

De CLARA

Cooperación Latino Americana de Redes Avanzadas

BULLETIN

54

March

2024

Ventanilla Abierta for Research

Second edition of
Ideatón BELLA II
promotes
innovation in
agri-food systems
in the region

Exceeding
expectations
and transforming
realities, LACNet
turns two years
old

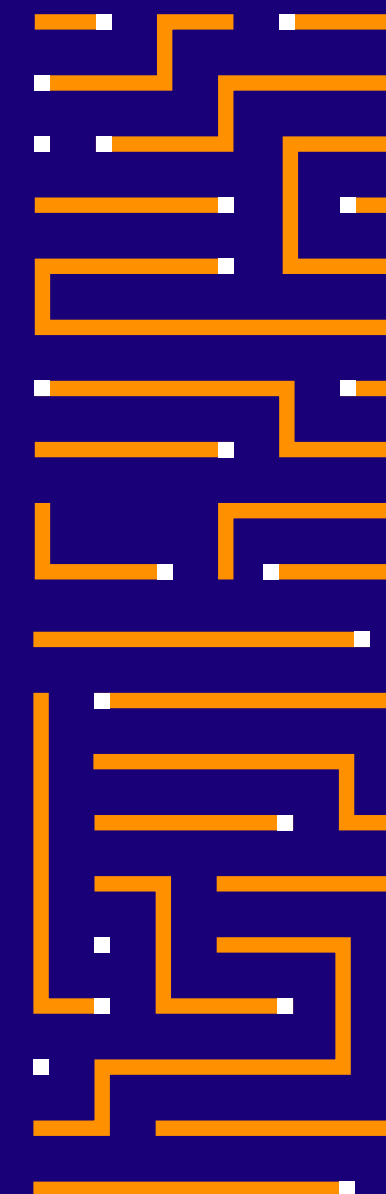
Red **CLARA**

Cooperación Latino Americana
de Redes Avanzadas



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Luis Eliécer Cadenas

Executive Director
of RedCLARA

The beginning of 2024 predicts a great year, in which RedCLARA will continue to set the pace in innovation, science and technology in Latin America and the Caribbean and promote human-centered digital transformation, hand in hand with national research and education networks (NRENs) and our strategic allies, such as the European Union (EU), international cooperation, academia, business and governments..

In just three months, we have already taken important steps, such as the signing of collaboration agreements on key issues for the region. We signed a Memorandum of Understanding with LifeWatch Eric, for the coordination and development of cooperation activities on Biodiversity and Ecosystems between Europe and Latin America and the Caribbean. In addition, we signed an agreement with the Dominican Republic Chapter of the Internet Society (ISOC-DO), to jointly continue promoting the creation of an NREN and the connection of that country to BELLA II.

We continue to support countries that aspire to greater connectivity and to generate valuable projects that change people's lives and bring socioeconomic development to their communities. We have made progress in working together to create national networks in Peru, the Dominican Republic and Trinidad and Tobago - as highlighted in some of the news items in this newsletter - without stopping in the rest of the countries.

We also promote collaborative activities to generate proposals to address the region's most pressing challenges. In the new BELLA II Ideathon, "Innovation of agrifood systems in Central America and the Caribbean," 12 groups composed of 125 experts from different sectors of the digital ecosystem, from 28 countries around the world, participated. The three winning proposals are focused on strengthening resilience and adaptation to climate change in agriculture, the livelihoods of farming families and collaboration between different sectors. In addition, we continue to advance the Copernicus Academy, within the framework of the EU-LAC Digital Alliance, so that data from the Earth Observation Program can be efficiently used in innovative solutions.

Recently, we launched a cutting-edge service: the "Ventanilla Abierta" for scientific research in Latin

America, which in a single virtual space provides access and support to researchers, scientists and academics, for the use of resources in areas such as network and connectivity, high performance computing (HPC) and identity services, among others.

Strengthening cybersecurity in national networks is also highly relevant in our work, which is why we participated in the EU-LAC Digital Alliance High Level Policy Dialogue on Cybersecurity in the Dominican Republic and, in alliance with the Latin American and Caribbean Cybercapabilities Center (LAC4) and with the support of the Cybersecurity Group of the RNIes of the region, EduLACSeg, we carried out the "Training for the Creation and Operation of CSIRTs in the academic sector", benefiting almost 60 organizations, represented by 85 registered participants from 18 countries. More than 30% were women.

There is much to highlight and celebrate, but I would especially like to emphasize the launch of our Gender Strategy. For our organization, women's leadership is not only fundamental, but is recognized and valued as an engine that drives ideas, collaboration and connectivity throughout the region. Therefore, we are taking a step forward to institutionalize and mainstream the gender approach within the organization and in our projects.

The relaunch of our DeCLARA Newsletter is also a sign of the momentum with which we will promote new initiatives this year to strengthen collaboration and open new channels of communication with our partners.

This is just the beginning and we are committed to contribute to the consolidation of the digital ecosystem and the closing of the digital divide, particularly through the BELLA II project, which we coordinate and which is financed by the European Union.

