



CLARIS | LPB

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A Europe-South America Network for Climate Change Assessment

And Impact studies in La Plata Basin

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Deliverables



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CLARIS LPB

A Europe-South America Network for Climate Change Assessment and Impact Studies in La Plata Basin

DELIVERABLES

D2.5: Trainings for local end-users

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Nro del Deliverable	Título del Deliverable	WP	Principal beneficiario	Indicación estimada personas-meses (staff permanente)	Naturaleza	Nivel de diseminación	Fecha de entrega
D2.5	Trainings for local end-users	WP2	P1-IRD	13,00	R	PU	30, 42

D2.5: Trainings for local end users

One of WP2's main objectives is to promote the articulation of the pluridisciplinary consortium with the needs and expectations of the social actors privileged by CLARIS LPB project: the agricultural sector, the hydraulic system and the field of public policies. In this sense, WP2's activities are targeted not only at stimulating communication and exchange inside the researcher's network, but also at building the *transectorial dimension*. This means to build collaborative relations "outside" the network in order to generate a real interaction between scientists and local social actors.

Thus, one of WP2's strategies to promote transectorial interaction has been to organize, coordinate and host local workshops with the stakeholders. These workshops aimed to present and install climate change problematic in the local social media of each study zone both in Argentina and Brazil.

In Argentina, we have held a CLARIS LPB Workshop on Climate Change, in the city of Junín (Buenos Aires Province) during June 2009, and two transectorial workshops: one in the city of San Justo (Santa Fe Province) in November 2009, and the other in Junín (Buenos Aires Province) in September 2010. CLARIS LPB has also cooperated with SINERGIA Project and participated in the ADAPTCLIM meeting, held in Asunción (Paraguay) in September 2010.

• I CLARIS LPB Workshop on Climate Change in Junín:

WP2 has begun working with Junín stakeholders (Buenos Aires Province, Argentina) in May 2009, when CLARIS LPB project was presented to the local authorities and the agricultural sector institutions. These actors manifested their willingness and enthusiasm to collaborate actively in the project; particularly, the College of Graduated Agricultural Engineers of Junín proposed different activities to be done with the local producers. Thus, on August 31st, the first CLARIS LPB Workshop was held at the Universidad Nacional del Noroeste (UNNOBA) with a diverse audience (agricultural producers, Junín's Agronomic Engineers Association members, local politic authorities, students and teachers of the UNNOBA, local institutions representatives).

This workshop was the first chance of dissemination for the Climate Change issue at the local level and an opportunity to introduce CLARIS LPB project to a wider public. The event took place in a very tense climatic and social juncture. The agriculture sector was going through a period of intense draught, which affected the yields of 2008-2009-campaign, and besides, its persistent confrontation with the national government increased the tension on the national social scenario.

During the event a collaboration agreement with Junín's Municipality was signed and we presented and explained the modality of anthropological field work, which would be developed in this city during 2009 by Diego Taraborelli (UNGS) under the direction of Dr. Valeria Hernández (IRD), coordinator of WP2. The lecturers of the Workshop were: Mario Meoni (Junín's Mayor), Jose Ariaudo (president of the Junín's Agronomic Engineers Association), Jean Philippe Boulanger, Diego Taraborrelli and Valeria Hernández (members of CLARIS LPB).

After the presentations, a debate with the public was organized based on comments and questions the audience had. This workshop's objectives (i.e., to strengthen the relation with local stakeholders and to generate a local dissemination/formation instance on climate change) were achieved and this event was a

very important boost to carry out the first transectorial workshop in a collaborative way with Junín's social actors.



CLARIS LPB presentation at Junín

• I CLARIS LPB Workshop in San Justo

In the case of San Justo, the implemented strategy to establish cooperation bonds with local actors has been our continued presence in this study zone since January till December 2009. The anthropological fieldwork performed in this site was in charge of Florencia Fossa Riglos (UBA) under the direction of Dr. Valeria Hernández (IRD). This long staying in the field allowed us to focus on the study of socio-productive profiles of the different local social actors and to be in touch with the diverse institutions that compose San Justo social network.

