



drynet

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No. 5

May 2009

News from Drynet

A global initiative giving future to drylands

Drynet is a project of 14 organisations from all over the world. They work together to combat land degradation

GLOBAL NEWS

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PUBLISHED BY

Both ENDS
Environment and Development Service



Editing Both ENDS, the Netherlands and LPPS, India



This project is funded by the European Union

Drynet Update

Welcome to the fifth issue of "News from Drynet", a newsletter from the Drynet network on global concerns for drylands from local perspectives. This issue highlights the current debates on climate change and its consequences for drylands, the desertification processes and the possible methods of adaption.

During March 2009 the Drynet network held their regional meetings in Asia, Africa and Latin America to discuss the (regional) progress on project activities, the situation in drylands, and the prospects and directions for future cooperation. Besides the project related work each meeting gave participants further inspiration through a field trip in Kazakhstan, an open conference in Senegal and the presentation of a research on bioremediation initiated by Drynet in Bolivia.

One of the themes which transpired from all three meetings as crucial issue for the future work of Drynet was the debate on climate change, the impacts this will have on dryland inhabitants and various strategies of adaption to these changes which are propagated. Being an already highly fragile ecosys-

tem, drylands are likely to suffer heavily from even minimal increases of temperature or variations in rainfall. In the wake of these changes many more regions will be adversely affected by the process of desertification and land degradation. For these reasons the implications of climate change and the strategies of adaption will be a top priority for our work in the coming years.

By Drynet partner: Both ENDS, the Netherlands - drynet@bothends.org



Regional Meeting in Africa. Drynet team visits a farmer's field outside Dakar, Senegal - Photo by Maude Gentil

GLOBAL NEWS

Adaptation to climate change:

SYNERGIES RESULTING FROM THE INITIATIVES DRAWN UP AT THE CONVENTION TO COMBAT DESERTIFICATION

It has been several years since multinational efforts to develop and implement action programmes to combat desertification were begun. These processes have led to the implementation of various initiatives to mitigate the effects of drought and also the consolidation of survival strategies for local communities faced with land degradation.

The initiatives undertaken in the affected countries of Africa, Asia and Latin America primarily address agricultural development and food security, conservation and protection of natural resources, water resources management, efficient energy use, information and communication.

These initiatives largely correspond to the priority activities identified in the National Adaptation Programmes of Action to address the most urgent needs and concerns regarding the adverse effects of climate change in the least developed countries (LDCs). In Africa, this applies particularly to water resources, food security, arid zone ecosystems, forestry and coastal areas. To overcome the difficulties posed by climate change, it is difficult to differentiate between the combat against desertification and adaptation to climate change with regard to the above mentioned actions. Some actions to combat desertification may also con-

tribute to the mitigation of climate change, such as sustainable land and forest management with carbon sequestration. In addition, improving the access of affected developing countries to renewable energy technologies could reduce greenhouse gas emissions resulting from the use of fossil fuels. The needs stated by the concerned parties through the National Adaptation Programmes of Action for Climate Change and the National Action Programs to Combat Desertification highlight common priority areas and the need for concentrated execution of these strategies to create a real sustainable development perspective. Although their methods and approaches are different, the programmes from the UNFCCC and UNCCD conventions share a common objective: to improve the living conditions of vulnerable and impoverished populations affected by desertification and climate change.

To accelerate the course of action, the

adaptation programmes must reinforce and extend the reach of the activities already begun within the framework of the NAP to Combat Desertification. This approach will reinforce the collaboration between different players and institutions without duplicating the implementation of actions resulting from the conventions and, with the existing financial resources, effectively respond to the needs of the most impoverished populations living in arid zones in developing countries where the means of subsistence are directly linked to natural resources.

Approaches to addressing adaptation to climate change can derive global benefits from the synergies of the initiatives and models drawn from the Convention to Combat Desertification.

By Drynet partner: Emmanuel S. Seck, ENDA TM, Senegal (*Environmental Development Action in the Third World*) - "Environment Energy Development"





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GLOBAL NEWS

EXCERPT FROM ARTICLE:

Can we survive the real and semantic pitfalls of adaptation?

Recognition by the Intergovernmental Panel on Climate Change (IPCC) that the climate is rapidly changing and will affect the world's most vulnerable communities most severely, has put adaptation high on the global agenda. What does this imply for development policy and practice?

