

IN THIS ISSUE

Project Coordination
(pg.1)

Research Activities
(pg 2-3):

Initial visit to local
communities

Water and sediment
quality monitoring

Studies of fish biology
and ecotoxicology

Health surveys in
local communities

Capacity Building (pg.4)

Events & Awards (pg.5, 6)

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The BASIC Cartagena Project is an applied research project on Basic Sea Interactions with Communities focused on the generation adaptation tools for integrated coastal water resource management in the coastal zone of Cartagena, Colombia. Started in July 2014, this 3-year multidisciplinary project is financed by the International Development Research Centre (IDRC) of Canada. Implementation of the project is led by EAFIT University, in collaboration with the University of Los Andes, University of Cartagena, the Foundation H.E.O., and the Regional Corporation CARDIQUE.

Project Coordination



Biannual meetings of the project Follow-up Committee

The Project Follow-up Committee met on August 4th and December 9th in the cities of Medellín and Cartagena. Meeting participants included representatives from the Universities of Eafit, Los Andes and Cartagena, the environmental authority CARDIQUE, the Foundation HEO, and expert consultants. The meetings focused on the project timeline, research strategies and methods, aspects of operational and administrative implementation, and preliminary results of the project.

Inter-institutional Agreements

Significant effort was dedicated to the development of inter-institutional agreements during the first semester of the project. It is a pleasure to report that agreements have now been signed confirming the participation of the following institutions in the project. Contracts for researchers, consultants and support staff have been signed as well.

- ✓ IDRC
- ✓ EAFIT University
- ✓ University of Los Andes
- ✓ University of Cartagena
- ✓ Foundation HEO
- ✓ CARDIQUE



Research Activities

Initial visit to local communities around Cartagena

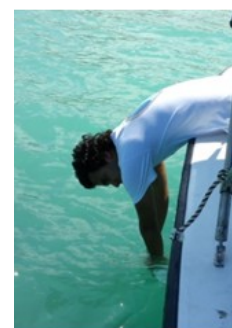
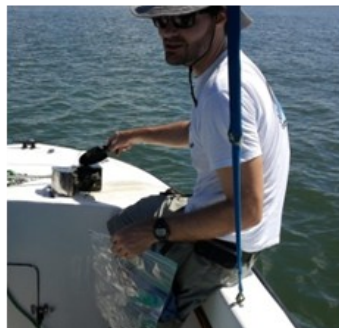
During the 19-21 of August, project participants visited the communities of Ararca, Santa Ana and Barú, and met with representatives of Caño del Oro. Coordinated by the Foundation Hernán Echavarría Olózaga (HEO), this initial visit allowed researchers the opportunity to get to know the communities and their environmental conditions while accompanied by Dr. Marco Rondón of IDRC. An initial collection of community information was



carried out through visits to local health clinics and schools, meetings with artisanal fishermen and surveys on public health. It was concluded that the project research would focus principally on the communities of Ararca and Barú, though all of the communities were noted for their interest to the project.

Monitoring of the marine waters and sediments of Cartagena

Researchers from EAFIT began the project's monitoring program of marine waters and sediments with monthly sampling sessions from September to December, 2014. The objective of the monitoring program is to assess the water and sediment quality with respect to its adequacy for the purposes of fishing, recreation and ecosystem health. Samples were taken from 16 stations in Cartagena Bay, Barú Point and "Playa Blanca" Beach for posterior analysis of various physico-chemical and microbiological parameters in the laboratories of Cardique, AguaCar and UniAndes. *In situ* analyses were also done using specialized equipment such as Castaway CTD, turbidimeter, pH-meter y O₂-meter. A series of 24 monthly sampling sessions are planned for the monitoring program.



Research Activities

Monitoring of fishes in the coastal zone of Cartagena



Researchers from UniAndes began the fish-monitoring program during the 10-13, October, 2014. The objective of monitoring is to assess the fish quality and population status by performing *in situ* analyses to determine the length-weight relationship, with the purpose of providing critical information for fishing, consumption and human health. With the collaboration of local fishermen, samples were collected from 4 stations in Cartagena Bay and Barú Point. These samples will be analyzed for population genetics and the accumulation of heavy metals in the laboratories of UniAndes.

Community intervention on public health in Ararca and Barú



On October 11th, 30th, and November 29th, researchers from the UNIMOL group of the University of Cartagena initiated a community intervention focussed on public health in the populations of Ararca and Barú. The 23 participating researchers included professors, PhD students, young researchers, medical interns and undergraduate medical students. This initial phase of the intervention included the identification of risk factors for water-related illnesses through personal surveys, inspection of living conditions and the collection of samples and data for the evaluation of sanitary indicators. Researchers were accompanied by the Foundation HEO and perceived an open and willing reception in the community to the activities of the BASIC Project. Persons identified with feverish symptoms were revisited 15 days later for follow-up to the diagnosis.

Capacity Building

Seminar on MIKE by DHI



aquatic environment, from seas and coasts to rivers and watersheds.