In the context of this anthropological fieldwork on November 17th 2009 we performed, together with WP8, the first transectorial workshop *Climate-Society* in San Justo agrocitry. The event took place at the local Rural Society installations, since this institution nucleates the main agriculture stakeholders in the region. Conceived as the first CLARIS LPB intersectorial workshop the representatives of the different agriculture institutions, local governmental officers and civil society representatives were invited to participate as well as scientists from CLARIS LPB and PICREVAT network. Its main objective was to promote a joint reflection about their perception on the local agriculture systems vulnerabilities, the most significant climate risks for production and society, the relevance of elaborating adaptation strategies for each producer category and for other activities relevant for the agrocitry life.

During the workshop Valeria Hernandez (WP2 leader, WP8) presented CLARIS LPB scientific needs and interests, emphasizing the way in which this knowledge production can be integrated to their activities (productive, social, etc.). With a total of 19 participants the workshop dynamics, coordinated by Valeria Hernández and Florencia Fossa Riglos, was based on three working groups and a set of activities proposed by CLARIS LPB team. The activities were directed to reflect participant's perception on climate change and its potential impact in San Justo area.

Thus, each team received a journalistic article (the sources were local and national newspapers) about three extreme climate events that occurred in the region: draughts, floods and a twister), and some indications to guide the debate. Each group designed a member to register the debate and to write down their conclusions in order to share them with the rest of the participants at the plenary instance. Each group was assisted by a member of CLARIS LPB and PICREVAT networks.

After each group exposed its conclusions the debate started and concluded once the first plenary conclusions were formulated. These conclusions were:

- A unanimous consensus on recognizing the existence of climate change phenomena.
- Climate change is an environmental problem, whose consequences are starting to be evidenced on daily life.
- A bad management of climatic events has political costs
- There is lack of environmental laws and the few existing ones are scarcely applied, particularly in the case of deforestation.
- The lack of planning in urbanization policies increases the flood risk in different growing population zones in the city.
- The channels built in the area have negative consequences (both in floods and droughts)
- There is a lack of prevision plans, evacuation or emergency systems to face climatic events; reverting this situation is necessary to face climate change potential consequences in San Justo (or in any other city)
- International cooperation and agreements is very important to cope with the necessary cultural changes in order to “reduce” gas emissions causing greenhouse effect.

Finally, after reflecting on the first plenary conclusions a collective working session took place based on Jean-Philippe Boulanger (IRD), climate change specialist and CLARIS LPB project coordinator, presentation of climate change issues from CLARIS LPB scientific perspective in which he tried to answer participants’ doubts regarding climate change.

We can summarize the exchange generated on this first transectorial workshop saying that two ways of thinking and approaching climate change issue were set out. A first one, based on measurements, mitigation and adaptation strategies, and on how to reduce greenhouse effect gases according to quantitative measurement parameters.

On the other side, an alternative approach, states that it is also necessary to question our current consuming model. This approach departs from the following standpoint: even if we start reducing emissions ¿Can we continue consuming in the current terms without putting the planet at risk?

Images of the “I CLARIS LPB Transectorial workshop: Climate and Society”:



After the workshop we built a transectorial bulletin together with WP8 researchers. This document contains the record of the activities done during the workshop and the reflections that arose on that space. Moreover, we included in this bulletin the first quantitative and qualitative results of the fieldwork developed in San Justo agrocitry. This provided local actors (stakeholders, politics, institutions, NGOs, live forces, etc) with a work and formation document of the climate change and society challenges.