As circumstances and the physical environment change, living things and their societies must also change if they are to survive and prosper in the new conditions. The particular combination of qualities, abilities and mental and emotional resources that enables some people to face and respond to change positively we call "adaptive capacity": the ability of a living social-ecological system to adjust responses to changing internal demands and external drivers. If they are to survive and thrive, agricultural and pastoral communities in the drylands will have to manage their resources in ways that draw on past knowledge and experience, but which go beyond the bounds of the familiar and the traditional. It is essential that we understand what sorts of conditions will enable the world's most vulnerable communities to thrive in this changing global environment, use this knowledge to shape our policies and practices. "Poverty traps" and "rigidity

traps" both limit the ability of people and their institutions to adapt successfully to changing societies, and relative wealth does not protect institutions from crumbling in the face of crisis. Providing money and material resources to vulnerable communities is not enough to increase their resilience. Inappropriate aid might undermine the resilience and self-sufficiency of farming communities. The post-Copenhagen adaptation agenda must enhance resilience and preserve environmental services.

It will be vital to focus material resources on ensuring that the resilience and problem solving capacities of dryland communities are enhanced. What was described as good development practice in previous eras is more relevant than ever in the "adaptation era": sustainable resource management approaches based primarily on local resources, informed by sound knowledge of local eco-and social systems, and engaging the full participation of local communities via participatory action research. "Solutions" based on analysis and technologies that only exist outside affected communities will fail. And when this happens we must ensure that the failure is not blamed on the affected communities.

By Drynet partner: Noel Oettle, EMG, South Africa

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If you like to receive this newsletter electronically or for more details on the articles published, contact us at drynet@bothends.org or check our website www.dry-net.org
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..... International Agenda 2009

04 - 15 May 2009 - CSD-17 Session in New York, USA 3rd Implementation Cycle: Policy Session. As the Policy Session of the third implementation cycle, CSD-17 will continue to focus on the following thematic issues:- Africa, - Agriculture, - Drought & Desertification, - Land, - Rural development. Drynet will be present at the CSD-17 with a side event. More information: www.un.org/esa/dsd/csd/csd_csd17.shtml

21 May - 22 May 2009 Environment & Economy: Mind the Gap in Cape Town, South Africa The conference will cover environmental resource economics as it applies to natural resource management. This includes the economics of biodiversity conservation, water resource management (especially natural aquatic environments), agricultural resource management (especially natural landscapes), climate change and marine resource management. More information: www.capeaction.org.za/index.php?C=events&P=2

01 June 2009 - 03 June 2009 E-biosphere Conference - International Conference on Biodiversity Informatics in London, UK Biodiversity Informatics is a young field that is making diverse classes of biodiversity data available online and putting these data to work for science and society. The Conference will highlight the accomplishments, capabilities and uses of Biodiversity Informatics and will gather community input for a 5-10 year research roadmap. More information: www.e-biosphere09.org

GLOBAL NEWS

The Camel:

A MAJOR RESOURCE FOR CLIMATE CHANGE

With its proverbial desert adaptation, the camel is the one domestic animal that is best equipped to withstand global warming. Already it is replacing cattle in areas such as the Ethiopian Borana rangelands where a higher atmospheric CO₂ content is driving the substitution of grasslands with shrub vegetation. Under high ambient temperatures, camels also have the major advantage over exotic cattle of not depending on energy-intensive air-conditioning for providing large amounts of milk.

While it is well known that camel racing is big business in the Gulf, the economic potential of camel milk production is less frequently realized. But lately demand for packaged camel milk has sky-rocketed in the supermarkets of the United Arab Emirates, especially Dubai, as camel milk has become appreciated as an alternative treatment for Diabetes: it contains a substance that simulates the effect of Insulin. The so-called white gold of the desert also has ingredients that stimulate the immune-system and therefore is used for the treatment of tuberculosis and even cancer. Furthermore it can be consumed by the increasing number of people who suffer from lactose intolerance. Demand for camel milk has also soared because Dubai's camel dairy Camelicious has entered into a joint venture with an Austrian chocolate maker which necessitates camel milk powder. For these

reasons, the Gulf countries are currently on a shopping spree in countries such as India, Pakistan, Sudan to purchase as many female camels as possible. Most camels in the world are still owned by some of the most marginalised people in the hottest and remotest parts of Africa and Asia. Obviously these people have a major resource on their hands, but in order to make use of this resource they require various inputs, such as awareness about the economic potential of their animals, organisational strengthening and training, as well as technological support and infrastructure for processing camel products which are not limited to milk, but also include meat, wool, leather, and even camel dung paper. Indian Drynet partner Lokhit Pashu-

Palak Sansthan, with support from a European Drynet partner, the League for Pastoral Peoples and Endogenous Livestock Development is currently supporting the camel breeders of the Thar Desert to cash in on their traditional assets, with significant results. However, much more needs to be done, and this NGO effort must be supported by appropriate government policies as well as targeted research efforts. It also should be replicated in Pakistan, Iran, and other Southwest Asian countries to ensure that it is not just affluent Gulf countries that can capitalize on this animal, but also the poor people of the drylands.

