News from Drynet
A global initiative giving future to drylands
Drynet is a project of 14 organisations from all over the world working together to combat land degradation.

NEWS

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Start Up Meeting of Drynet II
Santa Cruz, Bolivia
January 18th-21st 2011

The Drynet coalition is composed of representatives of NGOs from 14 countries in Europe, Asia, Africa and Latin America that work in international advocacy combating desertification. While promoting the framework of proper management of natural resources, it is now running the second part of its program. The meeting of Drynet II took place in Santa Cruz, Bolivia, January 18-19, 2011. Drynet II is partially funded by the Swiss Development Cooperation (SDC) and takes action since January 1, 2011.

The first day contained an overview of the Drynet program, its achievements in its first phase and the upcoming challenges for this new stage.

A special focus was set on the exchange of information and experiences and the promotion of intercultural competencies.

The meeting brought together numerous members of Drynet II, but unfortunately, due to logistical reasons, some partners were unable to attend this meeting. The meeting provided an opportunity to discuss, reflect and make concrete decisions regarding important aspects of the project. Among others the roles and responsibilities, financial issues and project activities of Drynet II were adressed.

The second part of the meeting was a two-day training given by Jitske Kramer. The overall objective of the training was to strengthen the collaboration amongst Drynet member organisations.

One of the greatest assets of the coalition Drynet is its size, as it has a presence in 4 continents. While this highlights DRYNETs cultural diversity it also reveals the challenges that exist in the fields of communication and coordination between the numerous cultural groups.

PROBIOMA hosted the event which was translated into English, French and Spanish, so that all participants were able to follow the discussions in detail. The event was held at the Hotel Los Cedros and was entitled: "Drynet: Effectively sharing Experiences across cultures." Mr. Cesar Altamirano, head of the National Program to Combat Desertification, attended the first day of the event.
The cultural differences affect all areas of life and thus as well professional cooperation. The training received in these two days was a refreshing way to get to know each other a little more and taught members how to let communication run smoother.

With great enthusiasm, a new period of improved interaction was initiated. The common goal of fighting desertification unites us over the various latitudes in which we perform our work.

**International Agenda 2011**

**September 3rd-5th 2011**, in Bonn, Germany, the 64th Annual Conference of NGO-DPI, entitled "Sustainable Societies, responsible citizens" will be held. Among others the following points will be addressed: the green economy and the eradication of poverty, the role of civil society in a world of rapid change.

http://www.uncsd2012.org/rio20/?page=view&nr=272&type=13&menu=23

**23 to 30 September 2011**, New York City - USA. The 64th Session of the General Assembly High Level Segment.

www.unccd.int

**3 to 4 October 2011**, New Delhi, India. Dialogue on "Green Economy and Inclusive Growth" This conference aims at supporting the preparation for Rio +20, providing a platform for international discussions on the opportunities for a green economy, the eradication of poverty and programs of social development. Mayor strategies include the improvement of food and energy security of the poor population.

http://rio20.net/eventos/

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**Water shortage and desertification:**

Desertification, land degradation and drought cause negative impacts on the availability, quality and quantity of water resources, resulting in water shortages.

The challenges posed by the scarcity of water for people in the drylands are on the increase both in magnitude and scope. As the world population is already higher than 6,000 million people, some countries have surpassed the limits of their water resources. With the current scenario of climate change, almost half of the global population will live in areas with severe water problems by 2030, including a population of between 75 and 250 million people in Africa. Moreover, the scarcity of water in some arid and semi-arid areas will force displacement of approximately 24 to 700 million people (WWDR 2009).

http://www.unccd.int/knowledge/docs/Desertificationwater-spa.pdf
June 17th International Day to Combat Desertification and Drought

INTERNATIONAL NETWORK FOR ENVIRONMENTAL REMEDIATION

On the occasion of the Day to Combat Desertification and Drought, the Department of Science and Technology of Bolivia, in coordination with several organizations including PROBIOMA-Drynet, held the first meeting of the Technological Innovation Network. It took place in the city of Cochabamba and was attended by over 150 representatives from academia, the scientific sector, and social organizations.

At this point in time the Network of Environmental Remediation was formed. A brief analysis of the situation in Bolivia and of the impacts generated by the different extractive and productive activities was presented.

Additionally contributions and actions carried out by different entities that do not maintain a level of coordination, were briefly detailed. For this reason a prioritized action plan has been established:

- Studies on hydrocarbon degradation by aerobic and anaerobic processes in the laboratory.
- Bioremediation with microorganisms.
- Studies on acid soil remediation with chemical processes.
- Bioleaching.
- Absorption of heavy metals with clays.
- Bioremediation with microorganisms of soils contaminated with copper.
- Passive methods for decontamination of acid waters of the mining and chemical treatment of heavy metals.
- Use of compost for bioremediation of acid waters.
- Use of sludge for encapsulation of heavy metals.
- Phytoremediation with the totora plant and other native plants.
- Creation of saline water distillation systems powered by solar energy.
- Phytoremediation of groundwater contaminated with arsenic.
- Development of physical means to replace mercury in gold mining.
- Reforestation of soils contaminated by gold mining.
- Protection of fertility, use and management of soil in the Intersalar and nutrient balance.
- Usage of bio fertilizers (Bokashi and worm humus).
- Usage of microorganisms for soil improvement.
- Usage of nitrogen-fixing bacteria for bio fertilizers for the cultivation of quinoa.
- Use of bacteria and fungi for pesticide degradation.
- Implementation of green fertilizers usage, soil conservation and water erosion.
- Use of microorganisms for biological control, improvement of soil fertility and acceleration of seed germination.
Based on the aforementioned proposals, the Environmental Remediation Network will aim to establish a forum for exchange, coordination, dissemination and technical-scientific advice for environmental remediation. Furthermore the following goals have been set:

- Promote and / or encourage the generation of joint work of members of the network for environmental remediation.

