

STRATEGIC ACTION PROGRAM FOR THE BINATIONAL BASIN OF THE BERMEJO RIVER - SAP BERMEJO

Implementation 2001 - 2009

5th BIENNIAL GEF INTERNATIONAL WATERS CONFERENCE

24 – 29 October, 2009. Cairns, Australia



SAP BERMEJO

STRATEGIC ACTION PROGRAM FOR THE
BINATIONAL BASIN OF THE BERMEJO RIVER



ARGENTINA



BOLIVIA

BINATIONAL COMMISSION FOR THE
DEVELOPMENT OF THE UPPER BERMEJO
AND GRANDE DE TARIJA RIVER BASINS
COBINABE



GEF

GLOBAL
ENVIRONMENT
FACILITY



UNEP

UNITED NATIONS
ENVIRONMENT
PROGRAMME



OAS

ORGANIZATION OF
AMERICAN STATES

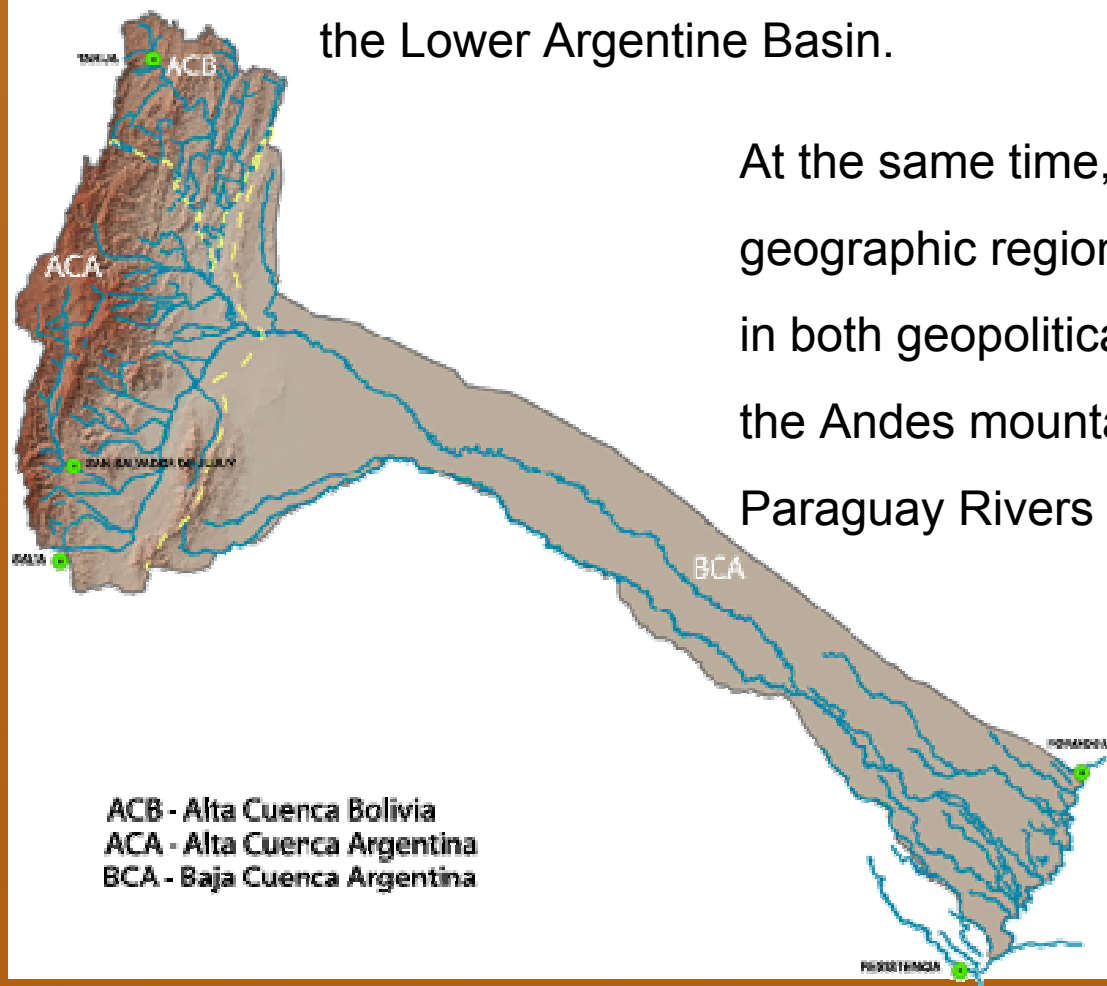
BERMEJO RIVER BASIN

The Bermejo River Basin, shared by Argentina and Bolivia, is an important area of the Del Plata Basin. It covers a surface area of 123.162 km², of which 11.900 km² (10%) belong to Bolivia and 111.262 km² (90%) belong to Argentina. The basin is located in the south of Bolivia, in the Department of Tarija, and in the north of Argentina embracing territories of the Chaco, Formosa, Jujuy and Salta provinces. Its population is estimated in 1.330.000 inhabitants.