Thus, in this document we presented to the local actors an initial picture of San Justo productive system, in order to have their feedback about it. Basing on the material that came out of the workshop and on the debate with the actors we have built the following chart showing the perception of San Justo actors about their vulnerability to climatic factors, internal factors (agro ecological, social organization) and external factors. It is important to underline that each categories meaning (i.e.: climatic, internal and external) was not given beforehand by the researchers, the social actors themselves placed the factors they consider on each categories according to their perception.

CLARIS LPB WORKSHOP in San Justo, 10/11/2009

CLARIS LPB WORKSHOP IN SAN JUSTO 2009:		Climatic Factors	
Sequías	Drought	11	100%
Inundaciones	Floods	11	100%
Granizos	Hails	0	0%
Temperaturas extremas	Extreme temperatures	4	36%
Heladas	Frost	0	0%
Variabilidad de las precipitaciones	Precipitation variability	11	100%
Efectos "El Niño"	"El Niño" Effects	4	36%
Total respuestas		41	
Internal factors			
Vulnerabilidades agroecológicas		Agroecological vulnerabilities	
Dependencia extrema de las precipitaciones	Extreme dependence on precipitations	8	72,73%
Mala capacidad de drenaje del sector de los <i>Saladillos</i>	Bad drainage capacity of the <i>Saladillos</i> sector	8	72,73%
Deforestación	Deforestation	3	27,27%
Vulnerabilidades de la organización Social		Social Organization vulnerabilities	
Especialización y explotación intensiva del cultivo de soja	Specialization and intensive exploitation of soybean crop	4	36,36%
Muy poca rotación de cultivos	Very little crops rotation	3	27,27%
Ausencia de políticas públicas agropecuarias que se adapten a los productores	Absence of agriculture public policies adapted to local producers	4	36,36%
La población se concentra en las ciudades (éxodo rural)	Population concentrates in the cities (rural exodus)	3	27,27%
Falta de conciencia, control e información sobre la actividad agropecuaria a nivel de las políticas públicas	Lack of control and information about agriculture activity at the public policy level	3	27,27%
Individualismo y falta de organización social	Individualism and lack of social organization	2	18,18%
Obras públicas mal hechas (canales, cloacas, etc)	Problems with public infrastructure (canals, sewers, etc)	3	27,27%
Total respuestas		41	
External factors			
Presiones del mercado internacional (demanda)	International market pressures (demand)	11	100,00%
Conflictos con el gobierno nacional	Conflicts with the national government	8	72,73%
Modelo de Consumo	Consuming Model	1	9,09%
Total respuestas		20	

• **II CLARIS LPB Workshop in Junín**

In Junín's case, we have also privileged an anthropological work with long staying on the field since May 2009 until November 2010. Junín's fieldwork was performed by Diego Taraborelli (UNGS) during the period May – December 2009, as we have mentioned before, and by Eugenia Muzi (UBA) during the period January-November 2010, both under the direction of Dr. Valeria Hernández (IRD). The permanent interaction with Junín actors' aims to assure that the research performed respond to the needs of the producers and the local actors from both public and private sectors.

In the context of this anthropological fieldwork we performed on September 3rd 2010 the first CLARIS LPB transectorial workshop in Junín city. The event was named "*Climate and vulnerabilities in the Agriculture sector*", and took place at the UNNOBA (Universidad Nacional del Noroeste de Buenos

Aires), in Junín. The workshop was conceived as transectorial and was coordinated together with Junín's Municipality as a result of the collaboration agreement signed during August 2009. Thus, CLARIS LPB researchers', Junín's Municipality authorities, different public and private institutions related to the agriculture sector, as well as public policies sector authorities and local agriculture producers were invited to participate.

The activities during the workshop were structured in two parts, a) introduction and presentation, in which we shared with the audience the results of the first year of fieldwork in Junín (in charge of Valeria Hernández (IR) and Eugenia Muzi (UBA); b) presentation about climate change (in charge of Jean-Philippe Boulanger, CLARIS LPB coordinator).