**By Drynet partner:
Ilse Köhler-Rollefson, LPP, Germany**

Camel milking in Khaba - Photo courtesy of the author



**COLLECTED
REGIONAL NEWS**
News from all over
the world collected
from Drynet's
Regional Newsletters

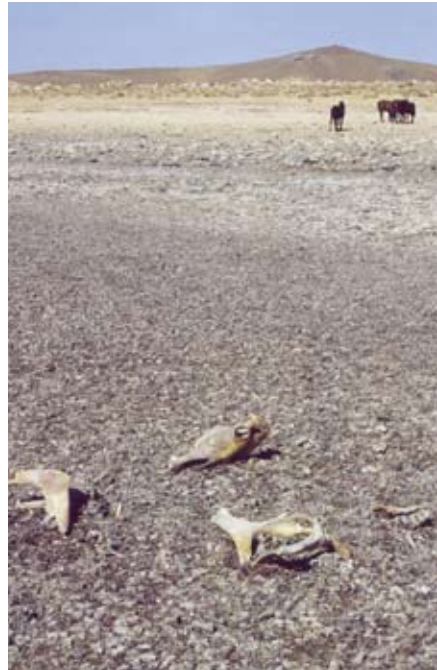
News from Central Asia:

AN ADDED CHALLENGE - CLIMATE CHANGE IN CENTRAL ASIA

Climate change is already under way, and its consequences are no longer reversible, even if immediate action is taken to mitigate it, according to the conclusions of the Intergovernmental Panel on Climate Change (IPCC) in its assessment report "Climate Change 2007". And the IPCC also concludes that Central Asia is one of the regions of the world that is most threatened by climate change. The marked rise in temperature, reduced precipitation and, in the long term, melting glaciers, will threaten freshwater supply in the region according to the climate experts' forecasts.

Potential consequences of climate change in Central Asia

Various climate scenarios show that temperatures in Central Asia are set to increase by two to three degrees on average over the next 50 years, while precipitation will decrease. As a result, climate zones will shift and hence agriculturally relevant arable land, pasture and forest will move northwards by up to 400 kilometers. This process will create a new hyper-arid zone.



Picture by Stefan Mikhel

As a result, in the event of failure to adapt land use to these changes, degradation will increase sharply, particularly in the semi-arid and arid areas of Central Asia. Overall, the IPCC assumes a loss of productivity of 40 to 90 per cent in the dry zones of Central Asia. River run-off in summer will increase in the medium term due to increasing glacier melt, but what lies ahead in the long term is a decline in available water resources. Taking a more differentiated view, however, some regions of Central Asia could in fact benefit from climatic changes in the short term.

In Kyrgyzstan, for example, forests in the mountainous regions could spread and forest density could increase due to the higher temperatures and improved water availability. Higher yields are also expected in arable farming.

In Kazakhstan, on the other hand, freshwater resources will decrease by 20 to 30 per cent in the longer term, and grain yields and pasture productivity are

expected to fall by up to 90 per cent. Expectations are similar for Turkmenistan. In Tajikistan, summer pastures are expected to benefit from climatic changes, but winter pastures, on the other hand, will become degraded. In the medium term, a reduction in glacier ice volume of up to 30 per cent is expected, which is why there is likely to be a significant reduction in water run-off from the rivers in the longer term. This could have catastrophic consequences for irrigation agriculture, water supply and hydro-power generation.

Climate change and desertification

Against this background, combating desertification takes on even greater significance, because climate change, desertification processes and land use are intimately interconnected.

If the productivity of agricultural land declines as a result of climate change, but current patterns of intensive and inappropriate land use continue, degradation of resources will be even more devastating.

Another reason why Central Asia is one of the regions of the world most at risk is because here the consequences of climate change - water shortage, decline in soil fertility, loss of harvests and incomes, scarcity of food and drinking water - will affect a region where rural poverty is already widespread. The social consequences, such as loss of food security, conflicts over water, or migration to more fertile areas, are almost impossible to predict at present.

An issue for policymakers and researchers

How then are we to respond to the problems that lie ahead? One of the biggest challenges is adapting land use to the declining productivity of agricul-

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tural land induced by climate change. In order to ward off the increasing risk of degradation, it is vital to make land use more flexible, for example by planting new types of crop, making pasture use more mobile, introducing other types of livestock and flood protection measures.

Measures already under way, such as the launching of the regional initiative CACILM and the numerous local projects in the Central Asian countries themselves, form a good basis for an adaptation strategy of this sort. This is

because, more than anything else, they provide the people directly affected by the consequences of climate change with competencies for combating desertification and managing increasingly scarce resources more flexibly.

