence through history that the development of a society can not be achieved without taking into account the environment in which it will be established; in other words, society and nature must go hand to hand, because in the end it is nature that gives mankind all that it needs for its maintenance.

To start having an appropriation of the environment, to know how it works and how we use natural resources for the benefit of mankind, without altering the stability of ecosystems, is what Francisco José de Caldas called *Economic Geography*, which, in the Age of Enlightenment was understood as the domination of man over nature. However, after the Conquest period, man dominated nature in the wrong way, since he did not take into account the features and the virtues of American ecosystems, especially those who were in the tropics, because for Europeans the climate of this area did not allow for the establishment of an organized society. This is how the ecosystems began to be transformed to meet European needs, and as a consequence habitats of endemic species were reduced, leading to their extinction.

Today, when we speak of sustainable development, we include, among other aspects the balance that should exist between the social and the environmental realms, for man has realized that social development can not be separated from the environmental balance and

has also understood that humans are a functional part of the ecosystems and not a separate entity from them.

IYB Academic Calendar – Instituto de Investigación de Recursos Biológicos Alexander von Humboldt

During this year various events related to the International Year of Biodiversity have been scheduled, in order to integrate the community and to increase awareness about diversity, its problems, causes and the challenges that are faced in mitigating the negative ecological impacts caused by man. In this second semester, the Humboldt Institute is sponsored by Ecopetrol, an organization allied with the IYB in Colombia, for the implementation of the different lectures.

The August lecture was:

Thursday August 19, 2010

The empire of nature and the empire of man: climate and politics in the Age of Enlightenment

By: Mauricio Nieto

Profile: Doctor in History of Science from the University of London. Associate professor and Graduate Director of the Department of History Universidad de los Andes. He was director of Colciencias, Professor of Universidad Nacional of Colombia.

Guest Commentator: Francisco González L de G.

Profile: Anthropologist, MSc in Geography and Philosophy - Director of the Institute for Environmental Studies (IDEADE) of the Pontificia Universidad Javeriana. He is a national and international consultant on issues related to planning and management of sustainable development. His research focuses on policy and environmental management systems, anthropology, geography and philosophy applied to the study of political ecology, environmental issues and sustainable development.



Francisco González – Brigitte Baptiste – Mauricio Nieto



Mauricio Nieto

Nature plays a role on the organization of society, in which climate and humans have a very close relationship. This relationship between climate and man begins to be debated with greater strength since the European exploration voyages to America.

Gonzalo Fernández de Oviedo, in his book *General and Natural History of the Indies* (1535), says that in the torrid zone there cannot be life, let alone a civilization, given the intense heat, “*The torrid zone (which is the same equinoctial) is uninhabitable because of the excessive heat of the sun*”. Along with other authors Oviedo stated that the American continent is immature, degenerated and weak, it does not provide the necessary elements for the development and establishment of an organized society.

In the Age of Enlightenment, one of the most influential writers is the Count of Buffon (1707 - 1788), who seeks to understand the world, taking as reference the familiar places, in this case Europe, and so he begins to show similarities and differences between the Old and New World, expressing and defending his ideas that America has weakness, degeneration and cowardice. Buffon supports its claims in that it is the climate that determines the features of the new world. Therefore it cannot produce big, strong animals and on the contrary small birds, reptiles and insects can be seen, unlike the big mammals found in the Old World. An example of this, according to Buffon is that in America there are no elephants, the elephant being the American tapir, a degenerated elephant .



IMAGEN 16.1
 Elefantes, Georges Louis Leclerc Buffon, *Oeuvres complètes de Buffon*, V.4, p. 50.
 Biblioteca Luis Ángel Arango, Libros Raros y Manuscritos.

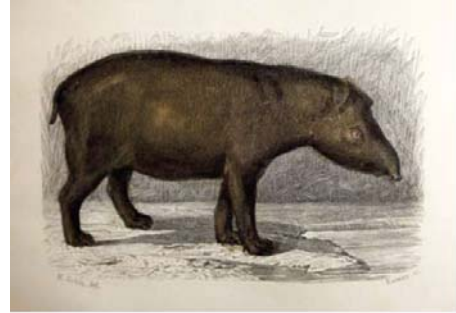


IMAGEN 16.2
 Tapir, Georges Louis Leclerc Buffon, *Oeuvres complètes de Buffon*, V.4, p. 488.
 Biblioteca Luis Ángel Arango, Libros Raros y Manuscritos.

