



ENLACE

Enhancing Scientific Cooperation between the European Union and Central America

Fortaleciendo la cooperación científica entre la Unión Europea y América Central

DELIVERABLE REPORT

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EXECUTIVE SUMMARY

The following proceedings give account of the discussions held around the priorities presented by the Caribbean and Central American researchers and the EC policy actors during the seminar “EU, Caribbean & Central America cooperation in Research and Innovation” which took place in Brussels on October 2011. The seminar aimed at fostering cooperation in Research and Innovation among Europe, the Caribbean and Central America through a series of discussions and consensus building among European Commission officers and other Research and Innovation stakeholders from these regions in themes such as KBBE, Energy, Environment and ICT and the Joint Initiative for Research and Innovation. The outcome of this event provided the Caribbean and Central American research officers with a better understanding of the research priorities from the participating EC officers and integrated them into future plans of mutual interest between EU and the Caribbean, thus laying the groundwork of long term perspectives of bi-regional cooperation in R&I. The final part of this document presents some points of discussion that can be taken as ideas towards further recommendations on the match making priorities. This document is in fact set to contribute to the final version of the Position paper of R&D&I priorities match making for the Caribbean and Central American region.



1. INTRODUCTION

As part of the overall strategy of ENLACE and EUCARINET priorities setting for S&T cooperation, a discussion aimed to find such common research priorities and cooperation progress at the policy level between EU and the Caribbean was to be set. These priorities will be crucial to the long term perspectives in RTD on the region. In order to meet this objective, the seminar on "EU, Caribbean & Central America cooperation in Research and Innovation" was held in Brussels on October 2011.

The Seminar, jointly organised with the EUCARINET project aimed at fostering cooperation in Research and Innovation among Europe, the Caribbean and Central America through a series of discussions and consensus building among research officers from these regions, European Commission officers and other Research and Innovation stakeholder and in line with the "Road Map to implement the EU-LAC Joint Initiative for Research and Innovation which corresponds to the S&T part of the EU-LAC Madrid Summit Action Plan"¹ set by the EU/LAC Senior Official Meeting of the four thematic Working Groups on bioeconomy, including food security; biodiversity and climate change; ICT for meeting societal challenges; energy.

This event represents the "top-down" chapter of a broader exercise that ENLACE will run based on the Central American "regional position paper" in order to validate the priority areas in the perspective of mutual interest and benefit. This event followed two previous bi-regional Experts' dialogues where an exchange of ideas, trends and strategies between EU and CA has established the basis for this discussion. In fact, the First Experts' Dialogue in Athens, on the 11th June 2010 and the second Experts' Dialogue in Santo Domingo, on the 7-9 March 2011, opened the gate to the identification and definition of research lines and scientific priorities that paved the way to new cooperation opportunities and enabled access to cooperation opportunities to countries with low or no participation in European Programmes.

The following proceedings give account of the discussions held around the priorities presented by the Caribbean and Central American researchers and the EC policy actors. The event provided the Caribbean and Central American research officers with a better understanding of the research priorities from the participating EC officers and integrated those into future plans of mutual interest

1 For further information on the EU-LAC joint initiative please visit http://www.consilium.europa.eu/uedocs/cms_Data/docs/pressdata/en/er/114540.pdf

between EU and the Caribbean, thus laying the groundwork of long term perspectives of bi-regional cooperation in R&I. Methodologically speaking, the event was divided into four main slots during the morning dealing with specific themes related to the R&D EU policy status and forecast:

- The first slot, explained the International Dimension with respect to Innovation and the EU-LAC Joint Initiative for Research and Innovation (JIRI)
- The second part was dedicated to the International Cooperation of specific relevance for Central America and the Caribbean: state of the art, opportunities for innovation and private sector implications (KBBE, Energy, Environment and ICT)
- The third, on the synergies among LAC International Cooperation projects
- The fourth and last, on two summary reports on the Caribbean and Central American initiatives Research and Innovation priorities found so far.



International Seminar "EU, Caribbean & Central America cooperation in Research and Innovation"
Brussels, October 5th 2011

To meet this agenda, the following experts participated as keynote speakers:

| Expert name | Organisation |
|-------------------------|-------------------------------------------------------------------|
| Cornelia Nauen | EC DG Research & Innovation, International cooperation |
| Paul Vossen | EC DG Research & Innovation, International cooperation |
| Pierre Antoine Vernon | EC DG Research & Innovation, Energy |
| Nikolaos Christoforides | EC DG Research & Innovation, Climate change and natural hazards |
| Ardiel Cabrera | EC DG Information Society |
| Maria Angeles Macías | EULARINET coordinator, Ministry of Science and Innovation (Spain) |
| Henning Jensen | UCR – University of Costa Rica |
| Joseph Williams | CARICOM |

The final part of this document presents some points of discussion that can be taken as ideas towards further recommendations on the match making priorities. This document is in fact set to contribute to the final version of the Position paper of R&D&I priorities match making for the Caribbean region.