BERMEJO RIVER BASIN

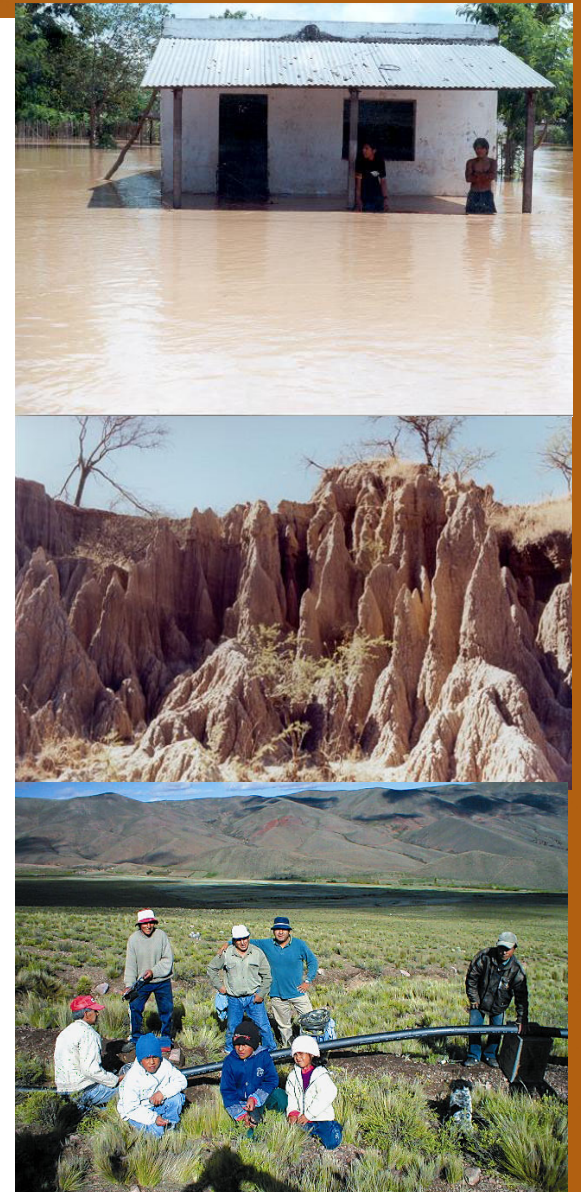
Based on its characteristics the basin is divided into the Upper Basin (Upper Bolivian Basin and Upper Argentine Basin) and the Lower Argentine Basin.



At the same time, it links together two geographic regions that are vitally important in both geopolitical and economic terms – the Andes mountain range and the Paraná-Paraguay Rivers system.

BERMEJO RIVER BASIN

The basin has a high social and environmental vulnerability, characterized by a clear reduction of its natural resources, soil and native forests, by severe restrictions in the availability of surface and ground water, as well as by the decline of the population's standard of living, resulting from the isolation of vast areas and the weakness of its markets.



BERMEJO RIVER BASIN

Erosion and sedimentation problems seriously affect the basin, producing around 80% of the sediment load of Paraguay-Paraná System