As for humans, Buffon states the inferiority of the American man “*The savage one is docile and their reproductive organs are small, has no hair nor beard, has no desire for his female: although lighter than Europeans because of its running habits, is, however less strong; he is also less sensitive and yet more fearful and lazy. He lacks has vivacity, no activity of the soul; the corporal activity is not a voluntary movement, merely a response to need; if we take away hunger and thirst, the reason for his movement will be destroyed, and he would remain idle for whole days*”

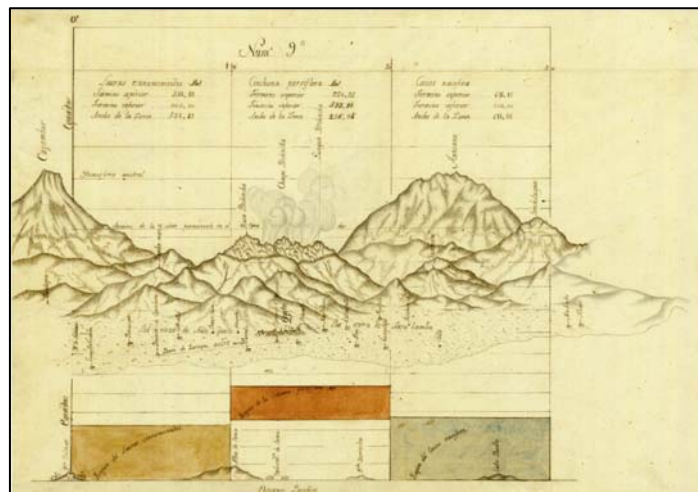
Just as Buffon does, Hegel underestimates the American continent saying: “*America has always proved impotent and continues to do so both physically and spiritually. The indigenous people, since the arrival of Europeans, have been perishing at the breath of European activity. In animals themselves you can see the same inferiority as in men. The fauna has lions, tigers, crocodiles, etc., but these beasts, although remarkably resembling those of the Old World, are nevertheless, in every way smaller, weaker, more helpless. They say that edible animals are not in the New World as nutritious as those from the Old World. America has big cow herds; but European beef is considered there as a delicacy*”. Similarly, Hegel indicates that American history began with its discovery, being Europe the architect of this continent’s history.

Alexander von Humboldt, who is considered the second discoverer of America, emphatically contradicts Hegel, who never traveled to the New World. Humboldt highlights the imposing American and how ferocious animals can be, saying “*I’ve seen alligators climbing up canoes and eating the Indians*”. In the same way, he denies the assertions of previous authors which blamed climate for the impotence in America. On the contrary, Humboldt highlights the benefits of America stating that “*Many Europeans have exaggerated the influence of these climates on the spirit and affirming that it is impossible to support intellectual work here; but we must assert the contrary and, according to our experience, proclaim that we have never had more strength than when we watched the beauty and magnificence that nature offers here. Its greatness, infinite and new productions, as it were, electrified us, filled us with joy and made us invulnerable*”.

To the *criollos* (native Americans with European parents) the most important issue was geography. Francisco José de Caldas (1808), defined geography as climate that influenced organized beings. Caldas finds a direct relationship between politics and geography, which is explicit and necessary to build any political order, saying that “*Geographical knowledge*

is the thermometer that measures the enlightenment, trade, agriculture and prosperity of a people. Its stupidity and barbarism is always proportionate to its ignorance on this point: Geography is the foundation of all political speculation”