2. GENERAL INTRODUCTORY REMARKS ON EU-LAC COOPERATION IN R&I²

As means of introduction to this event, Cornelia Nauen presented the future research cooperation opportunities by paving the way to bringing Latin American and Caribbean countries stronger into the Joint Initiative for Research and Innovation (JIRI). The context where this initiative was born, is based on the following meetings and agreements:

- 1999: The first EU-LAC summit in Brasilia;
- 2002: EU LAC S&T ministerial in Brasilia – A shared vision and an action plan;
- 2004: The Guadalajara Summit fixes the objective to create an EU-LAC knowledge area; Today it has become a bi-annual meeting. At that moment, we only talked about the European Research Area not EU-LAC knowledge area;
- 2008: The lima Summit addresses key societal challenges requiring research, policy dialogue and innovation: climate change, biodiversity, social inclusion;
- 2010: Madrid summit on Science, T & I for sustainable development, social inclusion endorsing the JIRI.



Today, S&T has become one of the central themes of the political summits and R&I is no longer reduced to a technical issue but a building block to tackle societal challenges in the future. To this end, several activities towards implementing the EU-LAC knowledge area have been deployed such as the Promotion of LAC participation in EU FPs,

² By Cornelia Nauen and Paul Messer, European Commission DG Research & Innovation, Cornelia Nauen –DG Research & Innovation International STI cooperation policy: Cooperation,



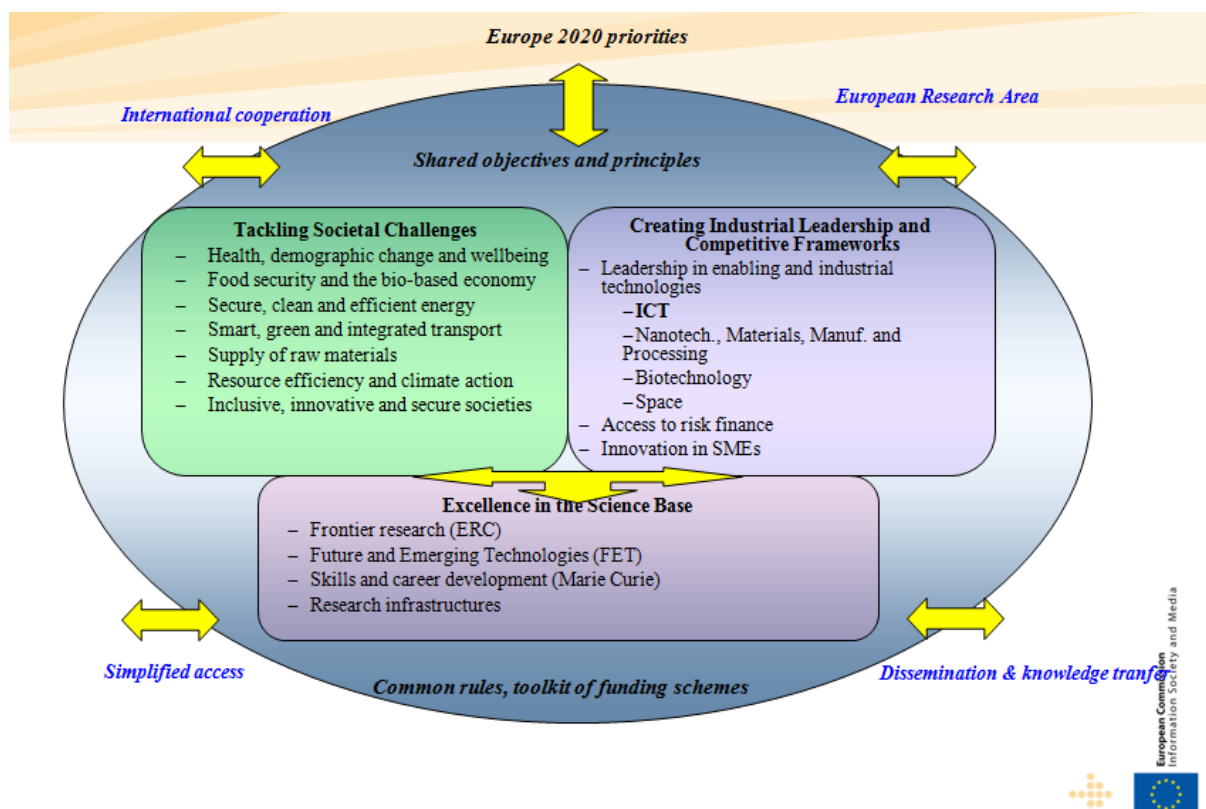
through INCONETS. Also, immediately after publication of the Work Programme 2012 of FP 7 in July, two videoconferences connected about 100 hubs across Latin America to highlight opportunities for cooperation available in PDF on the INCO website. These INCONETS are helpful as means to make the EU-LAC knowledge area a reality. In addition, regional programmes for S&T capacity building and academic exchange outside FP7 such as ALFA, ALBAN, @LIS, Caribbean component of the all-ACP project on S&T capacity are also relevant. Although these latter being more technical programmes, they are encouraged to find a way to join forces to generate better outcomes. Other opportunities for innovation can be generated as well through the AL-INVEST initiative as the private sector and SMEs evidence a big potential for future R&D and innovation projects. Bilateral S&T cooperation agreements with EU and with individual EU Member States are also encouraged.