RedCLARA launches new service for e-Infrastructure resources

A new and efficient tool specially designed to improve knowledge and access to e-Infrastructure resources and to stimulate new collaborations in Latin America and the Caribbean is the "Ventanilla Abierta para la investigación científica en América Latina" (VA), a service recently launched by RedCLARA and developed in collaboration with the National Research and Education Networks (NRENs) of the region.

The Ventanilla Abierta aims to provide researchers, scientists and academics from universities and research centers in the region with access and support for the use of resources in areas such as networking and connectivity, high-performance computing (HPC) and identity services, among others. "Our goal isto meet the growing data and collaboration needs of research community in our region by working with the NRENs and its members," explains RedCLARA's Academic Relations Manager, Tania Altamirano.

Interested parties will be able to request connections to e-Infrastructure resources in Latin America and other regions of the world, support and advice on the use of network services and end-to-end connectivity, High Performance Computing (HPC) resources in collaboration with SCALAC (Advanced Computing System for Latin America

"Our goal isto meet the growing data and collaboration needs of research community in our region by working with the NRENs and its members".

Tania Altamirano

and the Caribbean) or other similar initiatives, and technical guidance or support for identity services implementations. "In addition, it will be possible to consult available services and tools, request support for the development, and the identification of peers at a global level", Altamirano points out.

To request this support, it is sufficient to access the web of the Initiative and fill in a form, through the RedCLARA website and, soon, through the website of each NREN.

"This service is very relevant, as it aims to promote international collaborations and accelerate research and education processes in the region, in addition to promoting the use and sharing of knowledge of e-infrastructure resources in different research areas," emphasized Martha Avila, coordinator of CUDI.



Mexico's advanced network is the first to have a local Ventanilla Abierta. Interested parties from other countries can go directly to the RedCLARA website and fill out a form to provide clear and specific information about their request. They will receive a response that will put them in contact, as appropriate, with their respective national network or members of our team that can provide the support they need.

All researchers, academics and/or scientists of any discipline (whether distributed across the continent - and/or collaborating with other regions of the world - or based in a single country) are invited to request technical support from RedCLARA's partner NRENs and from RedCLARA itself if they do not have an NREN in their country. All fields of knowledge/academia are welcome.

Access the Ventanilla Abierta:
<https://redclara.net/index.php/es/servicios-rc/ventanilla>



Get to know RedCLARA's Gender Strategy: Women leadership and participation

The implementation of a gender strategy is an imperative need for RedCLARA in the dynamic context of research and education in Latin America. Therefore, the regional advanced network officially launched its institutional Gender Strategy for the coming years in the framework of the celebration of International Women's Day, last March 8th.

The implementation of the strategy has a triple objective: to increase the representation and active participation of women in RedCLARA's activities and projects, to implement awareness and training programs to raise awareness about the importance of gender diversity and provide tools for its promotion, and to support the development of women's leadership within the RedCLARA community.

In this sense, the network seeks to take an essential step towards building a more just and equitable community and strengthen its position as a leader in promoting gender equality in the field of research and education in Latin America. "By recognizing and supporting the talent of women in the network, RedCLARA will not only enrich the quality of projects and decision-making, but will also set an inspiring example for other organizations, consolidating its commitment to excellence and equity in regional and international collaboration," explains Academic Relations Manager Tania Altamirano.

Among the actions planned to achieve this goal, RedCLARA will work to organize events that promote equitable participation, including panels and conferences with prominent female presence, collect and publish data disaggregated by gender to assess and improve representation in all RedCLARA initiatives and generate a working group with members of national networks for the joint development of actions in the region.

In the opinion of RedCLARA's executive director, Luis Eliécer Cadenas, the inclusion of diverse perspectives, particularly female voices, will significantly enrich the scientific and technological landscape. "Gender diversity not only strengthens the innovative capacity of the network, but also contributes to equity in participation, ensuring that female academics and researchers have equal opportunities to lead and contribute in a meaningful way. Creating an inclusive environment is not only an ethical responsibility, but also a key strategy to enhance the quality and relevance of collaborations in RedCLARA, by aligning the goals of the organization with the global values of equality and sustainability," concluded Cadenas.



To learn more about RedCLARA's Gender Strategy, please visit <https://www.redclara.net/index.php/es/colaboracion/estrategia-de-genero/conectando-a-traves-de-la-diversidad>

Second BELLA II Ideathon promotes innovation in the region's agri-food systems

Eight days of intense work, 126 participants divided into 12 working groups, 28 countries represented, 10 concept notes generated, and three winning "seeds" prepared for harvesting more efficient, inclusive, resilient and sustainable agri-food systems in the region. These were the main results achieved in the second edition of the BELLA II Ideathon, focusing on "Innovation in Agrifood Systems in Central America and the Caribbean".