For Caldas, geography has a utilitarian sense, which serves to transform the nature into wealth, ascribing the term *Economic geography*, which expresses the man's dominion over nature for his own benefit; in other words he states that through Economic Geography one acquires the “*Extension of the country in which you want to work*”. On the other hand, as he did with geography, Caldas attributed significant value to cartography by which a sense of control over the territory is achieved, because it evidences the good things the country has to offer and allows to identify and make appropriate decisions about of the most proper places for certain types of crops, navigable rivers, and location of forests, among others; Caldas puts it as follows “*It is no longer a common chart: reduced scales and everything that has an appearance of smallness and economy must disappear from the spirit of our countrymen. Two square inches must represent at least one league of land. Here we have to notice the hills, mountains, pastures, forests, lakes, swamps, valleys, rivers, their bends and speed, waterfalls ... putting these squares together will produce a superb and dignified chart of New Grenada . Here will come the politician, the judge, the philosopher, the merchant to drink light to carry out their trades ... All classes of the State will come here to take their part”*



Through mapping Caldas says that what defines climate is not latitude but altitude and in New Grenada the Andes range plays a fundamental role in the climatic features of the territory, as follows: “*These great eminences of our world, that changing our home fill us*

with these beautiful presents and all the comforts of life, change our temperature and climate. They are the cause and give rise to the springs and rivers: they accumulate the mist, give direction to the winds and increase or decrease the rains.”

Finally, Francisco José de Caldas refuted Buffon's thesis blaming America's climate for Americans being weak and unable to form a culture or civilization. To Caldas, the virtue of a man depends on himself, stating that *“Climate is not the one that forms the morale of men, but opinion and education; and such is their power, that they will always succeed over latitudes, and even over the temperament of each individual ... In a word: Climate, food, nation, family, temperament, do not absolutely lead man to embrace vice or virtue, all and everywhere are free to make the choice”*.



Mauricio Nieto

Comments:

The debate about nature and society from a perspective of history has created in man the question of: How is society constructed from nature?, Arguing for this how the history of mankind is nothing else but the interaction between society and nature.

Culture is a human adaptive strategy that cannot be thought of without a natural reference, that is, culture can not be separated from the ecosystems, therefore society can not be sustained without nature. To build a culture, a society and a nation it is critical to assess what is our relationship with nature.

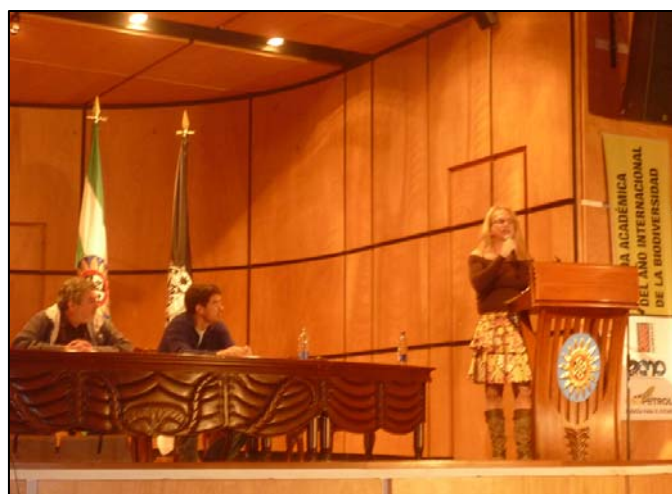
Before the Conquest America was totally intervened by indigenous production systems, according to European accounts. After the Conquest, ecosystems and culture were transformed, opposite to the reality of the American continent. The New World man begins to have a vision of modernity that prevents him from recognizing the essential elements that his natural environment provides, which are key to the construction of his survival; the

American man perceives the environment and himself in a negative through an arrogant and contemptuous look, finding obstacles to progress and development; feeling inferior to Europe. Thus he begins to think “what does it take to be like Europe?”, “how to make its ecosystems and himself look like Europeans?”, since the reality showed by America cannot build what is required by the European reality, the great diversity of American ecosystems, mainly in the tropical zone, turns out to be the problem that prevents the establishment and development of a society.

It is not until recently that ecosystem diversity begins to be recognized as a source of progress and generation of a different culture. Nature and society are part of the same reality, a complex reality, where we are not different from each other and are connected in all the biological processes. In tropical countries like Colombia, a self knowledge has to be built with which the possibilities of the future can be defined, and not taking into account the knowledge of others, whose the reality is another one. Therefore the questions “what is left for us towards the future?” and “from where are we going to build a nation, culture, science and society?” are answered from the knowledge of the natural environment and man's relationship with it, and this knowledge begins with history.



