



EU-CELAC

Renewable Energies SOM Working Group

**EU-CELAC Joint Initiative for Research and Innovation
Geothermal Energy Workshop**

Salta, Argentina 9-11 December 2014



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CONACYT - Mexico**



EU-CELAC Policy Dialogue - Background Bi-regional Relations



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EU-LAC Summit process (7 GR)

- Main forum strength INCO → EU-LAC Summits (former dialogue EU-Rio Group)
- Heads of state and government → Declaration / joint policy statements and commitments - cooperation between the two regions. Priorities for EU-Latin American co-operation are identified
- 7 since First Summit – Rio 1999 to Santiago Summit 2013
- VI Madrid Summit (2010) → Madrid Action Plan → **EU-LAC (JIRI)**
 - Research and Innovation considered as component of the agenda of the Summits EU-CELAC from 2010.

Action Plan 2010-2012 / 2012-2015: identifies instruments and activities to concrete results guaranteeing ownership and capacity building in key areas, one of which is **Science, research, innovation and technology;**

Joint Initiative for Research and Innovation: JIRI implementation through biannual Action Plans



EU-CELAC Policy Dialogue - Background Bi-regional Relations



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- Regular bi-regional dialogue:
Senior Officials Meetings → **(SOM) on ST&I**
 - Working mechanism and roadmap
→ forward JIRI implementation
 - EULAC SOM March 28-29, 2011 in Brussels
 - Focus on 4 thematic areas (WGs)
 - Framework to implement the EU LAC Knowledge Area
 - Contribute to sustainable development and social inclusion in priority areas of cooperation related to global societal challenges
- INCONETs (**ALCUE NET**...) + ERANETs (**ERA Net LAC**...) and other thematic projects to support the work implemented under the Joint Initiative



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EU-CELAC Policy Dialogue on R&I



- Research and Innovation considered as component of the agenda of the Summits EU-CELAC as of 2010.
- The political motivation fosters the debate of ministerial representatives, Senior Officials Meetings (SOM), to implement the EU-CELAC Joint Initiative for Research and Innovation, JIRI and to build up an strategic agenda.



Senior Officials Meetings (SOM) with EU-CELAC representatives - established as a regular bi-regional dialogue on STI to implement the **Joint Initiative for Research and Innovation (JIRI)** through biannual Action Plans, focus on specific thematic areas for bi-regional pilot activities (WG's)

The JIRI

aims at contributing to sustainable development and social inclusion in **six priority areas** of cooperation related to key global societal challenges as mentioned in the Innovation Union Communication

Priority areas:

1. Energy
2. Environment and Climate Change
3. Agro Food
4. Health
5. ICT
6. Horizontal activities regarding S&T policies focused in both institutional and human capital formation

Working Groups:

1. Renewable Energies
2. Bio-economy, including food security
3. Biodiversity and Climate Change
4. ICT
5. Health(2013)
6. *Cross cutting issues (Mobility incorp. 2014)*



- **SOM Thematic WGs** define specific issues and objectives and prepare an implementation plan that will be reported annually to the SOM

Working Groups:

1. **Renewable Energies** → **Mexico (CONACYT) + Spain (MINECO)**
 2. **Bio-economy, including food security** → **Argentina (MINCYT) – Francia (Min Edu)**
 3. **Biodiversity and Climate Change** → **Colombia (COLCIENCIAS) – Francia (Min Edu)**
 4. **ICT** → **Chile (CONICYT) –Finlandia (VTT)**
 5. **Health (2013)** → **Spain (MINECO) – Brasil (Fiocruz+CNPq)**
 6. **Cross-cutting issues** → **Mexico (CONACYT) + Portugal (FCT)**
- ↕
- Mobility (Integrated into 6th, 2014)** → **Chile (CONICYT) - Finland**



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EU-CELAC Energy SOM Working Group