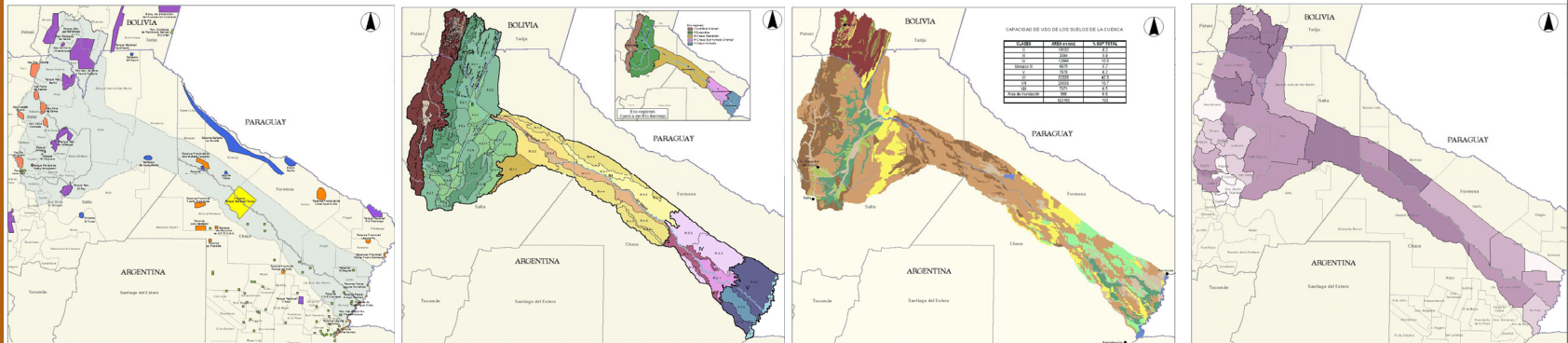
SAP BERMEJO

The SAP Bermejo, carried out since 1997, was framed under the will of Argentina and Bolivia governments of searching alternatives against poverty and basin degradation by implementing sustainable development programs through the COBINABE.

In doing so, COBINABE joined together the support of national capacities with the international cooperation of the Global Environment Facility (GEF), United Nation Environmental Programme (UNEP) and the Organization of America States (OAS).



The formulation of the SAP Bermejo was a highly participative and planning process. Its outstanding final outputs were the Transboundary Diagnostic Analysis (TDA) and the Strategic Action Program (SAP) which COBINABE implemented between 2001 and 2009



SAP BERMEJO

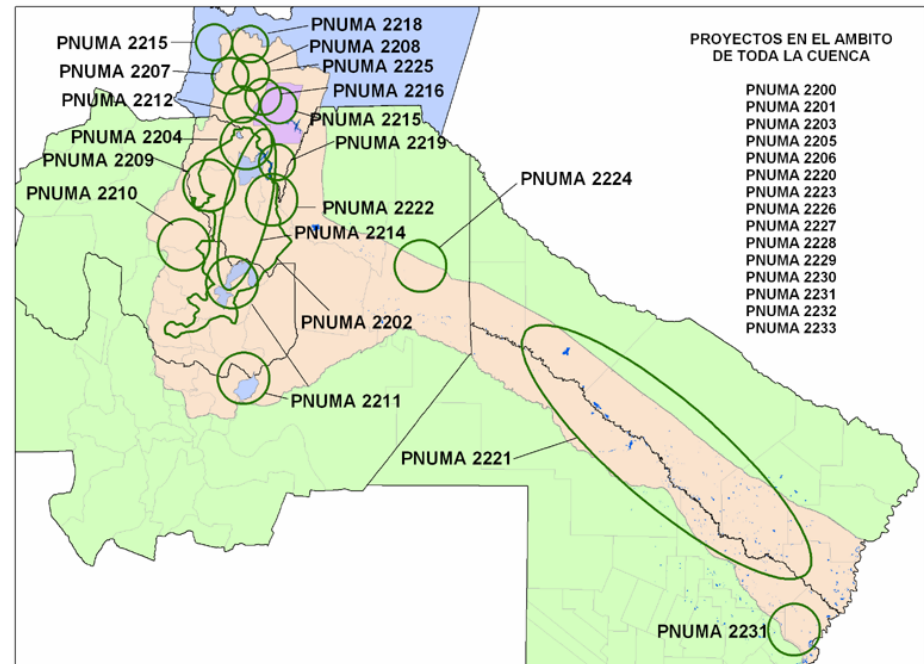
The SAP-Bermejo objective is to promote sustainable development across the entire area of influence of the Basin: the Tarija Department in Bolivia and the Provinces of Salta, Jujuy, Chaco and Formosa in Argentina.

The Program is intended to encourage and to restore the proper environmental performance of the Basin ecosystems, by undertaking strategic actions intended to address the direct, root causes leading to environmental degradation.