The LAC knowledge area is a 10-year old concept. However, today it enjoys a fresh momentum through the EU-LAC JIRI. As part of the EU owns objective EU Horizon 2020, the LAC knowledge area works on an innovation union open to the world placing emphasis on international cooperation with three major thrusts:

- strengthen scientific excellence
- accelerate solution to global societal challenges
- contribute to foreign policy objectives.

In this sense, the EC wishes to keep the forthcoming FP open to all in order to promote international cooperation particularly with major regional partners and entire regions. Today, FP7 is the principal instrument to develop international policy. Moreover, the next Framework Programme - (Horizon 2020) will incorporate CIP programme (DG enterprise), as a big concentration push towards innovation. There will be a high concentration on issues transversal to societal changes and less on projects (see table below). However, concentration does not mean excluding smaller countries/partners. Therefore, it is important not to equate "strategic" with the exclusion of small countries/regions.

Horizon 2020 – Objectives and structure



Source: European Commission 2011

Moreover, the EU LAC Senior Official Meeting (SoM) held in March 2011 agreed on a road map to respond to the mandate of the summit. The senior officials also agreed to enhance bi-regional cooperation by focusing initially on the following pilot activities (for which working groups have been established):

- Bio-economy including food security;
- Biodiversity and Climate Change;
- ICT for meeting societal challenges;
- Renewable energies.

So far, all Working Groups have started to meet and will release their initial reports. The Working Groups are co-led by one country of each region (see



table below). I.e., the leading countries in Latin America for the different themes are Argentina (Bio-economy), Colombia (Biodiversity and climate change), Chile (ICT) and Mexico (Renewable energy and funding). At the same time, the roadmap to implement the EU-LAC JIRI has been adopted with explicit reference to the supporting role of the INCONETS.

EU-LAC SOM working groups

| Working group on pilot activities | LAC participants | EU participants |
|-------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Bio-economy including food security | Argentina, Bolivia, Colombia, Costa Rica, Guatemala, Mexico, Nicaragua, Panama | France, Spain, Germany, Malta |
| Biodiversity and climate change | Colombia, Peru, Mexico, Expert participation: Argentina, Chile, Costa Rica, El Salvador | France, Finland, Spain, Germany with expert observers |
| ICT for meeting societal challenges | Chile, Nicaragua, Peru, Uruguay, México, Colombia | Finland, Spain, France, Germany with expert observer (tbc) |
| Renewable energy | Mexico, Argentina, Exerts participation: Nicaragua, Brazil, Peru, Costa Rica | Spain, France, Germany with expert observers |
| Funding and good practice | Mexico, Argentina, Dominican Republic | Portugal |

Source: EC as of 27 September 2011

3. INTERNATIONAL COOPERATION IN AREAS OF SPECIFIC RELEVANCE FOR CENTRAL AMERICA AND THE CARIBBEAN



This session was dedicated to the identification of research expectations by the European Commission on the key priority areas for the Central American and Caribbean region. In this line, four main topics were discussed: Energy, Environment (including climate change), KBBE and ICT.

ENERGY³

The EU Strategic Energy Technology Plan (SET plan) bases its strategy on the achievement of the EU energy and Climate Change targets by investing in R&I through a joint strategic R&I planning between the EU the EU Country's Ministries, the Industry, the research community and the European Commission. The main action lines for the effective implementation of the SET plan are the following: European industrial initiatives (EIs) <http://setis.ec.europa.eu/activities/initiatives> and the European energy research alliance (EERA) <http://www.eera-set.eu/>. In parallel, other existent Public – private partnerships (PPP) have been developing ongoing initiatives such as: the European Wind; Solar Europe, Bio-energy Europe; European electricity grid, European CO2 capture, transport, and storage; smart cities; sustainable fission. These initiatives will be the focus of the EU research efforts for the Working Groups in the years to come.

The EU Strategy in Energy R&I – the SET-Plan

³ By Pierre-Antoine Vernon, European Commission, DG Research & Innovation, Energy.

New Public-Private-Partnerships



[European Wind Initiative](#)



[Solar Europe Initiative \(PV and CSP\)](#)



[Bio-energy Europe Initiative](#)



[European Electricity Grid Initiative](#)



[European CO2 capture, transport and storage Initiative](#)



[Sustainable fission Initiative \(GEN IV\)](#)



Smart Cities



[Existing PPP Initiatives](#)

- [Fuel Cells](#), [Hydrogen JTI](#), [Energy Efficient Buildings](#)- Green Cars

Source: EC DG Research and Innovation Energy. 2011

The International cooperation chapter within the Energy Theme is focused on the priorities of the SET plan. Some specific bilateral actions with the Latin American – Caribbean region have been implemented. The table below describes the different types of research collaboration ongoing.