CELAC members	EU members
➤ Mexico ➤ Argentina ➤ Bolivia ➤ Brazil ➤ Chile ➤ Costa Rica ➤ Peru ➤ Uruguay	➤ Spain ➤ France ➤ Finland ➤ Germany ➤ Portugal ➤ European Commission



EU-CELAC Energy SOM Working Group Objectives



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- 1) Identify research and innovation, **basic lines** of high interest for EU-LAC cooperation
- 2) **Working documents** on EU-CELAC joint priorities considering:
Societal challenges & Research challenges
- 3) **Proposals** for activities in the thematic areas for each objective mobilizing expertise and resources among countries or institutions
- 4) Preliminary identification of **funding schemes**
- 5) Promote an operative platform to implement joint initiatives in emerging technologies
- 6) Foster cooperation and coordination among EU-LAC countries could impact on: smart regions development while assure a sustainable energy supply.



EU-CELAC Energy SOM Working Group JIRI Implementation



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HOW?



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EU-CELAC Energy SOM Working Group JIRI Implementation



The INCO-NET projects  balanced partnerships, regrouping multiple international stakeholders (partners from research, industry, government and civil society) for research actions.

In LAC: ***ENLACE, EUCARINET and EULARINET***

EULARINET concrete support mechanism for bi-regional S&T policy dialogue -Brussels SOM and Roadmap. BB-regional workshops and activities (4A).

ENLACE: Mesoamerica

EUCARINET: Caribbean

ALCUE-NET : follow up successive SOM Working Group process



At this moment this process is supported mainly by

ALCUE NET



SOM EU CELAC mandate to act as General Secretariat and Technical Support - WPs

- implementation of the roadmap of the JIRI - concrete recommendations
- update common priorities, encourage mutual policy learning and effectiveness of cooperation instruments
- provide technical support to the SOM
- articulation with past/on going thematic projects, initiatives and organizations

EU-CELAC Summits -Heads of state SOM-Senior officials of EU-CELAC governm



Cross-cutting issues / Mobility



ICT

Energy



Biodiversity
Climate

Bioeconomy

Health

Joint Initiative for Research and Innovation

EULARINET

ALCUE-NET

ERA-NET LAC

ENLACE

EUCARINET

ALCUE-KBBE

CONECTA2020

LEADERSHIP

Americas

EU-LAC HEALTH

ENSOCIO

B.BICE +

CEST+I

ABEST III

EUMEX-Innova



Projects supporting the JIRI

2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

EU-CELAC SOM-Cross-Cutting Issues Working Group (MK)





Activities in Renewable Energies

Phase 1: Meetings for discussing the Background document on EU-LAC joint priorities: Madrid, 11th -12th May 2011 and (GENERA 2011) & Montelimar, Nicaragua 22nd -23rd June 2011 (CYTED and CONICYT Renewable energies matchmaking event).

Phase 2: Workshops on implementation of activities:

- a) Rio de Janeiro, 31st August - 1st September 2011 (Wind Energy and renewable energy summing up section
- b) Mexico, 21st -23rd September 2011 (Bioenergy and Solar Energy),
24th September 2011 Working Group (WG) ALCUE SOM Energy meeting





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EU-CELAC Energy SOM Working Group Work Process



Work progress- Recent activities in the EU-CELAC renewable energies area are:

- ✓ ALCUE NET – CYTED Thematic Meeting on Renewable Energies, Biodiversity & Climate Change, Bioeconomy and ICT in CONACYT, Mexico on October 23, 2013.
- ✓ *ALCUE NET European-Latin American Workshop on Renewable Energies*-CONACYT, Mexico, October 24-25, 2013.
- ✓ *ALCUE NET European-Latin American Renewable Energies Policy Dialogue Meeting*-Mexico, March 11-12, 2013 focused on Renewable Energies + Energy efficiency.