The Ideathon took place in virtual mode from 29 February to 11 March, and was organized by RedCLARA, the BELLA II project and the European Union, with the support of the Food and Agriculture Organization of the United Nations (FAO), the German Technical Cooperation (GIZ), the Inter-American Institute for Cooperation on Agriculture (IICA), the regional academic blockchain network, LACNet, the advanced pan-European network, GÉANT, and the European Space Agency (ESA).

The triggering question proposed for the event was how to use advanced technologies of digital transformation (IoT, AI, advanced computing, 5G, Industry 4.0, Big Data, Web 3.0

and others) to transform agri-food systems and make them more efficient, inclusive, resilient and sustainable in the region? In the search of this answer, the event featured synchronous and asynchronous sessions, training and mentoring spaces and spaces for building final ideas, in charge of working groups made up of experts from different countries and sectors of the digital ecosystem, including universities, research centers, specialized international organizations, large research infrastructures, among others.

From Latin America and the Caribbean, experts from Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Mexico, Panama, Peru and Grenada will participate; from North America, the United States; from Europe, Italy and the Netherlands; from Asia, India; and from Africa, Cape Verde, Cameroon, Gambia, Kenya, Mali, Rwanda, Tanzania, Uganda, Zambia and Zimbabwe.

According to RedCLARA's Academic Projects Coordinator, Laura Castellana, the large number and diversity of participants prove the success of the initiative. "I can say that the



expectations of the Organizing Committee were far exceeded. We put out a call for participants from very important organizations, which resulted in the generation of 10 concept notes, from which we chose three winners. They were intense days of development, accompanied by an agenda of mentoring, lectures and conferences to build relationships and create development options for the region's agri-food systems," she said.

Focus on agri-food systems

The first edition of the BELLA II Ideathon was held in 2023, with the aim of developing proposals for using data from the EU's Earth Observation Program, Copernicus, to tackle the region's challenges. On this occasion, however, the focus was on food security. "We are all witnessing the effects of climate change and how it affects us in terms of food security (...) We want and believe that in this Ideathon we developed important solutions to these issues", emphasized IICA's Director of Digital Information and Communication for Agriculture, Emanuel Picado.

The European Union Ambassador to El Salvador and SICA, François Roudié, highlighted the importance of the Ideathon in view of the so-called European Green Deal, a package of strategic initiatives launched in 2019 that aims to put the EU on the path to a green transition, with the ultimate goal of achieving climate neutrality by 2050. "When we talk about the Green Deal, rather than a challenge, we see it

as an opportunity to redouble our efforts and build a new economic model that prioritizes sustainability and generates transformative changes not only at the European level, but also at the global level. Agri-food systems are fundamental to this vision", emphasized Roudié.

Thus, out of the 10 ideas presented to the jury, the big winner of the BELLA ideathon was Group 12, creators of "AgroIN4: INtegración INclusiva e INteligente de la INdustria 4.0 para el sector Agroalimentario sostenible en Centroamérica y el Caribe". The project envisages the integration of Industry 4.0 technologies to establish a knowledge management system, as a platform, to revolutionize the agricultural landscape, improving data acquisition, precision agriculture and resilience against the impacts of climate change, while being educational and enabling the empowerment of rural women.

The group was made up of Iván Armuelles Voinov (Panama), Johansell Villalobos Cubillo and Jazmín Calderón Quiróz (Costa Rica), Jaime Centellas (USA), Gabriel Barrientos (Guatemala) and Dianna Castillo García and Jesús Mariano Cahuana Aguilar (Peru). The winning group received two places to attend an event related to the theme, where they will present their proposal (including travel and accommodation).

Second place was awarded to Group 10, with a proposal for "Centros de Investigación y Monitoreo enfocados en la generación de estrategias tecnológicas para fortalecer los medios de Vida resilientes en familias campesinas del corredor seco de Centroamérica y el Caribe con Énfasis en la Desnutrición y Seguridad Alimentaria". The idea aims to create monitoring centers, using Geographic Information Systems (GIS) with in situ sensors and data transmission aimed at food biosecurity; these centers would be geared towards collecting data related to agricultural production, food security and crop health. This would allow farmers to make informed decisions and anticipate possible threats or crises.



In third place was Group 5, with the proposal "Interconnection of the agro-industrial ecosystem with integral solutions Platform or Observatory: Collaborative Planet Health (OSPC) for the Central American Dry Corridor, through technology, triple impact and regenerative economics". The idea of the OSPC is to be a space where players in the agri-technological innovation ecosystem interact, taking advantage of IoT, Big Data, Copernicus and other technologies, in the automation and optimization of agricultural production and responsible water consumption, with gender inclusion and under the guidelines of the European Green Deal, for better health and quality of life for people.

The second-placed group will receive five consultancies or mentorships to help them advance their concept note, and the third-placed group will receive training on relevant topics. As additional prizes, the first and second place winning groups will be able to continue working on their ideas at the next BELLA II Hackathon, and all the groups will be able to participate and be included in the "Digital Agenda 2024", an instrument to be built jointly by the Ideathon Organizing Committee to give immediate action to the ideas and make it possible to liaise with relevant actors.