Francisco González L de G





Events International Year of Biodiversity in Colombia

Through the International Year of Biodiversity website events organized by different entities related to biodiversity have been posted. Thus, this page has become the primary means of disseminating the activities and initiatives for the promotion and conservation of biodiversity. On the other hand, it allows for the integration of the various sectors of Colombian society to knowledge and ownership of the country's biodiversity.

During this year many events have been reported, led by the IYB partner and not partner entities in Colombia. The following table reports the events held during August.

Table No. 1. Events held during August

Entity	Information provided
Luis Ángel Arango Library	In the spirit of celebrating the IYB in Colombia, the Library organized the conference <i>Ecological structure and plant diversity in Colombian territory</i> , which discussed the concept of ecological structure from the point of view of natural resources, conservation and environmental risks, explained from natural elements, relationships and properties, considered in their levels of hierarchical organization. As for plant

	diversity it was examined from a phytosociological point of view, keeping a reflection on the zoning and mapping of ecosystems and landscapes in their different organizational levels.
Institute for Conservation, Sustainable Use and Animal Welfare	Theoretical and practical course environmental enrichment.
Zizua Foundation - CAR	International Mexico - Colombia Seminar, production and wildlife conservation: Report of management protocols and production of three promising species (white-tailed deer, collared peccary or zaíno and agouti, lapa or borugo). Results from parallel research in Mexico and Colombia were shown, using three methods for assessing wildlife populations.
Universidad Nacional – Humboldt Institute	As part of the Convention on Biological Diversity and the International Pollinators Initiative, these organizations presented the conference <i>Conservation and management of pollinators for sustainable agriculture with an ecosystem approach</i> .

Meetings and Activities

The International Year of Biodiversity, presents as an objective the joint efforts of different public and private entities at a national level in order to contribute to the dissemination of IYB in Colombia and also, spread the knowledge regarding Colombian fauna, flora and ecosystems.

BPO: The proposal made to the Bogotá Philharmonic Orchestra (BPO), to present the video of the International Year of Biodiversity, made by Gustavo Wilches for the Alexander von Humboldt Institute, in the time left free between the musical or other types of presentations in *At the Park* events, was accepted. Therefore, the video was presented at the *Salsa at the park* event at the Bolívar Square on 21 August.

The IYB video has the chance to be presented in *At the Park* events organized by the BPO.

GLP: Images of wetlands, Andean forest and páramo and images of fauna associated with these ecosystems were delivered. These images are the concept of the biodiversity campaign which will take place at the stations of the mass transportation system Transmilenio.

Alongside the Transmilenio campaign, there will be presence on Canal Uno, Telmex Magazine, Internet and BTL spaces. We are currently refining the proposal and beginning to examine the strategy from a commercial point of view.

Proposal in progress.

Radio station Universidad Santo Tomás: There is an agreement with the radio station to present radio clips, made by Eduardo Arias for the Humboldt Institute, alluding to the IYB. The University's radio station said that Humboldt Institute messages can be broadcasted during the Gaia Living Planet Program, at no cost.

The Gaia Living Planet program, of the Faculty of Environmental Engineering, airs Wednesdays 3-4 PM (repeats at 8 PM) and Saturdays at 8 AM. The radio station airs on the Internet <http://eradio.usta.edu.co/>

IYB auditoriums for lectures in the second semester: For the second semester we have looked for different scenarios in which to carry out the lectures scheduled for the academic agenda of the Humboldt Institute. In order to do this, different universities have been invited to actively participate in the development of the objectives of the IYB in Colombia, by making their auditoriums available. Some of the universities invited are: Universidad Externado, Universidad de La Salle, and Universidad Santo Tomás.

An arrangement was made with Universidad Santo Tomás to use Aula Magna Fray Domingo de las Casas, which is an appropriate place for presenting lectures, since it meets the quality level required for these events.

Academic Conferences Held during September

September 2, 2010

Solastalgia: On the desolation resulting from negative change in the environment

By: Glenn Albrecht

Profile: PhD in Philosophy – Professor of Sustainability at the University of Murdoch and Associate Professor at the Environmental and Life Sciences School at the University of Newcastle.