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EU-CELAC Energy SOM Working Group Work Process



Work progress- Recent activities in the EU-CELAC renewable energies area are:

- ✓ *ALCUE NET European-Latin American Matchmaking Workshop on Solar Energy* – Sevilla, Spain - November 13-14, 2014 focused on ERANet-LAC 1st call/H2020 calls & CSP Today + ABENGOA CSP Solar Plant.





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EU-CELAC Energy SOM Working Group Work Progress - Results



Work progress

- Additional expert meetings focused in identifying and designing further joint initiatives for cooperation and promoting innovation.
- Mapping and analysis of country potential is in process: collection, processing and centralization of key information focused on the renewable energies in LAC and European Union (1st phase)
- Analysis of country potential -critical mass of researchers and research organizations from both the private and public sectors; current cooperation with EU counterparts -exhaustive list of on-going relevant -national, regional and EU-LAC- STI programs, projects platforms (ETPs) with relevance to the thematic area-FP included (2nd phase)
- Follow up existing “Observatories”- “Observatorio de Energía Renovable para América Latina y el Caribe” under OLADE (Organización Latinoamericana de Energía), etc,



Networking and exchanges

- Actions to promote and support networking and exchanges between research organisations in on-going or planned projects (INCONets and other projects like ACCESS to MEXCYT, INCONTAC, etc.)
- Further linkage with regional thematic nets (Rembio, Mesomaerican nets and CYTED) reinforced through an on-line tool through ALCUENet web.
- Synergies between ALCUENET, ERANet LAC projects and CYTED. First steps done through the 1st ALCUENET-CYTED Thematic Meeting on October 23rd, 2013. Draft proposals for joint working plan.
- Capacity building: Mobility programmes available for the exchange of EU-LAC scientists is being promoted seeking synergy with bilat-project activities as well as through other projects.
- Policy dialogue meetings and regulatory frameworks: The priority objective is to promote policy convergence between EU and LAC countries.



Research areas and subareas of common interest

BIOENERGY

- **Biomass availability and supply**
- **Conversion processes**
- **Markets and regulatory framework**
- **Sustainability**

SOLAR THERMAL

- **Quality Assurance Procedures towards certified equipment, harmonization of equipment (and installers).**
- **Thermal energy storage mainly for distributed generation**

WIND ENERGY

- **Wind Resource Assessment and short term forecasting: computational tools**
- **Wind Turbines: technology for regional fabrication**
- **Removing barriers and promoting deployment.**

PHOTOVOLTAIC

- **Solar resources prediction and monitoring**
- **Quality Assurance Procedures**
- **Stand alone systems**
- **Advanced grid integration & large integration of PV in building areas**
- **Capacity building**



❖ Energy efficiency focus areas:

- Increasing energy efficiency in buildings;
 - Heating and cooling;
 - Increasing energy efficiency in industry and SMEs; Increasing energy efficiency of energy-related products;
 - Innovative financing for energy efficiency;
 - Citizen Engagement, capacity building, governance and communication for energy efficiency.
- ✓ Smart Cities and Communities – solutions integrating energy, transport, ICT sectors:
- Low energy districts
 - Integrated infrastructures

Energy Research Areas	Topics
WIND ENERGY	- Advancement of small/medium-scale wind turbines in EULAC countries - Integration of wind generation into existing electricity grids
BIOENERGY	- Development of cost-effective and sustainable advanced bioenergy technologies with biomass feedstock flexibility - Cost-effective biomass availability, supply and storage systems optimization to reduce feedstock uncertainty for bioenergy production. - Assessing and monitoring the four dimensions of sustainability (economic, environmental, social and institutional) for bioenergy to ensure governance and compliance with biomass value chains sustainability goals.