In the opinion of GIZ's technical advisor, Leonel Tapia, this is the big challenge going forward. "The ideas were excellent, but there are many like these that emerge and then disappear. Based on this reflection, we thought it was important to expand

them and give them public value. The organizing committee will map out the concept notes, which will allow us to identify cross-cutting areas of work and solutions to be implemented with potential for expansion. This will allow us to create a development agenda that is sustainable over time, which we call the 2024 Digital Agenda", said Tapia.

GÉANT's International Relations Manager, Tom Fryer, noted that the Ideathon not only represents an opportunity to benefit the region, but an advance in the collaborative work of national research and education networks on these issues. "Historically, our role has always been to help education research. With events like this, we are reaching a new moment, reaching people who can contribute to developing tools and solving the problems we have", he said.

The choice of Ideathon theme is also in line with a historic moment of great confluence of efforts and projects to boost the region's development, such as the EU-LAC Digital Alliance and the BELLA II Project, which seeks to consolidate the digital ecosystem by expanding connectivity to countries that are not sufficiently connected. In the words of RedCLARA's Executive Director, Luis Eliécer Cadenas, this connectivity, however, cannot become an end in itself: "One of the main objectives of BELLA II is to develop coordination between the different actors in the region to promote the resolution of our society's problems and the Ideathons are a way of enabling this coordination", he concluded.



Exceeding expectations and transforming realities, LACNet turns two

It's often said that time is a relative measure and that what for some tasks may mean a short time, for others sounds like an eternity. For an athlete competing in a "short shot" competition, for example, milliseconds can make the difference between missing the podium and winning the world record. The same metric, however, does not apply to other activities, such as writing a report or constructing a building. What is the value of time when we think about major projects, that have the capacity to transform people's lives? How many seconds, days or years are enough for an initiative to mature and achieve its goals? The example of LACNet, which

orchestrates LACChain's blockchain networks, shows that a lot can be done in a short time.

The initiative celebrated its second anniversary on February 26 in a webinar that brought together experts and authorities from partner organizations to celebrate the achievements of the network, the result of an alliance between RedCLARA and LACNIC in collaboration with the IDB Lab, within the framework of the LACChain regional program.

In just two years, LACNet has already accumulated significant successes in its mission to implement Web3 for real life and inclusion, being

classified by the main entities of the ecosystem, such as Hyperledger, as one of the largest networks with public permission in the world; it enables a multi-purpose, production and enterprise-level network unique in the world. "Through the orchestration of a public and open infrastructure, we have been able to innovate and revolutionize the way formal and informal financial institutions grant loans, credit and opportunities; the evolution in terms of interoperability of certificates, academic credentials and skills certificates that facilitate work integration and access to better livelihoods; and the way farmers map out the processes for selling their crops, increasing the transparency and security of the highly confidential information they handle," explains the senior specialist at the IDB Lab and leader of LACChain, Alejandro Pardo.

Web3, of which Pardo speaks, is a set of technologies that represents a new milestone in the evolution of the Internet. Its main premise is the decentralization of the web, reinforced by concepts such as blockchain and digital tokenization, contrary to a scenario in which data and platforms are concentrated in Big Tech.

In this context, LACNet provides a reference blockchain infrastructure, with public permission, for projects in production with guaranteed scalability and impact on inclusion. It is a membership-based usage model that eliminates the high transactional and energy-intensive costs of other networks, with neutral and non-

profit orchestration, guaranteeing resilience and trust in a decentralized and open environment. In addition, it does not carry out data mining and is therefore environmentally friendly - with an almost zero carbon footprint - with the characteristics of a public good. This makes it possible for governments, universities, companies, NGOs and startups, among other sectors, to implement projects with the guarantees of use they need, implementing the governance of the Internet itself, guaranteeing neutrality and decentralization, while providing the confidence of being in line with the most demanding national and international regulations.

According to Oscar del Barrio, vice president of LACNet, the network has exceeded everyone's expectations. "During these two years, LACNet has shown remarkable development, becoming a world reference in the management of permissioned networks. The growing number of real use cases supported by the networks managed by LACNet in key sectors for the economic and social development of the region, such as the financial, health and education sectors, are just the basis of what is to come, with new projects that will generate more and more impact, boosting commercial relations in the region thanks to the reduction of administrative barriers; facilitating the relationship between companies and administrations; and helping to improve people's living conditions thanks to the development of the full potential of technology.

Impact on the lives of real people

Complex technological terms can often mean that less attention is paid to the positive impact LACNet has on people's lives. According to the initiative's own estimates, its work has already benefited more than nine million people in 18 countries through 104 digital solutions implemented on the platform, in more than seven different sectors. At least 82 of these solutions have a direct impact on vulnerable populations in the region. "LACNet enables solutions ranging from digital credentials such as diplomas, value chain traceability, transparency processes for public procurement or the issuance of tokenized assets," says Marcos Allende, LACNet's technical leader.