SAP BERMEJO – STRATEGIC AREAS

1. Institutional Development and Strengthening for Integrated Water Resources Planning and Management.
2. Environmental Prevention, Protection and Rehabilitation
3. Sustainable Development of Natural Resources
4. Awareness, Public Participation and Replicability



SAP BERMEJO - Institutional Development and Strengthening

This area included multiple actions designed to contribute to the strengthening of political, economic and judicial agencies, at the different levels of government, as well as to the strengthening of skills in professional, education and non-governmental organizations, for them to effectively contribute to the consolidation of development processes in the region and to promote an integrated management of the basin water resources.



SAP BERMEJO - Institutional Development and Strengthening

- More than forty (40) Joint Bilateral Cooperation Agreements were signed
- Regional Coordination Committee and Regional Advisory Committee were created and established within COBINABE's framework.
- Ad Hoc Committee, made up of representative members from both countries' Foreign Offices, was created and established.



SAP BERMEJO - Institutional Development and Strengthening

- COBINABE's Main Offices Agreement and Internal Regulations were developed and approved
- Bi-national Coordinator position was created and appointed covering technical and administrative areas.
- Annual budget allocated by both National Governments to support COBINABE



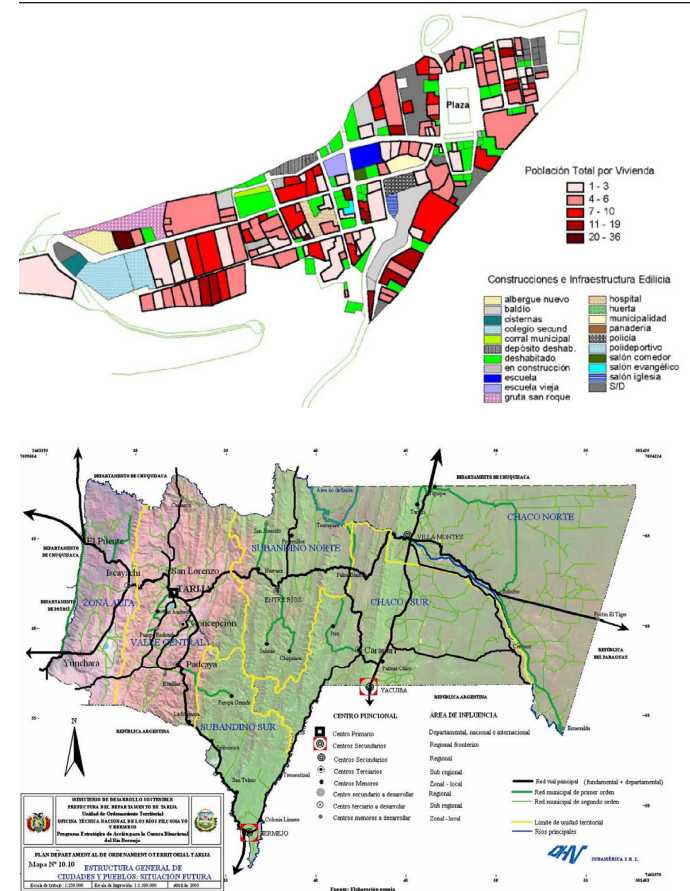
SAP BERMEJO - Institutional Development and Strengthening

- Communication Program of COBINBE was formulated and developed
- COREBE and OTNPB institutionally strengthened their human, technical, organizational and operating capacities
- Governmental agencies from the area of influence of the Bermejo River Basin, interested in the sustainable management of water and natural resources were strengthened.



SAP BERMEJO - Institutional Development and Strengthening

- Environmental zoning and land-use regulation pilot demonstration projects were implemented in Argentina.
- Land-use Regulation Plan for the Department of Tarijas 2006-2025 was completed and approved by resolution of the Departmental Prefecture Commission.



