

In terms of inclusion, RedCLARA, through the ALICE2 project, has deployed enormous efforts to incorporate into its backbone those countries in Latin America which still cannot get connected to the world through the Advanced Internet network. Honduras in one of such countries, and it is within it that a deep movement –from the government and with the participation of higher education institutions- is being incubated to establish the first national academic network. The action is led by the Deputy Directorate of Science and Research of the Directorate for Competitiveness and Innovation belonging to the External Planning and Cooperation Technical Secretariat, SEPLAN, and we talked about this with Engineer Ivette Castillo de Colindres, its deputy director.

The Directorate of Competitiveness and Innovation at the Science and Research Deputy Directorate has led the conversations with RedCLARA over the last year in order to evaluate the possible (and longed for) connection of Honduras to advanced academic networks through RedCLARA. From your point of view, why is it important that Honduras gets connected to the Latin American advanced network?

There are currently no doubts about the importance of investing on research, science and technology as one of the strategies to support the social and economic development of countries. We are increasingly aware of the correlation between this type of investments and the advances in terms of development. However, the concrete achievements are neither sufficient to reach the desired level of development nor to overcome the breach that separates us from the more advanced countries.

In Honduras, despite economic difficulties there have been efforts not only to increase the

allocation of resources, but also to take advantage of both the human resources and physical capacities already available, focusing them in just one direction.

To this end we have created the CONSORTIUM of Universities, where all the country's universities (20 in total) participate. Together with SEPLAN, they aim to boost the creation and training, as well as the use and development of scientific and technological tools.

Within the context of the objectives established, the importance of becoming part of RedCLARA is evident, as it links over 1,000 universities across the region, provides connection to other supranational networks and to top-level scientific information. This will enable an extensive cooperation for the promotion of scientific and technological development at a national and international level, so that universities and research centres in the country establish links with the scientific community via communications through the same channel, and develop R+D+I processes, thus improving the quality and contents of the higher education level.

What are the steps that the Deputy Directorate of Science and Innovation is taking to accomplish such connection?

The process was initiated in January this year with a presentation to the Consortium by SEPLAN about the Network in general. Then, in February we were visited in Honduras by Dr Luis Furlán, Director of the RAGIE Network in Guatemala and President of RedCLARA, Rafael Ibarra, Director of the RAICES Network in El Salvador and Claudia Córdova, head of training and other RedCLARA activities. They had a first contact with the highest authorities from the universities and their Vice-Chancellors of Directors of Research, in order to study in depth technical, scientific and general aspects related to the future incorporation of the country into this Network.

Subsequently, with the aim of giving greater importance and dissemination to the work done by the Network, we carried out in June in the city of Tegucigalpa the 1<sup>st</sup> Half-Yearly ALICE2 Meeting and the Technical Course on Transition to IPv6 Mechanisms, organised by RedCLARA, with the support of SEPLAN and the José Cecilio del Valle University.

Since that date, there have been two more meetings, where proposals by juridical bodies have been submitted. These could give birth to the National Network and the interest shown by universities is great.

## How do Honduran universities evaluate the possible connection to RedCLARA?

Universities regard it as a very significant contribution; the physical installation and the implementation of functions do not represent a major challenge. Its financial sustainability does represent a major challenge, though.

According to the indexes reported by Index Mundi, Honduras (see: <a href="http://www.indexmu">http://www.indexmu</a> ndi.com/es/honduras/

) has a population of just over eight million inhabitants, has a literacy rate (people over 15 who can read and write) of 80% (thus ranked in the 143

position at a world level and only above Nicaragua and Guatemala in Latin America), a GDP of 33.63b (which places the country in the world's 103

position, barely above Paraguay and Nicaragua), and, up to March 2011 (according to a 2009 report) has a total of 731.700internet users. Given this scenario, what are the reasons that lead the Honduran government to focus human and economic resources, through your Deputy Directorate, in order to accomplish the implementation of a national academic network and through this the connection to RedCLARA?