On September 26th 2014 in Bogota, BASIC project members participated in a seminar on the software of MIKE by DHI. The seminar included the latest innovations that integrate expertise, data and technology to provide solutions to a wide range of challenges related to the world of water with an emphasis on environment and health. MIKE products cover a wide range of needs in the field of modeling the



Capacity building of Naval School Cadets in water and sediment monitoring techniques

On October 24th 2014, the BASIC Project initiated capacity building activities on water and sediment monitoring techniques at the Admiral Padilla Naval School (ENAP) in Cartagena. This capacity building delivered to a group of cadets was focused on the

theory of the project's water and sediment monitoring program as well as specific techniques used for each parameter of analysis. With this theoretical background, the cadets will have the opportunity to put their knowledge into practice through participation in the BASIC Project's field sessions for water and sediment sampling.

PMI Project Management Fundamentals Training Course



The BASIC project manager, Marko Tomic, undertook a training course in project management fundamentals during the second semester of 2014. The online course is offered by the Project Management Institute (PMI), a world-leading developer of knowledge, standards and certifications in the project management profession. The knowledge gained from this course will be applied directly to coordination of the BASIC project and towards obtaining the Project Management Professional certification of PMI.

Events

BASIC Cartagena project launched at the climate change symposium LOTRED



The BASIC Cartagena project participated in the 3rd international symposium on climate change and human impacts in Central and South America (LOTRED) with the presentation of a poster on the new project. Hosted at Eafit University in Medellin, Colombia during 9-11 July 2014, the LOTRED event focussed on the importance of the region

in the dynamics of global climate at annual to millennial time scales. The event provided an opportunity to visualize a synoptic picture of the climate dynamics in the neotropics and to discuss new results in climate science.

Advances in Marine and Coastal Management in Colombia



The BASIC project participated in the conference on Advances in Marine-Coastal Management in Colombia, organized by the Iberoamerican Network in Integrated Coastal Management (IBERMAR) and the Colombian Oceanic Commission (CCO), held on September 16th, 2014, at the University of Cartagena (UC). At the conference, the Ministry of Environment and Sustainable

Development presented the environmental legislation related to the creation of Environmental Coastal Units (UAC) and their Management Plans (POMIUACS), established in Decree 1120 of 2013. Other participants included the Environmental Authorities (CARS) responsible for the country's UACs, which presented their current in support of the development of the POMIUACS.

VI Meeting for the Sea and the Coast



On October 8, 2014 in Santa Marta, BASIC project members participated in the 6th Meeting for the Sea and the Coast "Territorial, Marine and Coastal Management in the Governance Framework", hosted by Sergio Arboleda University with the support of the Ibero-American network of IBERMAR. Policy frameworks for the management of coastal areas were presented, along with the public perspective of governance through case

studies. Dr. Lucia Fanning of Dalhousie University (Halifax, Canada) presented on progress in the issue of effective marine and coastal governance in the Caribbean, describing multi-level work based on complete cycles of policy at local, national, regional and global scales as a joint strategy for decision making in complex contexts such as the Caribbean, given its ecological, social, and cultural diversity.



Interdisciplinarity to face climate change in coastal areas

A PhD researcher from Eafit University and the BASIC project received a travel grant kindly offered by the British Council and Sergio Arboleda

(Continued on page 6)

(Continued from page 5)

University to participate in a workshop on interdisciplinarity to face climate change in coastal areas, in Santa Marta on 18-21 November, 2014. The event led by Prof. Allan T. Williams (Swansea Metropolitan University, UK) and Prof. Camilo Botero (U. Sergio Arboleda) had the objective of bringing together early-career researchers from Colombia and the UK to build links and generate opportunities for future collaborations in research.

Awards & Recognition

Leaders of Colombia 2014 in Semana Magazine



In September 2014, Dr. Juan Camilo Cárdenas was named among the Leaders of Colombia 2014, a recognition granted by Semana Magazine, the Foundation of Leadership and Democracy, and Telefónica. The recognition cited his innovative teaching methods in economy, seeking to focus on reality which is very distinct from that presented in traditional texts. Dr. Cárdenas is a professor at the University

of Los Andes and leads the socio-economic component of the BASIC Project.

2014 Caracol Television Award for the Protection of the Environment



In October 2014, first prize of the Caracol Television Award for the Protection of the Environment has been granted to the conservation project of the *Crocodylus acutus* of local communities in Cispata Bay, San Antero, Córdoba. This project led by a group of 18 veteran crocodile hunters under the coordination of the biologists Giovanni Andrés Ulloa Delgado and Clara Lucia Sierra Diaz, who participate in the BASIC Project as

expert consultants. The *Crocodylus acutus* conservation project has progressed over the last 12 years in the consolidation of strategies for sustainable use and the conservation of wildlife.

Designation of the Colombian Academy of Exact, Physical and Natural Sciences



In December 2014, Dr. Juan Darío Restrepo A., research professor of the Department of Geology at EAFIT University and scientific director of the BASIC Cartagena Project, was named Correspondent Member of the Colombian Academy of Exact, Physical and Natural Sciences. His inauguration conference focussed on his research of over 14 years on the natural and human causes of erosion of the Magdalena River and was held in the main assembly hall of the Faculty of Mining of the National University in Medellín.