Among the outstanding projects implemented on the LACNet network is BloxTek, used by the Universidad Autónoma de Nueva León in Mexico, which has revolutionized the way it manages its official study certificates, diplomas and digital documents. Using blockchain technology, electronic documents have become fully verifiable (employers and other institutions can check their authenticity, in real time, without having to go to the issuer), immutable (records cannot be modified once issued, reducing the possibility of fraud), portable (students can share their electronic diploma with anyone they wish and publish it on professional social networks) and interoperable (certificates are issued

under BloxTek's highly accepted open standard). The process of receiving e-degrees on blockchain is done through an application and they are stored in a digital wallet.

Another important project developed at LACNet is Statwig, a supply chain optimization company centered on blockchain, which guarantees transparency and promotes trust between stakeholders. The company was founded with a dynamic and flexible vision to work with supply chains in various sectors to turn data into powerful insights and provide constant monitoring of the location and other restrictions of goods. Its main areas of focus are the traceability of medicines, food and vaccines, which are highly relevant to human health and nutrition.

According to RedCLARA's executive director, Luis Eliécer Cadenas, LACNet plays an essential role in the region's transformation. "LACNet is fundamental to the future of Latin America and the Caribbean. Blockchain can be a great tool for exchanging services, capabilities and solutions to the challenges our region faces, from issues related to issuing digital certificates, empowering student development, to food traceability, improving the lives of farmers," he said.

An initiative based on blockchain technology is also being developed within the regional advanced network and will operate on LACNet networks. This is the "Diploma", a project to issue and verify digital diplomas that

will serve as an essential facilitator for various processes of inclusion in the labor market, academic mobility and continuing education. This innovative project unites Latin America's National Research and Education Networks (NRENs) into a federated regional network for degree verification.

During its pilot phase, it brought together the NRENs of Brazil, Chile, Colombia, Ecuador and Mexico, with the technical support of LACNet and the coordination of RedCLARA, and focused on addressing important challenges for academic accreditation, such as facilitating the mutual recognition of degrees across borders, ensuring secure and real-time verification, combating the proliferation of fake certifications, establishing trust in credential issuers and compatibility with other reliable registries.

In essence, the project takes advantage of the blockchain's self-sovereign identity (SSI) layer within the LACChain network to manage the lifecycle of verifiable digital academic degrees. The result is a system that allows graduates to present and share their academic credentials via digital wallets and modernize their verification, creating a qualified and certified workforce that can access job opportunities without geographical limitations. By facilitating compatibility between different entities and establishing a strong Registry



of Trust, the Diploma Project seems not only to have simplified academic processes, but also to have created a sustainable business model for NRENs and academic institutions.

For Alejandro Pardo, LACNet was built on a vision that promotes inclusion and development. "We want to empower people. By giving them control over their credentials and digital tokens, they won't need to depend on third parties to exchange value between them and, with appropriate regulatory policies, they will be better covered and more protected. We want to promote accessibility; digital payment schemes, for example, will allow communities to generate credit histories and access loans while exchanging value. We'll do this while guaranteeing data privacy, as people won't have to rely on third parties to authenticate them," he emphasizes.

If before the launch of LACNet, anyone had said that the organization would achieve so much in such a short time, it would have seemed unbelievable. The orchestrated networks, however, are proof that every second counts when you work seriously, with high technology and the best interests of society at heart. "There is a

magnificent working environment that allows us to promote LACNet's path of continuous improvement as a blockchain network operator at the service of the Community, in an environment in which competition and cooperation come together and in which more and better business opportunities will be generated for all the actors involved," concludes Oscar del Barrio.



Accreditation as Category A Liaison in ISO/TC 307 Blockchain and Distributed Ledger Technology

One of LACNet's most important achievements during these two years of existence has been to have successfully completed due diligence and received unobjectionable approval to contribute to the development of international standards and promote their implementation in Blockchain and Distributed Ledger Technologies (DLT), demonstrating the necessary competence and experience for this purpose.

As a result, the ISO Committee Secretariat confirmed, during the Plenary in Montreal 2023, that LACNet has been qualified with "Category A Liaison" status, which allows the network to actively contribute to the development of blockchain standards, offering valuable knowledge, perspectives and best practices from Latin America and the Caribbean for a global impact. By having a seat at the table, LACNet can help shape the standards to meet the specific needs, challenges and opportunities of the region, ensuring that they are inclusive and relevant.

This accreditation also allows LACNet and its ecosystem to align their practices and protocols with internationally recognized standards. This guarantees users that their projects comply with international blockchain and DLT standards, enhancing their reputation and credibility, while ensuring that services meet internationally recognized standards of quality and accountability.

RedCLARA seeks new alliances in Peru

A delegation from RedCLARA, made up of the Director of International Cooperation, Academic Relations and Communications, Mark Urban, and the Manager of Links with Academic Networks, Cecilia Ortiz, visited Peru from March 4 to 8, with an agenda full of meetings and workshops to boost the formation of the country's National Research and Education Network (NREN) and present the benefits of connecting to the BELLA II Project, coordinated by the organization and funded by the European Union.