Main Lessons learned

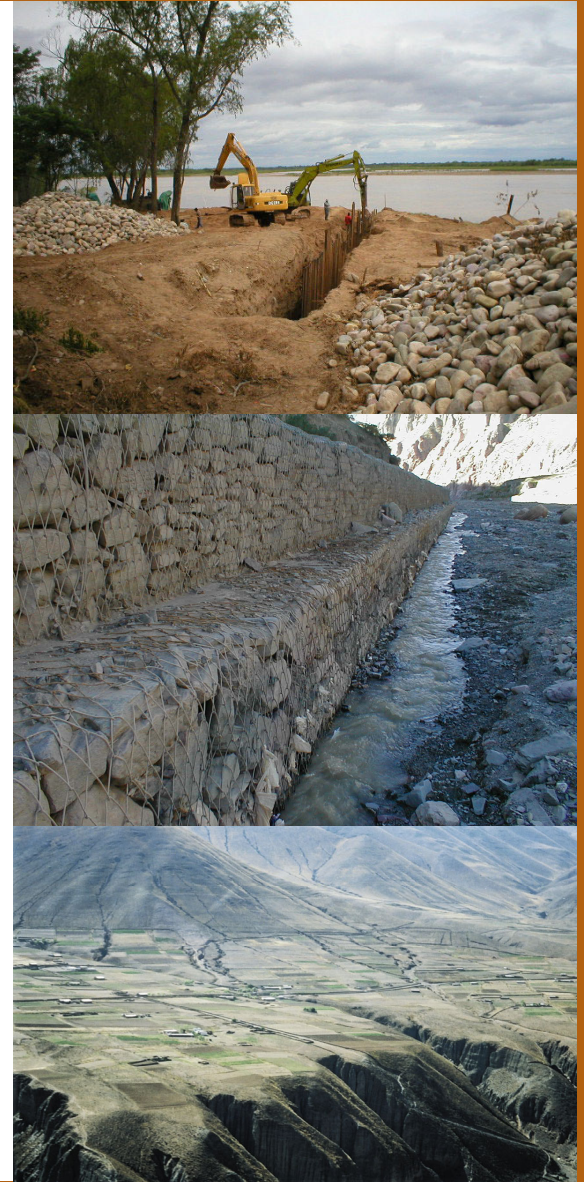
- The **participation** of the **highest authorities** in water and environment resources from the Provinces and the Prefecture and Municipalities of the Department of Tarija, **as members of the Regional Coordination Committee, was essential** for the institutional strengthening of COBINABE
- The institutional **strengthening of COREBE and OTNPB**, under the framework of a basin-based planning, was **instrumental to assist COBINABE's** Executive Secretariats in pursuing its objectives, while **consolidating as jurisdictional basin institutions**

SAP BERMEJO - Institutional Development and Strengthening

- The **institutional strengthening of Governmental Agencies** involved in water resource and environmental management **demonstrated the importance** of i) **promoting** a status report **self-analysis** and the **identification of needs** in terms of the objectives set forth in the SAP Bermejo, and ii) **promoting strengthening actions** aimed at the **fulfillment of goals and responsibilities** under an integrated framework for sustainable management of water and other natural resources
- The **periodic meetings** carried out by the COBINABE, and the **frequent bi-national technical meetings** held with the participation of the members of the Regional Coordination Committee **resulted instrumental** for the programming and monitoring of SAP's actions

SAP BERMEJO - Environmental Prevention, Protection and Rehabilitation

Under this area, mechanisms were encouraged to prevent and control the main degradation phenomena occurring in the basin. Said factors not only affect the diversity and availability of habitats, the suitability of natural resources and the quality of water, but also lead to problems such as floods and other natural disasters.



SAP BERMEJO - Environmental Prevention, Protection and Rehabilitation

Structural measures:

- Mud-flow control Infrastructure
- Sediments reservoir dams
- Protection of rivers banks Infrastructure
- Pluvial drainage.
- Clean-up and consolidation of watercourses
- Flood defensives
- Embankments



SAP BERMEJO - Environmental Prevention, Protection and Rehabilitation

non-structural measures:

- Livestock management
- Pastureland management
- Forest nurseries and forestry
- Waste management in small communities.
- Training activities



SAP BERMEJO - Environmental Prevention, Protection and Rehabilitation

- Calilegua – Baritú – Tariquía Bi-national Ecological Corridor.
- Plans for the sustainable management of Protected Areas.
- Environmental clean-up actions in the Guadalquivir River Basin and water-pollution control activities in the Bermejo Triangle
- Water Quality Monitoring Network



SAP BERMEJO - Environmental Prevention, Protection and Rehabilitation

Main Lessons learned

- Experiences obtained demonstrated that the **articulation of government**, national, provincial and prefectural, municipal and university sectors **requires deep effort** so as to make its **necessities, interests** and **priorities compatible** with those of **local residents**
- The **joint work** of the direct **beneficiaries** and SAP's **Technical Units** in the articulation of **planning processes**, as well as in the **implementation of bi-national teams** aimed at the implementation and monitoring of these projects, **is essential for the sustainability** of the actions carried out