FP 7 International Cooperation Specific Bilateral actions with Latin America and the Caribbean

| | | |
|---------|-----------|-----------------------------------------------------------------------------------------------------------------|
| DIBANET | 2009-2012 | The Production of Sustainable Diesel-Miscible-Biofuels from the Residues and Wastes of Europe and Latin America |
| BIOTOP | 2008-2010 | Identifying research needs and technological opportunities for biofuels production in Latin America |
| BIOREMA | 2008-2010 | Reference Materials for Biofuel Specifications |

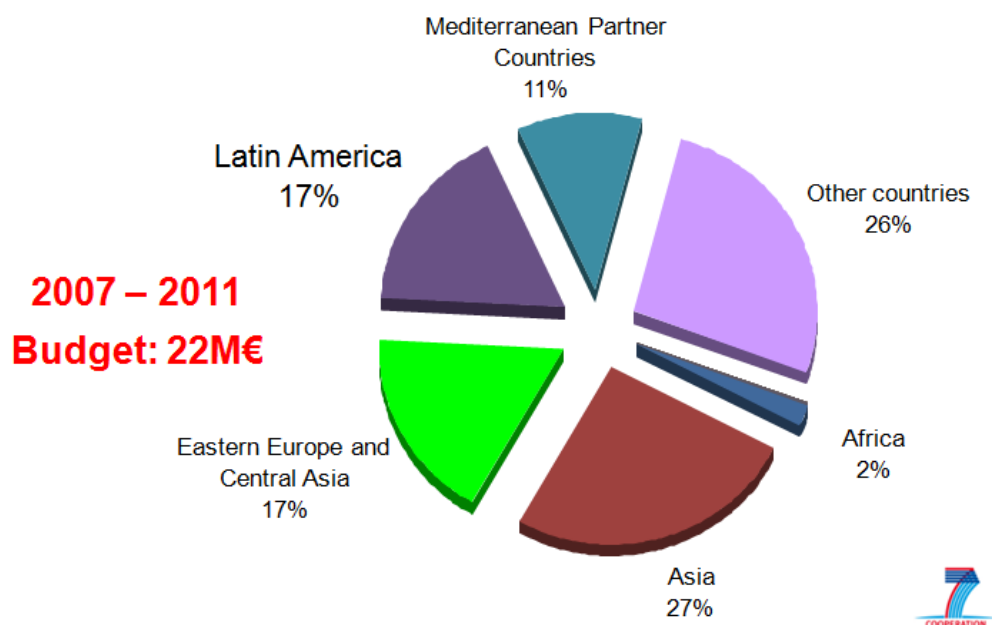


| | | |
|-------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------|
| CANEBIOFUEL | 2009-2011 | Conversion of Sugar Cane Biomass into Ethanol |
| INNOVASOL | 2009-2012 | Innovative Materials for Future Generation Excitonic Solar Cells |
| SETATWORK | 2008-2010 | Sustainable Energy Technology at Work: Thematic Promotion of Energy Efficiency and Energy Saving Technologies in the Carbon Markets |
| BABETHANOL | 2009-2013 | New feedstock and innovative transformation process for a more sustainable development and production of lignocellulosic ethanol |

Source: EC DG Research and Innovation Energy. 2011

So far, the LAC region has been a major beneficiary under the FP7 programme under the chapter of International Cooperation “general opening” feature. Moreover, there has been 1 coordinated call, 3 SICAS and 4 targeted openings for the LAC region whose main focus has been on renewable fuels and energy efficiency. On this regard, third countries received funding of 22 million €, majorly Brazil, Mexico, Argentina, Costa Rica, summing up to 17% of the EC budget.

FP 7 International Cooperation Statistics of EU-LAC cooperation 2007-2011



Source: EC DG Research and Innovation Energy. 2011

The Goal for future is to strengthen EU-LAC cooperation in the frame of the SET plan which should be continued in Horizon 2020 (although some potential changes might have to be taken into account after the Senior Official Meeting in march 2012). Within Horizon 2020, the SET plan objectives will fall under the societal challenge "Secure, clean and efficient energy"⁴.

INFORMATION AND COMMUNICATION TECHNOLOGIES⁵

The aim of ICT on International cooperation initiatives are to support the European competitiveness initiative as well as to jointly address issues of common interest on ICT within the target region, in this case, LAC. The ICT Working Programme 2011-12 will jointly respond to major global technological challenges by developing interoperable solutions and standards. As for the International cooperation participation possibilities, the EU Member States & Associated countries, including the partner regions such as LAC have been increasingly gaining momentum. So far, the LAC countries have participated 161 times in FP7 and this participation has been gradually increasing in the two last FP editions (FP6 to FP7). The EU contribution in FP7 for the Caribbean region has been so far of 195.949 €

⁴ For more information on the SET plan : www.setplan2011.pl.