The "Peru Mission" visited three cities: Arequipa, Chiclayo and Lima. In the country's capital, Urban and Ortiz participated in two events where they were able to present the benefits of joining RedCLARA through a national network to government authorities, representatives of national organizations such as the National Telecommunications Program (PRONATEL), the National Research and Development Commission (CONIDA), the Ministry of Education (MINEDU), the Directorate of Regulatory Policies and Competition of the Ministry of Transport and Communications, the General Directorate of Telehealth, Reference and Emergencies of MINSAL (DIGTEL) and several universities in the region. "Discussions with the Peruvian authorities are progressing steadily and we are very pleased to see that there is great interest in forming the NREN in the country," said Mark Urban.

In Lima, the delegation also met with the Senior Advisor to the Office of the President of the Council of Ministers, Martin Köhne Fulchi, who showed great interest in including Peru in the BELLA II Project: "Peru would be of great importance for BELLA II, as it is the connection that would close the Latin American ring. We are still in talks and with good expectations that the organizations will agree to achieve this double victory: the creation of the Peruvian NREN and its addition to BELLA II," explained RedCLARA's Director of International Cooperation, Academic Relations and Communications.

After these meetings, the mission headed to the north of the country, more specifically to Chiclayo, in the Lambayeque region. "This is a key region for agricultural and industrial development in Peru. We gave a presentation with great interest from the public, which had the support and participation of the Chiclayo City Council itself, the Regional Education Management and other organizations and universities," said Cecilia Ortiz. During the visit, the delegation also met with the governor of the Lambayeque region, Jorge Pérez, who showed his interest in collaborating with RedCLARA to bring connectivity to the regions.

The idea is for the regional governments to support the formalization of the country's NRENs and the expansion of connectivity, both for education, science and research institutions, as well as for governments and the provision of services, among others.

The last stop on the trip was the city of Arequipa, where the regional network delegation met with José Quilcate, Head of the regional government's Registration Zone, who was also very interested in the connectivity offered by RedCLARA. A presentation to promote the formation of an NREN was held with institutions such as the National University of the Altiplano, the Andean University of Cusco, the Catholic University of Santa María, the National University of Cañete, the National Autonomous University of Huanta, the San Pablo Catholic University and, finally, a representative of the Arequipa Chamber of Commerce and Industry, who agreed to support the creation of the organization, not only for its formalization, but also to actively participate in the formation of the NREN. From Peru, the delegation continued its journey to La Paz, for a round of meetings with Bolivian authorities.



RedCLARA and ISOC-DO sign agreement to promote the creation of the Dominican NREN



RedCLARA and the Internet Society Dominican Republic Chapter (ISOC-DO) took an important step towards the creation of a National Research and Education Network (NREN) in the country, with the signing of a Memorandum of Understanding (MoU) on February 16, in the framework of the EU-LAC Digital Alliance High Level Dialogue on Cybersecurity.

The parties were represented by RedCLARA's Manager of Communications, Public Relations and International Cooperation, María José López (representing the Executive Director, Luis Eliécer Cadenas) and the President of ISOC Dominican Republic, Oswaldo Larancuent Cueto.

This is the second agreement signed by RedCLARA with organizations in the Dominican Republic for the creation of the local NREN. The first one was signed in November with the Ministry of Higher Education, Science and Technology (MESCYT), the Government Office of Information and Communication Technologies (OGCIT) and the Dominican Institute of Telecommunications (INDOTEL).

In the same spirit of promoting technical and technological cooperation, innovation and digital transformation at the national level, the agreement between RedCLARA and ISOC aims to establish a regulatory framework for cooperation mechanisms between the parties with the objectives of supporting and promoting the creation of the RNIE, supporting the process of dialogues carried out by RedCLARA in the context of the BELLA I project, and supporting



the articulation with the various stakeholders in the project - including universities, research centers, companies, NGOs and civil society- to ensure the best use of the capabilities that the project will provide.

According to RedCLARA's NRENs Liaison Manager, Cecilia Ortiz, the agreement aims to further the process initiated in November for the Dominican network to conform and join RedCLARA. "We are very pleased with the signing of the agreement, and throughout this process the Dominican Republic and its organizations have been a fundamental support. In the specific case of ISOC, they have an IXP, which is a connection point that we could use precisely to connect the country to RedCLARA", said Cecilia. D

uring the period of the MoU (12 months) ISOC-DO is also committed to work in the identification and articulation of stakeholders interested in RedCLARA and the BELLA II project, to promote the

development of research projects that make use of Advanced Networks, promote the participation of researchers, teachers and students all over the country in Working Groups and RedCLARA communities.

RedCLARA, in turn, will support ISOC-DO in the development of the activities and fields of action mentioned above and in the consolidation of the RNIE. In addition, it commits to providing ISOC and Dominican higher education and research institutions with access to the activities carried out by itself and its allies, in accordance with its statutes and in the context of the objectives of the MoU.