Energy Research Areas	Topics
SOLAR THERMAL	- Solar technology development for industrial process heat - Solar resource assessment - Energy Storage technologies
SOLAR PHOTOVOLTAIC	- Novel concept in cost-effective constructive systems based on solar technology in buildings and urban areas
ENERGY EFFICIENCY	- Novel concept in cost-effective constructive systems based on solar technology for the built environment



BIOENERGY

- Biomass availability and supply
- Markets and regulatory framework

WIND ENERGY

- Wind Resource Assessment and short term forecasting
- Large Wind Turbines
- Social Acceptance & Removing barriers

- ☐ Improve conversion processes
- ☐ Sustainability

EFICIENCY

- ☐ Integration of PV in buildings areas
- ☐ Advanced grid integration

- ☐ Small Wind Turbines regional technologies

- ☐ Low thermal in buildings
- ☐ Medium thermal industrial apps

SOLAR PHOTOVOLTAIC

- Quality Assurance Procedures
- Stand alone systems

**Studies
of solar
resources**

SOLAR THERMAL

- Thermal energy storage & Thermochemical
- Quality Infrastructure (Standardization, Metrology, Accreditation)



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■ Joint activities

ERANET Joint Call (27th Nov 2014)

- ☐ Small-scale self-sustainable biorefineries for multi-feedstock processing of agro-industrial and urban wastes for advanced biofuels, biobased chemicals and biomaterials.
- ☐ Towards Zero Carbon Energy Systems for heating and cooling in industrial processes by means of solar technologies including the envelopes of the buildings.

Concrete results in the Renewable Energies area include:

- Subareas for potential collaboration and topics identified in line with the priorities of the SET Plan and LAC
- Provided R&D background knowledge and strategic objectives in **bio energy, solar-photovoltaic and thermal- energy and wind energy + energy efficiency**
- Working documents on EU-LAC joint priorities in 3 + EE
- Proposals for activities in renewable energies for the consideration of the SOM



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Synergies with other projects and initiatives

- ERANet LAC for joint actions
- CYTED Iberoamerican Programme for Science Research and Development
- IRENA International Renewable Agency (aimed at disseminate best practices in the field of renewables as the principal platform for international cooperation in the field – particularly with their centre of excellence on renewable energy and a repository of policy, technology, resource and financial knowledge).

This includes the promotion of the widespread and increased adoption and the sustainable use of all forms of renewable energy globally, including in the EU and CELAC countries, in particular to bring down costs and also to increase market experience, and support activities for countries in their transition to a renewable energy future.



- ❑ Further linkage with regional thematic nets (Rembio, Mesomaerican nets and CYTED) reinforced through on-going INCO projects.
- ❑ Synergies between INCO, BILAT and ERANet LAC projects and other regional programmes -CYTED. First steps done through ALCUENET-CYTED Thematic Meetings in Mexico. Draft proposals for joint working plan.
- ❑ Capacity building: Mobility programmes available for the exchange of EU-LAC scientists is being promoted seeking synergy with bilat-project activities as well as through other projects.
- ❑ Policy dialogue meetings and regulatory frameworks: The priority objective is to promote policy convergence between EU and LAC countries.
- ❑ Other areas:



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Future cooperation: objectives and proposals



Other areas:

- ☐ Geothermal energy
 - Alignment with SET-Plan
 - Resource identification and assessment
 - Management of geothermal systems
 - Sustainability and regulatory framework
- ☐ Smart cities and energy
- ☐ Wind energy (2nd)



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Conclusions



Continuous dialogue - working group participants and different stakeholders at the national, regional and bi-regional scale



INCO initiatives

Build upon a mature relationship and prior cooperation, enhanced by multilateral and bilateral projects.



Schemes (ERANet and others and combination of instruments)

National funding mechanisms for implementing pilot initiatives (dialogue to agree with national funding agencies for pilot initiatives)



SOM ST&I

The Challenges

Establishing an EU-CELAC platform - actors involved in R&I orientation, funding and implementation and other relevant stakeholders from the **public and private sector and the civil society**



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EU-CELAC Energy SOM Working Group



Thank you!

CONACYT - Mexico

MINECO - Spain

Working group leaders.

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