Glenn Albrecht is internationally recognized as the creator of the concept known as “solastalgia”, defined as the anguish, discomfort, or suffering of a human being that is produced by the negative environmental changes that result from industrial development, mining, drought and climate change.

Guest Commentator: Gustavo Wilches-Chaux

Profile: Doctorate in law and social and political sciences. Expert in risk management and climate change adaptation. Consultant for Pnud and Unicef on territorial and climate change security.

The world is facing a globalization that is generating a homogenization of landscapes and leading to the loss of biological and cultural diversity. The restoration of ecosystems must begin with a mental process in which man’s thought is reflected in our surroundings. This is known as the Ecomental Landscape.

Not being sustainable impedes the ecosystems as man’s well-being and if the situation continues, it will eventually affect man’s mental health as well. The sicknesses induced by the environment have 2 main categories. The first is known as psycho terrestrial which is understood as the connection between the mind and earth; the second is known as somato-terrestrial where environmental contamination such as pollution and toxic materials, among others, affect human health.

The Nature Deficit Disorder is classified as a psycho-terrestrial sickness. This concept was developed in 2005 and it alludes to the generation of children that are no longer able to relate to nature as a result of passing most of their time in an artificial world dominated by technology, decreasing activities in the open air. This Nature Deficit is prompted by the adult population since they are responsible for generating an overload of technology that governs the world, provoking children to stay immersed in the very world that adults are creating. The opposite of this Disorder of Deficit is known as Biophilia, or having an affinity to life processes, having love for life. However, the notion of Biophilia is currently not strong enough to diminish the effects of the Nature Deficit Disorder, seeing that children are becoming more and more indifferent to the loss of biodiversity.

Another psycho-terrestrial sickness is known as Ecophobia which is a fear of the future that stems from feeling incompetent in having influence over the future. This feeling of incompetence is defined as ecoparalysis and it leads people to think that environmental problems are so great that anything they do will not be sufficient enough to address the full

scale of the problem. Along with ecoparalysis comes ecoanxiety which is the constant sense that whatever man does, it is part of the problem.

Solastalgia attributes man's melancholies to the loss of the home and environment. This term was coined by Glenn Albrecht after carrying out a study in the Australian province of Hunter Valley. As a result to the discovery of large amounts of carbon that needed to be exploited, this province experienced a huge change in their landscape – from rural to industrial. After the change, the community began to see the environmental loss and expressed feelings of depression, anguish, anxiety and impotence. At this point, the concept of Solastalgia was born. Solastalgia is a neologism that describes the sadness of losing a home even while at home. In order to experience Solastalgia, it is necessary to be a human being that has had profound love of the native.

To contrast the Solastalgia feeling we have come up with Solifilia, which comes from solidarity and is key to reaching the restoration of ecosystems. In order to reach this goal there must be political and cultural will. There is also the sensation of Euterria, being the positive feeling of unity with the earth and the forces of life. Soliphilia and Eutorria together create a powerful force with which it is possible to reach sustainability and eliminate Solastalgia from the world.

Glenn Albrecht

Commentary

The feeling of Solastalgia has to do with the loss of identity which is related to the sense of territory. Territory is the result of the relationship between two dynamics: the dynamic of nature or of ecosystems and the dynamic of communities. As a result, the loss of territory is presented when one of the two components are lacking.

A human population feels unsafe when the ecosystems are not unsafe, in other words, when nature is vulnerable, it becomes a threat to man. To create a safe territory there must be a strong relationship between: ecological security, social security, economic security, energy security, judicial security, and autonomous nutritional security. These should be understood as a combination of factors that contribute to the stability of territory.

Territory should have the capacity to be Resistant, allowing it to survive an adverse situation like a flood, for example. In the same way, it must have the capacity to be Resilient, allowing it to return to its state even after a difficult situation. This capacity depends exclusively on the community since it is the community that initiates the construction of the territory.

On the other hand, an unsafe territory generates poverty and this is the result of the interaction of the following factors: Nutritional insecurity, ecological poverty, economical poverty, cultural poverty, energy poverty, and institutional poverty. This generates a cultural, affective and emotional poverty.