- Permanent exchange of technical, scientific information and technologies related to the field of environmental remediation.

- Disseminate information on prevention, mitigation and remediation, to the social environment.

- Contribute to the politics and legislation related to prevention, mitigation and environmental remediation.

- Generate input for environmental education related to prevention, mitigation and remediation.

In this sense we believe that Drynet through PROBIOMA can contribute much to strengthen these processes of institutional coordination between the state, civil society and the academic-scientific sector.

The first step has been taken and now it is necessary to take further action to assure a successful fight against desertification.

PROBIOMA

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Water shortages have a durable impact on the soil

Desertification is land degradation in arid, semiarid and dry sub-humid areas resulting from various factors, such as human activities and climatic variations. Water scarcity is prolonged imbalance between the availability of water resources and water demand. Increasing shortages of water - whether natural or caused by man - trigger and exacerbate the effects of desertification through long-term direct impacts on soil quality. The structure, the content of organic matter and the moisture levels of the soil are severely altered. The direct physical effects of soil degradation include the loss of freshwater resources, the increased frequency of droughts, sand and dust storms and a greater amount of flooding due to inadequate drainage or poor irrigation practices. If this trend continues, there will be a sharp decline in the amount of soil nutrients, thus accelerating the loss of vegetation cover. Sadly this leads to even further degradation of soil and water quality, including pollution, sedimentation, salinization and alkalinization.

http://www.unccd.int/knowledge/docs/Desertificationwater-spa.pdf
Recovery project for the saline soils through cultivation of quachi
Departamental Secretariat for the Environment and Mother Earth of the
Autonomous Government of Oruro

The saline soil recovery project leads since the start of its activities
(October 1, 2008) a comprehensive fight against the desertification
of soils. The management of salt and chemical proliferation that
were applied by the mining and agricultural industries is one of
the focus points. The recovery of these soils is made possible
through the cultivation of Quachi crop, a halophyte plant that due
to its morphological and anatomical characteristics adapts to saline
soils. It can resist soils in stage of degradation, limited access to
organic material and is resistant to sudden temperature changes
in the Highland Plateau.

RESULTS

SALINE SOILS AND MUDY CLAY SOILS
This species has a protein content of 16.78% similar to alfalfa and can be consumed by sheep, camels and bobinos. This species is the only one that remains green throughout the winter and is very important for livestock alimentation. In recent years of work this halophyte species was planted in an area equivalent to 5200 ha, in 90 communities of three municipalities. Exclusively seeds that were produced and harvested in regional communities with the typical ayni system were used. This system is typical for indigenous andine societies and is based on communal cooperation.
The combat strategy against desertification and drought is put into operation

Bolivia already has a National Strategy to Combat Desertification and Drought and a special governmental commission has been established to coordinate the implementation of the Action Plan that involves multiple other governmental institutions. The Department of Science and Technology of Bolivia, with the support of PROBIOMA and Drynet organized a national event for Technological Innovation in June 2011. The Network of Environmental Remediation was created, that primarily deals with the impacts on soil quality caused by the mining, extractive and agricultural industries.

In this sense, the network brings together the Bolivian government (involving the special commission for the United Nations Convention to Combat Desertification (UNCCD)), the Viceminister for Science and Technology, and PROBIOMA Drynet. In addition the governor of Oruro joined the network underlining the importance of the matter at hand. In this department 90% of the soil suffers from desertification due to the mining industry and the monocultivation of quinoa. Furthermore, the public universities of Potosí (a department in which 90% of the soil faces desertification) and Tarija (80%) have joined the Network.

Through Drynet II PROBIOMA was capable of involving the departmental governments and the scientific academic department in this process. They will strengthen the work of the special commission and the national government entities.

This process has been supplemented by the experience gained under the Drynet I that took place in Chile in coordination with the OLCA. Research in bioremediation of soil contaminated with mining waste has been made and will now be applied in Bolivia. Especially the recovery of native species possessing features contributing to desalinization that prevent desertification of soil will be fostered.

On this occasion, a joint program between the Vice Ministry of Science and Technology, the special commission (that is part of the Ministry of Environment), the Bolivian Institute of Nuclear Technology - IBTEN, the Technical University of Oruro - UTO, Oruro government officials and the Tomas Frias University of Potosi has been established. This joint program can count on the PROBIOMA - Drynet support for the coordination and articulation of this process.

For this purpose, Drynet II will also support the dissemination of such experiences and the strategies employed through the Drynet Newsletter as well as the dissemination of the Strategy within the civil society.