SAP BERMEJO - Environmental Prevention, Protection and Rehabilitation

- **Engineering works** for sediment control **shall grant** direct and immediate **benefits** so as **to obtain acceptance** from the farmers. This gets them involved with the project, contributing to the proper implementation, maintenance and complementation actions of the works and agroforestry practices
- The **participative processes** conducted for project development and implementation **allowed the incorporation** of new **dimensions**, originally **unconsidered**, but **which resulted essential** for the social acceptance and internalization of these actions' direct beneficiaries.

SAP BERMEJO - Sustainable Development of Natural Resources

This area was intended to improve the quality of life and the standard of living of the population, by the sustainable development and use of natural resources. Projects linked to the efficient use and exploitation of water resources, based on the integrated management of basin natural resources, were key in the use of sustainable technologies and access thereof, as well as in research for the appropriate management and use of natural resources.



SAP BERMEJO - Sustainable Development of Natural Resources

- Sustainable management of goat livestock
- Sustainable management of tropical pastures
- Management of agro-forestry-pasture systems
- Small-scale traditional crops development
- Systematization of irrigation areas
- Soil management and erosion control plan along San Jacinto area



Main Lessons learned

- The **consolidation of production entities**, as well as the development of **municipal-level entities**, and the **strengthening** of communities in the **decision-making process** and institutional relationships **contributed** to the **strengthening of local capacities**
- **Production alternatives** identification, validation, and promotion projects **carried out by an education entity** represent a **multiplying effect**, being that the majority of students belong to producer families in the area.

SAP BERMEJO - Sustainable Development of Natural Resources

- **Access to new production practices**, together with the **improvement** of related **infrastructure**, and the implementation of management **business units** resulted in the **reduction of social vulnerability**, significantly improving life quality of beneficiary communities
- The **implementation** within the region of **projects** directed **by Non-Governmental Organizations**, which are entirely **familiar** with **local problems**, constitutes a **competitive advantage** for the **achievement of the successful** implementation of these projects

SAP BERMEJO - Awareness, Public Participation and Replicability

This strategic area promoted the establishment of fora intended to identify and coordinate the interests of citizens and organizations with economic and/or institutional responsibilities in the basin.

This area developed environmental, education, institutional transparency and exchange-of-information programs among the different stakeholders.



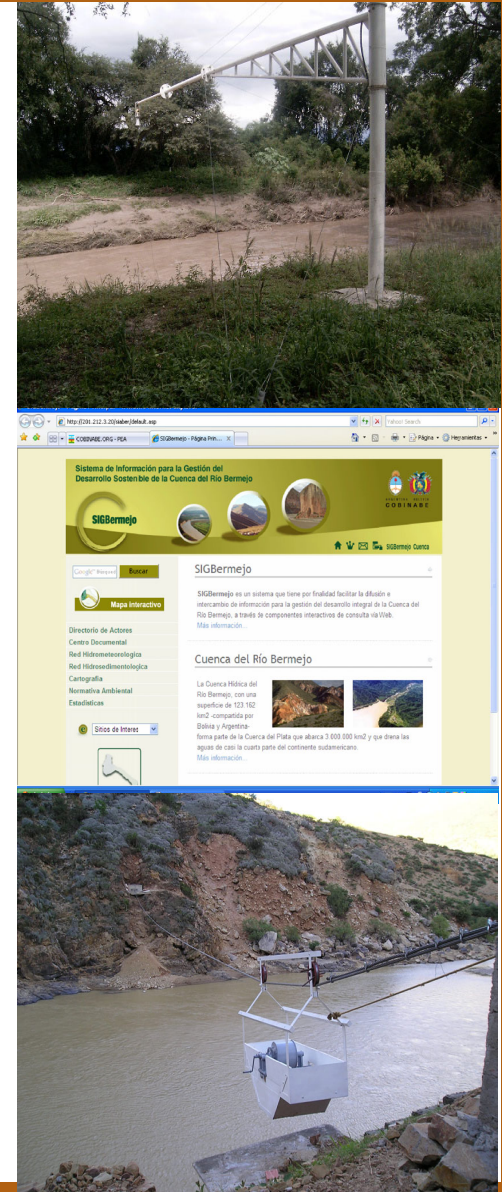
SAP BERMEJO - Awareness, Public Participation and Replicability

- Environmental Education Program
 - Public Participation Program
 - Communication and diffusion actions.
- WEB site.