At the end of each part we proposed an activity related to the presentations. After the first section each participant was invited to think and write the kind of vulnerabilities that he/she was able to identify focusing on different sectors of society (agriculture, livestock, territorial management, urban spaces, etc.). The activity was performed interactively, so that each participant could reflect on his or her own activities in Junín city.



CLARIS LPB transectorial Workshop in Junín

In addition, we included in the workshop the presentation of scientific posters with dissemination material of the preliminary results of CLARIS LPB in Junín and in the other two sites under study in Argentina (Balcarce and San Justo). This allowed participants to talk with the researchers about the posters content during the coffee break.

At the end of the second part, basing on the participants answers from the previous activity, we invited them to divide in three groups according to the different major sectors of Junín's society present at the meeting: urban, agriculture and livestock activities. Each group should think and elaborate a list of the different kinds of vulnerabilities for the chosen sector.



Posters session and presentations at Junín's workshop

As in the case of San Justo, after the workshop we elaborated, together with WP8, a work and formation document on climate change and society challenges in the format of a transectorial bulletin. This document contents all the activities performed during the workshop and the reflections that arose in that space. Basing on this material and the exchange with Junín's actors afterwards, we created the following vulnerabilities chart. In this case the actors were guided conceptually, they placed the identified vulnerabilities under the factors proposed in the presentation performed by Jean-Philippe Boulanger (IRD) during the workshop:

CLARIS LPB WORKSHOP in Junín, 3/09/2010

Climatic Factors			
Sequías	Drought	14	77,78%
Inundaciones	Floods	15	83,33%
Granizos	Hails	6	33,33%
Temperaturas extremas	Extreme temperatures	6	33,33%
Heladas en Noviembre	Frost in November	3	16,67%
Precipitaciones fuera de época	Off-season rainfall	1	5,56%
Total respuestas		45	
Internal factors			
Concentración de la riqueza	Wealth concentration	4	22,22%
Participación de capital extrasectorial en la producción agropecuaria	External origin of capital involved in production	1	5,56%
Falta de capacitación y compromiso del personal rural	Lack of qualification and commitment of the rural staff	5	27,78%
Falta de financiamiento y créditos para el sector agropecuario	Lack of financing / credits	6	33,33%
Endeudamientos	Indebtedness	3	16,67%
Limitación en la flexibilidad para la producción de pequeños productores	Limitation in the productive flexibility in the small producers	3	16,67%
Problemas de transporte para la producción (fletes)	Problems in production transportation (loads)	4	22,22%
Caminos fuera de condiciones	Roads in bad conditions	3	16,67%
Falta de industrialización (biodiesel-aceites, etc)	Lack of industrialization (biodiesel, oils, etc)	1	5,56%
Contrato de servicios disponibles	Availability of service contract	1	5,56%
Individualismo y falta de organización del sector productivo	Individualism and lack of organization of the producers	2	11,11%
Falta de capacidad de almacenaje	Lack of storage capacity	2	11,11%
Total respuestas		35	
External factors			
Falta de políticas en relación al uso de la tierra	Lack of laws on land use	3	16,67%
Inflación	Inflation	2	11,11%
Condiciones y precios cambiantes del mercado	Changing market conditions / prices	4	22,22%
Retenciones/ Intervención estatal en el mercado	Retentions / State intervention in the market	12	66,67%
Cierre de las exportaciones	Closing for exports	5	27,78%
Precariedad educativa	Precariousness of education (tool change)	6	33,33%
Deficiencia de las políticas agropecuarias (dependencia de las políticas económicas)	Deficiency of a farming policy (dependent of the economic policy)	8	44,44%
Falta de políticas a largo plazo	Lack of long-term policy	4	22,22%
Burocracia administrativa	Administrative bureaucracy	2	11,11%
Falta de infraestructura para la población rural	Lack of infrastructure for rural population	3	16,67%
Falta de equilibrio entre producción y ambiente	No balance between production and environment	3	16,67%
Total respuestas		52	

Furthermore, after this transectorial workshop a new working group was conformed among CLARIS LPB's scientists and actors from the agro productive and political sector from Junín. This group aims at designing a set of adaptation strategies to drought; these strategies will be included in the development strategic plan of Junín city.