In 2010 with a new approach for economic, social and political development, based on a well-planned process; the Decree N° 286-2009 establishes the "Law for the Establishment of a Country Vision and the Adoption of a Nation Plan for Honduras", and creates the Technical Secretariat for External Planning and Cooperation (SEPLAN). The role of SEPLAN emphasises the actions and initiatives in the organisation and funding of research projects and the strengthening of national competitiveness, through the regional competitiveness committees organised in each region, through a multidisciplinary approach that is capable of generating greater **cooperation** with the entrepreneurial sector, where the State is seen as a facilitator to favour the identification of strategic priorities for national development, collaboration in **innovation networks**, investment on R+D+I, training of human resources, and the public-private interaction. Since RedCLARA is a window of opportunities that, as already said, establishes links with the scientific community,

communicated through the same channel, developing R+D+I processes, and thus improving the quality and contents of the higher education level, it is a reliable tool for development.

What is the timescale you are considering for the creation of the national Honduran academic network and what are the steps you are following to accomplish the initial objective of generating such network and establish the physical infrastructure of advanced internet?

At the moment the CONSORTIUM is analysing a series of juridical levels which could serve as the basis for the conformation of the National Network. Once the universities make a final decision and undertake the commitment to participate in the Network, SEPLAN will support the elaboration of the document that seals the Network's creation. The documentation was handed in on August 3<sup>rd</sup> of the present year. We have already received feedback from some universities, and therefore we expect to draw up a summary with all observations over the next few weeks.

Do you think the organisation of the half-yearly RedCLARA and ALICE2 meeting in Tegucigalpa somehow contributed to the objective of creating the Honduran network?

It did not contribute to the creation of the Honduran network, but it did contribute to making more visible the importance of participating in it and the benefits that universities can obtain from their incorporation. It gave visibility to the network not only for universities, but also for the population in general.

Focusing fully on Hondura's connection to RedCLARA, when would you expect this to become a reality and what do you think Honduras can contribute to RedCLARA and vice versa?

I would expect it to become a reality this year, and among the contributions that Honduras could bring into the Network I could mention the capacities and the work done by some Research Institutions in the country, and which would be shared with the scientific community. An example is the Honduran Foundation for Agricultural Research (FHIA — See: News about the FHIA March 2007 No. 10), an entity which does research in the agricultural field and has obtained significant achievements in the genetic improvement of bananas, producing hybrids

(FHIA-17, FHIA-21, FHIA-23, among others) which are being used in more than 50 countries around the world, since they represent an excellent food alternative due to their high productive potential and low production cost. Another example is Hondura's National Autonomous University, whose School of Medicine has a Postgraduate in Neurology, which is a Pilot Programme at a global level and is the postgraduate with the greatest scientific production in Central America, with publications featured in globally renowned journals, such as Nature, Lancet Neurology, Brain, Epilepsia, etc. It has also developed educational guides approved at an international level for global use (See: Article in the Journal of Neurological Science 15/02/2007; volume 253 #1-2: pages 7-17). The other example is the Central American Astronomic Observatory at Suyapa, where research is conducted in the areas of astronomy, astrophysics, remote perception and archaeoastronomy, with applications in issues related to Land Use Planning, Management and Prevention of Natural Disasters. Other examples are the Regional Centre of the Atlantic Coast (CURLA) in the area of agriculture, the National School of Forestry Science (ESNACIFOR) in the area of forestry, the Pan-American Agricultural School (EAP), which aim its research towards entrepreneurial projection in agricultural issues and has managed to create improved species of seeds that are resistant to local plagues.

RedCLARA's contribution to Honduras will lie in its contribution to the development and improvement of the country's competitiveness, providing a tool which makes it possible to add and generate value, develop, disseminate and incorporate knowledge resulting from R+D+I activities of the different networks around the world.