According to Cecilia Ortiz, the first actions under the MoU include events and webinars to promote the initiative coming in the next weeks and the expectation is that the network will be created and join to RedCLARA by the end of 2024.



Strategic Meetings and BELLA II Workshop in Trinidad and Tobago

From 29 to 31 January, a delegation from RedCLARA participated in high-level meetings in Trinidad and Tobago to explore the possibilities of the future formation of a National Research and Education Network (NREN), to discuss the connectivity of the country and the Caribbean, and the possible contributions of the organization within the framework of the BELLA II project.

The delegation was composed of the Executive director, Luis Eliécer, and the Liaison Manager of the RNIE, Cecilia Ortiz, who accompanied the Regional director of the European Commission's Directorate General for International Partnerships (DG INTPA), Félix Fernández-Shaw, to key meetings. In a meeting with Cory Belfon, Permanent Secretary of the Ministry of Digital Transformation, and the EU Ambassador to Trinidad and Tobago, Peter Cavendish, they discussed the process of implementing 5G technology in the Caribbean and the importance of data management and security.

RedCLARA delegates also met with representatives of the Caribbean Telecommunications Union (CTU), the Caribbean Community (CARICOM), the Ministry of Digital Transformation, the National Information and Communication Technology Company (iGovTT), and the CARICOM Crime and Security Implementation Agency (IMPACS).

RedCLARA representatives also visited the facilities of the Caribbean Industrial Research Institute (CARIRI) at the St. Augustine campus of the University of the West Indies to learn about important research projects, including innovation projects in fisheries and a platform that includes more than 160 organizations.

During these initial meetings, opportunities to link the Caribbean with the rest of Latin America and Europe through RedCLARA and

BELLA II were discussed, as well as other topics of interest, including the European Union's (EU) Earth Observation Program, Copernicus.

A workshop was also held to address these issues, highlighting the benefits of joining the regional advanced network, including services, working groups and NREN training models in the national digital ecosystem. The meeting concluded with an expression of intent to continue exploring opportunities together.

"Connecting Trinidad and Tobago to RedCLARA and BELLA II would bring significant benefits to all sectors, including academia, business and government. The BELLA II project is strategically designed to build strong national and educational networks, fostering greater connectivity and collaboration," said Luis Cadenas. "BELLA II is envisioned as an unprecedented effort to bridge the digital divide and promote digital transformation in all Latin American and Caribbean countries."

LifeWatch ERIC and RedCLARA: boosting science and research in Europe, Latin America and the Caribbean

The European Consortium for Biodiversity and Ecosystem Research Infrastructures, LifeWatch ERIC, represented by its CEO, Christos Arvanitidis, and the Latin American Cooperation of Advanced Networks, RedCLARA, represented by its Executive Director, Luis Eliécer Cadenas, signed a Memorandum of Understanding (MoU), for the coordination and development of cooperation activities to promote science and research in Europe and Latin America and the Caribbean.



Signed on December 2023, the agreement sets out specific lines of collaboration, such as the development of a common agenda for participation in key events, the generation of joint proposals for grants or lines of funding and reciprocal collaboration in virtual research laboratories, including access to MiLab, managed by RedCLARA, and Virtual Research Environments (VREs) developed by LifeWatch ERIC.

Recognising the different technical characteristics of the environments, the entities committed to generate specific agreements to ensure compatibility, especially in data loading, management and processing, so that the platforms and systems of both institutions were interoperable and facilitate the efficient flow of information, within the framework of the FAIR (Findable, Accessible, Interoperable and Reusable) principles in all shared data, services, VREs and other research products.

Regarding the blockchain, the MoU establishes that the entities will share knowledge, experiences and best practices to strengthen their capabilities and jointly advance in the adoption and adaptation of solutions that respond to the current and future needs of the scientific and technological community. The agreement endorses the shared vision of innovating and collaborating for a more secure, transparent and efficient data management.

Specifically, the commitment established is designed to analyse and study blockchain environments that the parties are currently promoting - "LACChain" by RedCLARA

and "LifeBlock" by LifeWatch ERIC -, to identify synergies, learning and collaboration points, through mutual development opportunities that allow them to optimise and enhance the use of this technology.

In addition, the MoU establishes the creation and strengthening of a Regional Training Platform for the technological tools and solutions offered by LifeWatch ERIC for Latin America and the Caribbean users.

One of the main areas of scientific collaboration will be centred on addressing the challenges associated with climate change, given the relevance of this problem in today's world. The agreement establishes a framework for scientific collaboration through advanced infrastructures focused on this issue, which will strengthen the research capabilities of both institutions and the scientific community in general.

To implement the lines of collaboration, a Monitoring Commission has been established, with two representatives from LifeWatch ERIC and two from RedCLARA.

Mexico and Costa Rica learned about the benefits of Copernicus program and academy

In order to inform the education, science and research communities of Mexico and Costa Rica about the benefits of the European Earth Observation Program, Copernicus, and explore the possibilities opened by the initiative for the entire region, including the Copernicus Academy, RedCLARA held the webinars "From the Skies to the Earth", on February 21 (Mexico) and March 12 (Costa Rica).