Therefore, all of the management processes for community development must keep in mind that none of the initiatives can affect the integrity and biodiversity of the strategic ecosystems and should sustain themselves in a way that will build human and territorial security in the long run. Lastly, it must create conditions that facilitate the true exercise of Human Rights and especially the rights of Children and Adolescents.

September 32, 2010

Visions of Diversity and Evolution: Evolutionary Aspects of Gender and Sexuality

By: Joan Roughgarden

Profile: PhD in Biology from the University of Harvard. Professor of Biological Sciences and Geophysics at the University of Stanford and the University of Hawaii. Author of the Best Seller: *The Genial Gene: Deconstructing Darwinian Selfishness*.

Invited Commentator: Mauricio Linares

Profile: PhD and post-doctorate in Evolutionary Genetics from the University of Texas. Professor at the Institute of Population Genetics at the Universidad de Los Andes

Joan Roughgarden

The theory of sexual selection must be deconstructed. Joan Roughgarden proposes an alternative theory in which the diversity of gender is interpreted and studied in nature, "each species has its own history and we can learn from them, most of all from the gender varieties and sexual expression", stated Roughgarden. The theory of sexual selection posed by Darwin affirms that the vigorous males are those that are the best adapted and have the best probability of passing down their genes to the next generation since they are the ones that are the most attractive to the females. In this way, it is understood that the female's selection of a male is limited to the quality of genes that the male can offer.

However, Darwin's theory has been refuted by species that have become cases of exception within the animal kingdom. There are individuals that cannot be assigned to only one class of gender. This case is found in those species that present simultaneously both sexes, producing ovules and sperm at the same time. One example of this is the fish that can be found in the corals, such as the clown fish which have the capacity to change from male to female. These species are hermaphrodites, changing sex according to their stage of development. These exceptions pose a problem for the theory of sexual selection since the sex of each species must be well defined to generate offspring.

Another exception that we find in nature that contradicts Darwin's theory is found with the reversion in gender roles of the seahorses. The female deposits mature eggs in the incubating pouch of the males where they stay until they are fertilized.

Joan Roughgarden proposes the theory of social selection as a theory to replace that of sexual selection in which cooperation becomes an important factor in the moment evolution for the species. An example in nature where cooperation is seen is when males form a lek, a behavior that is seen especially in birds to attract females. Although it seems to be a

competitive event, there is cooperation between the males. Within the group, those that are the least seen create a "friendship" with the females to attract them to the lek and to present the most vigorous males of the group. With this example, Roughgarden affirms that the offspring of a species emerges from a social structure. Another example seen in nature is also observed in birds. The mother receives cooperative support of the population in caring for the offspring, generating familial incentives since the others are protecting cooperatively the genes of the population.

The theory of social selection of Roughgarden is based on the mathematic theory of cooperative games and the economy of industrial organization. This theory has a focus on two levels: the first level is behavioral. This level refers to a fast, competitive or cooperative game in which the population engages. The second is an evolutionary level that makes reference to the genetic change of the population an evolutionary period. If it is played competitively, the population ends up in a different place than if it is played cooperatively.

Academic Conferences Held During October

Alexander von Humboldt Institute
With the sponsorship of Ecopetrol

Biodiversity, Ecosystem Services, and Food Security

Date: October 16 -17, 2010
Place: Villa de Leyva, Boyacá
Auditorium: San Agustín Cluster

Saturday, October 16, 2010

Opening Event – Eugenia Ponce de León – Director of the Alexander von Humboldt Research Institute for Biological Resources

Conference: Ecological Agriculture: An option for the development and security of food in light of climate change

Speaker: Galileo Rivas – PhD in Phytogenetic Resources and Biological Interaction in the Supérieure Agronomique de Montpellier, France; Leader of the Agro-ecological production of Food Crops (CATIE) in Costa Rica.

Traditional Agriculture presents a focus dependent on technologies such as agrochemicals and high-yielding varieties, in other words, it is based on using chemicals and monocultures. This type of agriculture has created a series of imbalances in different environments such as: Risk in biodiversity, provoking the elimination of reservoirs, risk in the economy of producers, reflected at the national level, generating high costs of production and economic loss. In the same way, there is an imbalance in the well-being and

quality of community life, as a result of contamination in water sources, human toxicity and soil contamination. And from this ecosystem point of view, the level of Plague Systems that are related to the elimination of natural enemies, are effected since new pests, pathotypes, or biotypes appear and these new natural enemies become resistant to the use of pesticides. The use of pesticides brings with it production costs, generation of resistant pests, averse effects for birds, fish and other animals and other negative effects for apiculture.