⁵ Adriel Cabrera, European Commission, DG-INFOS.

Central America and Caribbean Participations in ICT and eInfrastructures

| | FP6 total | FP7 so far |
|------------------------|-----------|------------|
| CENTRAL AMERICA | | |
| COSTA RICA | 1 | 5 |
| PANAMA | 0 | 2 |
| GUATEMALA | 2 | 1 |
| HONDURAS | 0 | 1 |
| | 3 | 9 |
| CARIBBEAN | | |
| CUBA | 1 | 3 |
| DOMINICAN REPUBLIC | 0 | 2 |
| JAMAICA | 0 | 2 |
| | 1 | 7 |

Source: European Commission DG Information Society and Media International Relations Unit. 2011

Moreover, new means such as the Specific International Cooperation Actions (SICA) or Targeted openings have also become alternative initiatives. Some thematic projects supporting EU-LAC cooperation were mentioned as past and

present examples: FIRST, FORESTA, Pro Ideal Plus, Euroafrica ICT, WINDS-CARIBE, SALA+.

As for the future plans, the new opportunities under ICT Work Programme 2011-12 will seek to find EU-LAC ICT focal areas on themes such as: E-inclusion, E-Health; Intelligent Transport systems; Living Labs as well as horizontal actions to foster the International partnership building & support to dialogues. Finally, within Horizon 2020, ICT will be considered as part of the 3rd pillar "Creating industrial leadership and industrial technologies"

ENVIRONMENT⁶

INCONets are useful tools for dialogue between EC officers and experts from 3rd countries and EU. The INCONets bottom up structure does not replace government institutional dialogue, but nonetheless gives an extra voice to researchers. Because of its transversal and cross cutting importance, the environmental theme fits easier in the logic of cooperation than in other areas where industrial issues are prevalent. Environmental problems are of common concern, e.g.: Climate Change. The Environmental Programme is supported by 4 main pillars: Climate Change, pollution and risks, sustainable management of resources ("Ecosystem part"), Environmental technologies and Earth observation and assessment tools for sustainable development. The Environmental Programme was one with the **highest International Cooperation participation rates** (Highest EU Funding received by 3rd countries). Dedicated calls on Africa were issued two years ago were leading projects but last year the LAC region became a focus region.



Nikolas Christoforides DG Research & Innovation, Climate change and natural hazards

The outcome of the dialogues with the concerned countries, either bilateral or biregional, may orient the drafting of future work programmes and also raise

⁶ Nikolas Christoforides DG Research & Innovation, Climate change and natural hazards.



capacity building through other resources such as advisory groups. International topics are the result of new international dialogue mechanisms to a great extent. Under the Horizon 2020 the environment chapter will be covered under the societal challenges as a cross cutting issue.

KNOWLEDGE-BASED BIO-ECONOMY

Knowledge-Based Bio-Economy (KBBE) plays an important role in creating economic growth and in formulating effective responses to pressing global challenges. Over the last few decades, the major economic driving forces behind the KBBE in Europe included the increasing demand for a sustainable supply of food, raw materials and fuels, as well as recent scientific progress. The European Commission (Directorate General Research) has developed the concept of KBBE in 2005 with the aim of reaching excellence in science, technology and industry to deliver innovation. In parallel, an EU cluster policy, including bioclusters, to support KBBE has been developed by the DG Enterprise and Industry. DG Research and Innovation has set the terms for the agro-food, bioenergy, bioprocessing, marine biotech etc. sectors as follows: "The KBBE within FP7 focuses on the agro-food, bioenergy, bioprocessing, marine biotech etc. sectors and typically excludes health applications of biotechnology.

In 2008, **The European Cluster Policy Group (ECPG)** was formed by the Commission to strengthen the quality of cluster programmes across Europe, and a Commission Decision was published. This independent expert group was tasked to improve policy responses in support of cluster excellence, and make recommendations on how to better design cluster policies in the Community. Following this first initiative, policy suggestions have been categorized under six themes: KBBE aspects, funding, incubators, technology transfer, cluster organisations, and entrepreneurial culture.

The main points under each policy recommendation highlighted are listed below:

1. **KBBE Aspects:** For supporting the further development of bioeconomy in Europe,
2. **Funding:** In order to cover the major funding gap existing in all KBBE sectors, it is first suggested to make existing funding on the market more accessible. Then, it is crucial to create new funding resources and attractive funding mechanisms for the entrepreneurs and investors.
3. **Incubators:** In order to increase the efficiency and the awareness of the importance of incubators, it is suggested to create new added value on incubators
4. **Technology Transfer:** To stimulate the innovation, the technology transfer process should be revised and eased.
5. **Cluster Organisations:** In order to bring cluster organisations to the excellence level

6. **Entrepreneurial Culture:** In order to stimulate the entrepreneurship and revert the risk averse culture dominating the EU