The events were organized in alliance with the National Research and Education Networks (NREN) of the respective countries, RedCUDI (Mexico) and RedCONARE (Costa Rica), and counted with the special participation of the Copernicus Global Supervisor and Community Manager, Stéphane Ourevitch.

In his talks, the expert gave a complete overview of the Program and its benefits for the region. "Copernicus monitors the Earth, its environment and ecosystems, helping us to prepare for crises, security risks and natural or man-made disasters. More than that, it has a comprehensive, free and open data policy, which transforms it into an economic development tool and

a driver of the digital economy", he explained.

The Program Supervisor also highlighted the functions of each of the Copernicus "Sentinel" satellites and how they allow the tracking of the Earth's surface, water masses and vegetation to obtain monitoring indices, such as vegetation indices (NDVI) or water and humidity indices (NDWI). He also added that one of the main objectives of Copernicus is to generate impact in the social, economic and environmental spheres, contributing to solve the challenges of the region and to encourage the promotion of new applications, local solutions, entrepreneurship and adapted technical developments.

Opportunity to deploy the Copernicus Academy

The webinars "From the Skies to the Earth" also addressed the initiative to deploy the Copernicus Academy in the region. Driven by RedCLARA and its member NRENs, the Academy is the local "arm" of the program in Latin America and the Caribbean, and has the overall objective of enhancing its universe of benefits.



Its specific objectives are the development of capacities and knowledge management for the adoption of Copernicus data in new sectors; the promotion of interdisciplinary training programs that promote new skills; the articulation of efforts to provide solutions to problems related to climate change, disasters, water and emergencies, and the visibility of successful experiences of implementation of the skills and knowledge developed and acquired with Copernicus Academy, to solve the needs of the region.

"This allows collaboration between the different actors of the digital ecosystem (universities, research centers, private organizations, government) in Latin America, the Caribbean and Europe, to develop capabilities and research. It also makes it possible to train researchers, scientists, professionals and entrepreneurs with the right skills to

take advantage of the full potential of Copernicus data and information services," explains the Academic Projects Coordinator of RedCLARA, Laura Castellana.

The Copernicus Academy's deployment work in the region was also highlighted at the EU Space Networks General Assembly, which took place in January in Brussels, Belgium. The meeting discussed the work of organizations and networks in the work of consolidation and dissemination of Copernicus (as Academies or Relays) and RedCLARA was the only Latin American network invited to participate in the event, represented by Laura Castellana.

RedCLARA promotes capacity building to combat cyber threats

RedCLARA participated in several events and led workshops related to the topic in the first months of 2023 with the aim of contributing to the dialogue on how to tackle cyber threats and empower the region's academic sector in its fight against them.

The regional network's Services Manager, Carlos González, was one of the experts invited to the High-Level Policy Dialogue on Cybersecurity of the EU-LAC Digital Alliance, held from February 14 to 16 in Santo Domingo, Dominican Republic. On the panel "Building Cybersecurity Workforce in the LAC region", he highlighted the work of the Cybersecurity Group of RedCLARA member National Research and Education Networks (NRENs) and its contribution to meeting the challenge of closing the gaps in cybersecurity skills and competencies.

"In addition to the shortage of specific skills - it is said that there may be a shortage of 400,000 to 700,000 information security professionals in the region - I believe there is a lack of awareness about what information security really is. In

the region's NRENs, we are working to address this issue, through cybersecurity groups that work together to achieve results. Our efforts focus on integrating academia into decision-making and replicating best practices throughout the region," explained González.

The event was attended by more than 150 high-level government representatives from Latin America and the Caribbean, the European Union and its member states, as well as civil society, academia and the private sector, and aimed to promote the exchange of knowledge and experiences in cyber security in order to agree on joint initiatives and establish a preliminary work plan for the EU-CELAC Summit to be held in 2025.

González was also one of the experts invited to the First Cybersecurity Conference at the University of Querétaro, held in hybrid form on February 21, and to the TEC24 International Cycle of Conferences at the Juan Misael Saracho Autonomous University, on February 22 and 23. On both occasions, he highlighted the role of universities, higher education



institutions and national research and education networks working together to tackle the multiple challenges related to the issue: "Our region faces similar challenges: the scarcity of human and financial resources, the lack of common standards, guidelines and policies, and the need for training. Based on our experience at RedCLARA, we see that collaboration between different actors in the academic sector is the key to mitigating many of these problems," he explained.

CSIRT training with the support of LAC4

Between March 11 and 14, RedCLARA, in alliance with the Latin American and Caribbean Cyber Capabilities

Center (LAC4) and with the support of the region's NRENs Cybersecurity Group, EduLACSeg, held the "Training for the Creation and Operation of CSIRTs in the Academic Sector". The course was held virtually, with the aim of facilitating training and raising the maturity of the region's academic Cybersecurity Incident Response Centers (CSIRTs). The initiative benefited around 60 organizations, represented by 85 participants from a total of 18 countries.

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