Ecological Agriculture emerges as an alternative to conventional agriculture, one that tries to organize the process of plant and animal production, attempting to be sustainable in a way that does not deteriorate natural resources and even improve the environment. Therefore, Ecological Agriculture is a production system that maintains and improves the health of soil, ecosystems and people. This type of agriculture can be adapted to local conditions, extracting local knowledge and technologies. This type of method can combine tradition, innovation, science, experience and lessons learned by the communities. The objective is to produce in a way that is cleaner and to promote fair relations and better quality of life.

Ecological Agriculture is based on the science of Agro-ecology. However, the emphasis is not just on pests but also on the analysis of agriculture processes where the goal of a whole ecosystem is identified, considering a series of elements to optimize the process (mineral cycles, energy, biological processes and socio-ecosystem relations). Within this focus, it is important to highlight the following: Nutrient recycling, the use of renewable resources, elimination of toxins, use of natural fertilizers, management of pests instead of controlling and eliminating them, environment adaptation, resource conservation and valuation of health in an ecosystem from a more holistic point of view rather than as a specific crop.

Conference: Environmental Services, an Opportunity for Sustainable Development

Speaker: John Mario Rodríguez – Professor of University of Technology in Pereira;
Director of the Center of Research and Studies in Biodiversity and Genetic Resources (CIEBREG).

Environmental services cover aspects principally of economic nature. Some definitions of ecosystem services relate to the flow of material, energy and information from natural capital combined with human capital obtaining, as a result, maintenance of human health. Consequently, ecosystem services seek to generate human well-being since humans can survive and sustain themselves on these ecosystems.

Taking that into account, there is a need to define other concepts such as Ecological Services from Agro-ecosystems which are understood as the combination of benefits generated from the implementation of best practices of management. Ecological Processes are the result of natural processes that occur directly in protecting, recuperating and improving the environment and generating human well being.

Conference: Agro-biodiversity, Food Security and Farmer Economy

Speaker: Santiago Perry – Executive Director of PBA Rural Innovation for Development

Conference: Plants for Life

Speaker: Carlos Rodríguez – PhD in Natural Sciences, University of Amsterdam; Director of TROPENBOS Colombia.

Sunday, October 17, 2010

Conference: Community Experiences – Participatory innovation for the technological development of Quinoa with farmers of small production in the department of Boyacá.

Speaker: Edelmira González

Conference: Small Producers – Community experience of the municipalities of Ventaquemada and Turmequé

Speakers: Luz Marina Parra and Marlén Muñoz.

International Year of Biodiversity event with the Luis Angel Arango Library and the Network of Libraries of the Banco de la Republica

Date: Monday, October 4, 2010

Conference: Water and Biodiversity: An approximation of the Tunjuelo River Basin

Speaker: Camilo Rodríguez Murcia

Profile: Geologist, Consultant for the National University of Colombia, the Alexander von Humboldt Institute, and the Institute of Hydrology, Meteorology and Environmental Studies (IDEAM).

The Luis Angel Arango Library programmed the Week of Science and Technology with the main subject of Water and Biodiversity. The conferences involved the participation of experts in the matter and provided an opportunity for hearing different visions, policies, research, and social conflicts that revolve around the basins and around one of the most important rivers of Bogotá.

Conference: Initiatives of the Local Government of Usme in the Conservation of the Tunjuelo River Basin

Date: Wednesday, October 6, 2010

Speaker: Johanna Gelvez Bernal

Profile: Forest Engineer – PIGA Referent, Local Government of Usme

Usme is a city that is made up of 85% rural area. As a result, the conservation of water is centered on the water sources that provide for 14 different districts within the locality. In the urban area, there is contamination in the water sources as a consequence of poor solid waste disposal. In order to improve the situation, work is being done in the Tunjuelo River in an attempt to reverse the affects generated by the contamination.