At the sub-national level, biotechnology is developing under several forms such as **biotech parks, bioclusters** and bioregions. The main factors which have been identified to be essential for the growth of bioclusters and for the successful development of bioregions are the following: the awareness at regional level of the importance of the local economic development, the consequent allocation of the necessary resources and means for this purpose, and the willingness of the regional policy makers and politicians to bring this subject into the agenda at national and EU level. Moreover, the regions with strong political commitment and local cluster policies in-place are found to have strong bioclusters, a factor that plays a pivotal role in boosting the region's economic growth and job creation.⁷

3. SYNERGIES AMONG LAC INCO-NETS⁸



Angeles Macias – EULARINET project

ENLACE, EUCARINET). Common partners such as CIRAD; CONACYT (Mexico) play also an important role as content facilitators and connectors.

Synergies need time to be established but are of extreme importance for complementary support and collaboration in the region and in INCONET projects. As a positive outcome, teamwork will produce an overall better result than each person individually and also different complementary skills can be attained in the form of human synergies. It is therefore key to focus on existing INCONETS today (11 bi-regional INCO-NET projects) and specially those involving LAC (EULARINET,

In this sense, INCONETS are platforms bringing together policy makers and stakeholders of one target region with the EU to:

⁷ <ftp://ftp.cordis.europa.eu/pub/fp7/kbbe/docs/regional-biotech-report.pdf>

⁸ Maria Angeles Macias Garcia – EULARINET project.



-
- Establish a dialogue to identify S&T priorities for mutual benefit and interest and define cooperation policy orientations;
 - Implement specific activities to promote and contribute to the participation of the targeted regions/countries in the Framework Programme;
 - Carry out strategic analysis on S&T trends and mapping competences in the UE and the targeted region
 - Monitor and review activities in view to provide feedback and update S&T policies and priorities

As for the impact of the JIRI road map on the specific case of the EULARINET project, the following has been achieved: Action plan item to establish a regular bi-regional dialogue on Science, Research, Technology & Innovation; EULARINET SOM "working groups" workshops; EULARINET concentrated efforts to provide input for the following Working Groups: ICT June 2011 Chile; KBBE September 2011 Paris; Renewable energy August/Sept 2011 and Biodiversity and CC: Colombia 2011

Moreover, within the framework of EULARINET, the activities that have encouraged synergies with thematic related projects have been:

- ICT workshop in June Chile together with FORESTA and CHIEPII and MACHI, PROIDEAL PLUS
- Last workshop on KBBE in Paris in 27th-28th September with ALCUE KBBE project.
- Neglected infectious diseases workshop in Lima September 2009
- ILN INCONETS INDICATORS workshop October 7th and 8th 2009 in Madrid Spain
- Stronger accent on links and interactions needed for improving the impact of investments with the knowledge triangle (education, research and innovation)
- Address the whole innovation cycle including the knowledge transfer and valorization;
- Better policy coordination within the commission.



4. REPORT FROM CENTRAL AMERICAN AND CARIBBEAN REPRESENTATIVES: PRIORITIES FOR THE REGIONS

As means of preliminary conclusion and to roundup of the priorities top down overview, the session presented a summary of the findings produced so far by the two projects, EUCARINET and ENLACE following the discussions and workshops on thematic areas organized in Central America and in the Caribbean. These findings are key to feed the match making priorities dialogue between EU and the CAC region that will eventually be constructed further along.

For the Caribbean region, the following priority research areas in renewable energy were highlighted by Joseph Williams, CARICOM, representative of the EUCARINET Project:

Geothermal: development of high temperature geothermal energy in the volcanic CAR islands in order to produce electricity and cooling systems and reduce CO2 emissions; geothermal energy development and exploitation for the whole CAR region

Solar photovoltaic: photovoltaic module performance under CAR conditions

Wind Energy: "Design and manufacture of small wind turbines for Caribbean and Central American area (CAC area) conditions

Biofuels: "Solid biofuels and integrated systems for electricity, heat and cold"

Energy Efficiency "Establishing Performance Benchmarks for Energy Efficient or Low Carbon Commercial Buildings in CARICOM", 2. "Housing passive thermal protection"

Grids/Electricity Networks "The impact on the dynamic and stability pattern of interconnected transmission and distribution electrical systems at the replacement of conventional generation technology by renewable energies

As for the Central American priorities, the following points presented by Henning Jensen from the UCR and representative of ENLACE project, enables to identify the priorities found so far that can leverage future opportunities for further development in the area of R&I.

Land & water degradation in a climate change context

Monitoring of land and water status, with particular emphasis on the effects of intensive agriculture under climate change conditions, and chemical pollution, including the behaviour of specific contaminants (such as oil spills) and their impact on environment status and human health, were mentioned as key topics.

Natural & anthropogenic hazards

The discussion highlighted the need to set up and implement Early Warning Systems (EWS) with focus on major issues affecting the CAC region such as drought, chemical contamination of soils & waters, floods, landslides and earthquakes.