If we compare Junín and San Justo results summarised on this two charts we can see that the priorities, worries and perceptions are the same in both sites: droughts and floods (precipitation variability).

As to differences in both sites, "political organization" is identified as "external factors" in the case of Junín and as "internal vulnerabilities" in the case of San Justo. We sustain this difference is directly related to the participation context of each workshop. In Junín's workshop there was a very strong presence of the local political authorities, in fact as it was mentioned, the workshop was convened *with* the local municipality. In San Justo, instead, there was only one political authority from the local community of Angeloni. This political absence was due to a very tense situation in San Justo society related to the debate on intensive agrochemicals use and the consequent environmental and social damages. This context allowed the participants to manifest themselves more openly about their perception of the social vulnerabilities at the local level. We consider it is very important to keep these contextual situations in mind at the time of analysing and designing adaptation strategies since "*The place of the researcher in the fieldwork situation has sense in the frame of a precise communication way, in a specific social context*". (Althabe, Gérard; Hernández, Valeria; 2004). This means, the inclusion/exclusion dynamics we go through along the different moments of interaction must be a central input for the reflection about power in social relationships, which gives sense to local actors accounts, their positions and their behaviour in different interaction contexts.

However, two vulnerability factors that appear in both sites of study are: on one side, land use and tenancy, and on the other side international market pressures. These two factor's nature and complexity are being analyzed by WP8. Their importance in the organization of the agro productive systems at the local level must be considered in order to elaborate realistic adaptation strategies.

The reflection and analysis of this first stage of transectorial work resulted in a scientific poster presented at CLARIS LPB M24 meeting in Florianópolis, during November 2010. This work was titled "*Climate Change and Society: reflections about transectorial work from an anthropological perspective*" by Florencia Fossa Riglos (FFyL, UBA, WP8&WP2), Eugenia Muzi (FFyL, UBA, WP8), Valeria Hernández (IRD, WP8&W2).

• Cooperation CLARIS LPB - SINERGIA in ADAPTCLIM

In September 2010 SINERGIA held ADAPTCLIM conference in Asunción, Paraguay which was attended by more than 80 participants from Brazil, Paraguay, Argentina, Bolivia, Canada, United States, France, England, Poland and Uruguay. Several CLARIS LPB scientists attended the event.

·"El lugar que ocupa el investigador en la situación de trabajo de campo adquiere sentido en el marco de un modo de comunicación preciso, propio de una coyuntura social" (Althabe, Gérard; Hernández, Valeria; 2004)



ADAPTCLIM Conference

In the frame of this event, a CLARIS LPB workshop was performed under the title “*Climatic change RPG: Building strategies in a funny way*”. The direction of this workshop was in charge of Michelle Bonatti (WP8, UFSC) and the proposal was to create adaptation strategies to climate change through role playing games (RPG). The activities were based on the RPG methodology, a game in which its participants incorporate a certain role and need survive through hypothetical actions, considering certain situations (fictitious scenarios). In this sense, the game proposed on ADAPTCLIM conference had as objective to stimulate the awareness of the impacts of climate change, the relation of social actors and the creation of adaptation strategies. Basing on this theory, the workshop enabled the creation of simulated situations of drought, floods and diseases related to climate. Synthetically, as a final result some principal strategies were identified:

- Creation of financial funds to assist the resource-poor farmers. The idea of Communitarian Banks could contribute to this initiative.
- Creation of special credit lines to drought.
- Catchment-water areas of heavy rainfall that could be taken of the areas hardly affected by droughts.
- Centres dealing with the existing religious dissemination of information on climate changes, with warning systems to climate extreme events and the use of less polluting materials.
- Media-Daily programs with special focus on forecasts of future weather and climate events.
- Creation of groups of parents with children affected by climate-related diseases.
- Creation of green areas in schools.
- Creation of law that establishes 10% of green areas for urban settlements

The created scenes showed a hypothetical interrelation between different social actors as the agricultural sector, the religious sector, mass media, the policy sector, among others. This work presented the possibilities of the game to motivate the process of creation of adaptation strategies. This experience could be improved through the development of others scenarios integrated with real situations.



RPG at the Workshop

The analysis of this experience led also to a scientific poster titled “*Role playing game Climate Change: an experience of creative process in development of adaptation strategies*” by Michelle Bonatti, Juliano Borba, Jean Philippe Boulanger, Elvira Gentile, Pierre Girard, Sandro L. Schlindwein and Ana Carolina Vasconcelos, presented at CLARIS LPB M24 meeting in Florianópolis.

For the next two years, 2011 and 2012, we have scheduled new transectorial workshops, which will be coordinated and convened together with WP8 and the local social actors with the aim of presenting the regional scenarios produced by CLARIS LPB specialists and their relation with the development model existent on each site. The main objective of this stage is to debate jointly the impacts that the expected scenarios may have on the social and productive life of each region and to think in adaptation strategies according to the inhabitants expectations. In the following chart we present the summarized scheme of dissemination and transectorial work designed for the next period 2011-2012.

Work schedule for the period 2011-2012

Disemination Stages	WP2 with WP8 and WP 9	Stakeholders
Beginning of 2011	<ul style="list-style-type: none"> •Coordinate the organization of CLARIS LPB/Stakeholders work at a sectorial level. •Participation in the workshops with the presentation of climate change material to stakeholders 	<ul style="list-style-type: none"> •Presentation of the relation between productive profiles and climate change. •Reflexion about the transectorial modality of work implemented by each team in their site of field investigation.
End of 2011	<p style="text-align: center;">2nd. Summary Workshop of transectorial and multidisciplinary collaboration</p>	<ul style="list-style-type: none"> •Organize and host the transectorial workshop. • Design of potential climate change adaptation strategies
<p style="text-align: center;">2011-2012</p> <p>Elaboration with social actors and policy makers of possible <i>adaptation strategies</i> based on the conclusions established on the precedent period.</p>	<ul style="list-style-type: none"> •Coordination of the activities and meetings inter WPs. Stimulate consortium communications with stakeholders incorporating the results of the 1st and 2nd workshops. • Produce material supports for the inter WPs; intraWP and transectorial dimensions (informative bulletin, website, young scientists forum, brochure, etc.). •Organize local Workshops with stakeholders with the aim of doing a joint reflexion, experts and stakeholders, about the adaptation strategies according to the vulnerability thresholds identified on the previous stages. 	<ul style="list-style-type: none"> •To collaborate on the organization of the local workshops with stakeholders; object: “Adaptation Strategies and social actors”.

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Jean-Philippe Boulanger, Valeria A. Hernández and Eugenia Muzi, (2010) “*CLARIS LPB Climate and Society Bulletin* for stakeholders” Work and formation document for the community of Junín, Buenos Aires, Argentina.

Florencia Fossa Riglos, Eugenia Muzi and Valeria Hernández (2010). “*Climate Change and Society: reflections about transectorial work from an anthropological perspective*”, presented at CLARIS LPB M24 Meeting, Florianópolis, Brazil.

Michelle Bonatti, Juliano Borba, Jean Philippe Boulanger, Elvira Gentile, Pierre Girard, Sandro L. Schlindwein and Ana Carolina Vasconcelos (2010). “*Role playing game Climate Change: an experience of creative process in development of adaptation strategies*”, presented at CLARIS LPB M24 meeting in Florianópolis.