SAP BERMEJO - Awareness, Public Participation and Replicability

- Integral Information System - SIG Bermejo
- Bi-national Hydrometeorological Network in charge of the collection and transmission of hydrometric height data and rainfall data on a real-time basis through 14 remote stations
- Water Quality Monitoring Network, made up of more than 40 sampling points



Main Lessons learned

- The **Regional Advisory Committee** is an **essential synergy and articulation instrument** for the actions developed by the Bi-national Commission and SAP Bermejo with NGO's, academic institutions, scientific and technical organizations, private society organizations and civil society
- **Communities' social and anthropological knowledge is elemental** for the simplification of the development and instrumentation of public participation mechanisms.

SAP BERMEJO - Awareness, Public Participation and Replicability

- **Communication and diffusion mechanisms**, such as the WEB page and the Information System framed under the Communication Program, **contributed to the access to information** and to the promotion of the project and of COBINABE, **encouraging** at the same time the **participation** of the different social sector of the Basin
- For the planning and instrumentation of **educative programs**, **school calendars** and **educative system structures** (timetables-operation-communication-contingencies) **must be considered**, in order to adapt terms and control schedules.

SAP BERMEJO - Conclusions

The SAP Bermejo (Strategic Action Program), through the execution of studies, demonstration projects, and short-term institutional actions in both countries, established an integrated management process of the Bermejo River Basin resulting in a “catalyzing” instrument for the development and implementation of a long-term program

In the Bermejo River Basin, which is characterized by its huge surface area, its diversity of habitats and landscapes, and its strong hydrological dynamics, the promotion of the sustainable use of water resources requires higher scale structural and non-structural solutions than those developed by the SAP



SAP BERMEJO - Conclusions

Lessons learned from performed practices and products achieved during the development of the SAP resulted in an invaluable reference material for the progression of the actions required for the integrated water resources management of the Basin.

SAP BERMEJO - Conclusions

Local benefits gained give quantitative evidence of the increase in the communities' ***Physical Capital***, through investments made on machinery, tools, land titling and regularization, and productive infrastructure; in ***Financial Capital***, through the generation of savings, the increase in productivity and production, the increase in demand for manpower, and risk-reduction resulting from improvements in commercialization channels; in ***Natural Capital***, through the preservation and promotion of rational use of natural resources; and finally, in ***Social Capital***, shown by the strengthening of institutional capacities, the progress made by communities on building relationships and interacting outside of their own environment, the improvements in social and gender equality, and the empowerment of women and minority groups for decision making processes.



SAP BERMEJO - Conclusions

Being the SAP's implementation stage duly completed, the Governments of Argentina and Bolivia, together with the COBINABE consider that new projects and actions based on the integral vision of the basin are required, which shall be developed on the basis of a new program which shall consolidate the management process already initiated.



SAP BERMEJO - Conclusions

Finally, proper sustainable conditions shall be granted in order that SAP Bermejo's benefits (impacts and results) shall continue after its completion. Such sustainability shall be based on three main focal points: an Integral Management Program of Bermejo River Basin; the consolidation of the institutional capacity required for the implementation of this Program; and the development of a financial strategy in order to obtain financial support for the proper implementation of the program.



SAP BERMEJO - Sustainability

The SAP Bermejo sustainability can be addressed from three complementary point of view:

- **Institutional Sustainability:** through organizational agreements, political and regulatory frameworks, institutional strengthening.
- **Economical and Financial Sustainability:** through counterpart commitments, budgets of basin organizations (bi-national and nationals), improvement of “Financial Capital”
- **Social Sustainability:** through stakeholders involvement, community participation in decision-making process, gender consideration.



The **Bermejo River Basin Integrated Management Program – BRBIMP**–, was developed as an instrument for the COBINABE to ensure the sustainability of the Basin integral management actions already initiated in the SAP Bermejo for the period 2010 - 2030.

The BRBIMP represents in consequence a key stage, on the one hand, to reinforce long-term development objectives set forth in the SAP, and on the other hand, to consolidate already initiated actions, and to deepen and broaden these particular objectives, adapting them to the framework conditions imposed by the historical process.

Thank you



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