Marine resources

Marine resources represent an important environmental and economic component for both Caribbean and Central American Countries. Oceanography expertise is needed as well as a long-term strategy for collecting data. The estimation of the impacts deriving from pressure factors like tourism and fisheries is of priority importance in terms of resilience of marine protected areas and of economic loss of ecosystems.

Biodiversity

Resilience of agro-ecosystems to climate change, with particular reference to land and water degradation, identification of socio-economical factors determining degradation phenomena and development of modelling of pollutant and contamination behaviour are key areas for research. Research should explore the potential benefits of the introduction/enhancement of conservationist low-impact agricultural practices and cost efficient technologies for solid and liquid waste treatment

KBBE

Research should focus on biodiversity to “optimize ecological services”, including the use of microorganisms, for food and non-food use, the development of functional foods for improved nutrition and health on the basis of existing biodiversity resources. Biotechnology applications for novel and/or improvement of traditional food processing techniques, food quality and safety assurance (e.g. mycotoxins control on processed foods) and societal aspects of food, including the acceptance of novel food by users and other consumers requirements are also important topics.

Neglected infectious diseases

The following topics were mentioned: arthropod vector-borne diseases (e.g. Leishmaniasis), soil-transmitted helminths (e.g. Hookworm) Endemic mycosis caused by several (fungal) pathogens (e.g. Candidiasis), diagnosis, epidemiology (determinants of infection), new drugs, interaction with other pathologies, viral diseases (non-arthropod borne): new and re-emerging viral diseases (Mexican flu, Hispaniola polio recombinant), zoonoses, HTLV-I, Hantavirus, chronic and degenerative diseases (Cardiovascular, hypertension, stroke, diabetes, cancer), health inequality, communicable diseases linked to natural disasters and diagnosis of genetic diseases.



5. CONCLUSIONS

The presentations and the discussion held during the Seminar reached the objective of building capacity among the participating Central and Caribbean researchers on the expectations and the priorities by the European commission regarding future cooperation with these regions.

The message that the objectives of the Horizon2020 programme are characterized by joining forces, enhancing communication between stakeholders, fostering a good environment for collaboration and taking into account the participation of small countries on the Research and Innovation initiatives was highly appreciated by the Central American and Caribbean participants.

Main key points on the JIRI initiative : Future objectives on the FP programmes by joining forces, enhancing communication between stakeholders, fostering a good environment for collaboration and taking into account the participation of small countries on the Research and Innovation initiatives and as part of the Joint Initiative for Research and Innovation

Main key points for the four priority Areas : Reports of current INCONET projects are circulated to the EC managers- policy advisors and taken into account within the next 3 to 5 years. The idea will be to elaborate recommendations in all four key areas having in mind the structure of H2020, limit the number of priorities, and focus on the essential priorities.

Main key points for the synergies among LAC INCONETS: Focus on ongoing INCONETS and specially those involving LAC (EULARINET, ENLACE, EUCARINET). Common partners such as CIRAD; CONICYT (Mexico) may play an important role as content facilitators and articulators that may enable for each INCONET project, complementary outcomes and a better policy coordination

The results of the event will be brought forward by ENLACE and EUCARINET; in cooperation with the other INCONET projects targeting the region, in its future activities, so to complement the "top-down" messages received during the Seminar with the "bottom-up" capacities and priorities of the Central American and Caribbean research communities.



ANNEX 1. AGENDA

International Seminar “EU, Caribbean & Central America cooperation in Research and Innovation”

5th of October 2011

**Hotel Silken Berlaymont, Boulevard Charlemagne, 11 -
19, Brussels**

***Morning Session: The European Commission priorities for
Caribbean and Central American cooperation in R&I***

| | |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 30 | Welcome Diassina Di Maggio , Director of APRE, Coordinator of EUCARINET & ENLACE |
| 10.00 | The International Dimension with respect to Innovation Union and the EU-LAC Joint Initiative for Research and Innovation (JIRI) Cornelia Nauen /Paul Vossen , European Commission, DG Research & Innovation, International Cooperation |
| 10.45 | International Cooperation of specific relevance for Central America and the Caribbean: state of art, opportunities for innovation and private sector implications <i>Knowledge-Based Bio-Economy (KBBE)</i> Paul Vossen , European Commission, DG-Research & Innovation, International Cooperation <i>Energy</i> Pierre-Antoine Vernon , European Commission, DG-Research & Innovation, Energy Coffee BREAK: Video projection on BIOCIRCLE project experience |



Environment

Nikolaos Christoforides, European Commission, DG-Research & Innovation, Climate change and natural hazards

ICT

Ardiel Cabrera, European Commission, DG-INFOS

12.15 Synergies among LAC INCO-NETs

María Angeles Macías García, Ministry of Science and Innovation (Spain), Coordinator of EULARINET EU Project

12.30 Summary Report on EU-EUCARINET activities and support to EU-LAC initiatives for Research & Innovation

Henning Jensen, University of Costa Rica, representative of ENLACE project

Joseph Williams, CARICOM, representative of EUCARINET project

13.00 Comments and Questions

13.30 Lunch Break



ANNEX 2. LIST OF PARTICIPANTS

| Name | Surname | Institution | Country |
|------------|---------------------|-------------------------------------------|--------------------|
| Keji | Adunmo | APRE | Italy |
| Francisco | Alarcón | CSUCA | Guatemala |
| Joseph | Antoine | Minister Counsellor | Haiti |
| Jimena | Arango | MENON | Belgium |
| Clothilde | Arrocha | Universidad de Chiriquì | Panama |
| Marie Ange | Arsene | UAG | Guadeloupe |
| Alessandro | Barbieri | Eurochambers | Belgium |
| Claudia | Barrios | FECAICA | Panama |
| Lynwood S. | Bell | The Technology Campus | Anguilla |
| Georgia | Bernard | Jamaican Embassy | Belgium |
| Monique | Bossi | APRE | Italy |
| Caterina | Buonocore | APRE | Italy |
| Ardiel | Cabrera | European Commission | Belgium |
| Tahiri | Calderon | UNIBE | Dominican Republic |
| Susana | Campoy Folgoso | EuropeAid Development and Co-operation DG | Belgium |
| Nikolaos | Christoforides | European Commission | Belgium |
| Diassina | Di Maggio | APRE | Italy |
| Yenny | Eguigure | UPNFM | Honduras |
| Debbie | Emamdie | UWI | Barbados |
| Laura | Garcia Vitoria | Fondation des Territoires de Demain | France |
| Zarja | Garmers-Rojer | UNA | Curacao |
| José | González y González | AL-INVEST programme | Belgium |
| Erika | Guzman | CONACYT | Mexico |
| Soraya | Hidalgo | Universitat Politècnica de Catalunya | Spain |
| Henning | Jensen | UCR | Costa Rica |
| John | Kakule | ACP Secretariat | Belgium |
| Katalin | Kálai | TETALAP | Hungary |
| Vassiliki | Kalodimou | FORTH | Greece |
| Kim | Krusinga | Agentschap NL | Netherlands |
| Lorenzo | Lo Cascio | META Group | Italy |
| Andre | Lochel | Territories of Tomorrow | France |
| Claudy | Lombel | Agrodyt | Guadeloupe |



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|----------------|--------------|-------------------------------------------|--------------------|
| Angeles | Macías | EULARINET | Spain |
| Mr. Raymond | Magloire | Ambassador of Haiti | Haiti |
| Guadalupe | Martinez | CONICYT | Nicaragua |
| Jorge | Mendoza | El Colegio de la Frontera Sur | Mexico |
| Francisco | Mosquera | Universidad de San Carlos | Guatemala |
| Darwin | Munoz | UNIBE | Dominican Republic |
| Simona | Mussolino | COPOLAD programme | Belgium |
| Fabio | Nascimbeni | MENON | Belgium |
| Cornelia | Nauen | European Commission | Belgium |
| Beatrice | Niyibigira | MENON | Belgium |
| Carlos Roberto | Ochoa | CONACYT | El Salvador |
| Filippo | Pasquet | ENTERPRISE EUROPE NETWORK (EEN) | Belgium |
| Gustavo | Perez | UAB | Spain |
| Linnette | Peters | | |
| Raul | Salguero | CSUCA | Guatemala |
| Christina | Schmutzhard | LAI | Austria |
| Juliette | Smith-Ravin | | Martinique |
| Elektra | Tsigaridas | EuropeAid Development and Co-operation DG | Belgium |
| Daphne | Van de Sande | Agentschap NL | Netherlands |
| Pierre Antoine | Vernon | European Commission | Belgium |
| Paul | Vossen | European Commission | Belgium |
| Humprey | Vrolijk | Research Officer | Aruba |
| Joseph | Williams | CARICOM | Guyana |
| Vincenzo | Zappino | IADB/TargetEuro | Italy |



ANNEX 3 – LIST OF ACRONYMS

ACP – African, Caribbean & Pacific region

CA – Central America

CAC area – Central America and the Caribbean

CARICOM – Caribbean Community Secretariat

CIP

ECPG - European Cluster Policy Group

EERA - European energy research alliance

EIIs - European industrial initiatives

ERA – European Research Area

EU - Europe

EWS - Early Warning Systems

FP7 – Framework Programme 7

ICT – Information and Communication Technologies

INCO – International Cooperation

INCO-NET – International Cooperation Networking activities

JIRI- Joint Initiative for Research and Innovation

JPI – Joint Programme Initiatives

KBBE - Knowledge-Based Bio-Economy

LAC – Latin America and the Caribbean

PPP- Public –private partnerships

R&D&I – Research, Development and Innovation

RTD – Research Technology and Development

SET plan

SICAS – Specific International Cooperation Actions

SoM - Senior Official Meeting

T & I – Technology and Innovation

UCR – University of Costa Rica

WP – Work Programme