The Central Asian Countries Initiative CACILM is a platform that represents a first attempt to approach these issues at several levels - it is not a solution to all the problems. What is needed first and foremost are simple human qualities: understanding the issues, acting on them, and persevering until one gets results. Only then can desertification be combated sustainably and only then will people in Central Asia be able to continue to derive benefit from the use of their land.

By Drynet partner : CAREC, Kazakhstan

News from Mauritania:

EXCERPTS FROM THE CASE STUDY "ACUTE RESPIRATORY INFECTIONS (ARI), A THREAT WORSENER BY CLIMATE CHANGE IN MAURITANIA"

The case study was supported by the IIED (International Institute for Environment and Development) and the CLACC network (Capacity strengthening in the least-developed countries on Adaptation to Climate Change). The study was led by a working group which brought together researchers and a panel of national expert climatologists, meteorologists, hydrologists, statisticians, doctors, nutritionists, and epidemiologists. The choice of ARIs as case study was validated in a workshop which gathered the group of experts.

Health Sector Vulnerability to Climate Change

Climate change will have some effects on the operation of the ecosystems with repercussions on the human health (WHO, 2004). The human activities for industrial development and the rapid growth of the world population contribute to breaking the natural balance of the ecosystems and the climate. One of the obvious consequences of this is the considerable reduction of biodiversity due to the fragmentation and the degradation of natural spaces and pollution, etc.

The alteration of the vegetal cover (deforestation, fragmentation of habitat) caused by drought and human activities are actual evidence of these environmental disturbances with harmful effects on both human and animal health (Patz, 2005). Some of these disturbances can directly or indirectly interfere with



*Village in Central Asian Desert,
Picture by Mamadaliev Tachir*

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the actors of the biological cycle of a pathogenic agent: agents of diseases, such as mosquitoes or other harmful animals. For instance, rodents may proliferate in a favorable environment and transmit disease to people. Even though parasites and pathogenic agents are invisible (bacteria, fungus, virus, etc) they play a major role in the operation of ecosystems. In fact, they regulate the balance of the ecosystems naturally established a long time ago. In addition, the reduction or degradation of the quality of water resources has a direct or indirect impact on human health and sanitation; the prevalence of water-borne diseases and the resurgence of endemic disease are a threat to public health. Climate change can increase the risks and lead to the proliferation of other harmful animals, which will live in the bare spaces or disturb the interactions in the trophic networks.

Main features of acute respiratory infections

ARIs are infections affecting the upper and lower parts of the respiratory system (lung infections, bronchitis and parenchyma infections). They gather all the pathologies affecting the respiratory and lung systems (ear infection, pneumonia, flu, myalgia cold, rhinopharyngitis, bronchiole infection, acute bronchitis, scarlet fever and angina). These infections usually affect children and they cause 30 – 40% of hospitalization around the world.

Correlation between climate ad ARIs in Mauritania

The climatic projections carried out through the models approved by IPCC predict a considerable reduction of rainfalls in the southern part of the country and more frequent droughts with consequences on waterways by 2020 and 2050. The reduction of rainfall will also have some incidence on communities in Mauritania resulting in more malnutrition with its consequences for the growth and development of children; more deaths and greater prevalence of diarrheic diseases, etc. As presumed by the physicians, it is hard to establish a formal correlation between the weather and the breakdown and evolution of ARIs in Mauritania for two main reasons: on the one hand, the fragmentary nature of the available data, and on the other hand, the inadequacy of public examinations about ARIs. However, the hard work carried out enabled to produce some results, which can be interpreted even though they are not fully perfect.

At the level of the statistics, the study of

the data collected shows the problem related to the correlation between the two observed climate parameters (rainfall and temperature) and both the region and the year without any regard to the pathology, which facilitated their interpretation. The study of this problem focuses on the outcomes of the tested samples concerning the evidence of the correlation between these two climate parameters and the relevant ARI.

Conclusions

In the light of the outcomes of the study of the correlation between ARIs, rainfall, and temperature and considering the weather forecast, there are indications that the number of ARIs could rise to reach a considerable amount and even tend to proliferation. Consequently, this could be a new threat for communities, particularly children, old people, and women.

Selected by Drynet partner: Tenmiya, Madyoury Tandia, Mauritania

Would you like to read the complete versions of these articles, please check the regional newsletters of CAREC, Tenmiya and OLCA on the website: www.dry-net.org.

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News from Chile:

"LANDS OF LIFE" - A RADIO CAMPAIGN AGAINST DESERTIFICATION AND DROUGHT

"Lands of Life", the radio campaign against desertification and drought, which was carried out in Chile during March and April by the Latin American Observatory for Environmental Conflicts (OLCA) received a resounding welcome.

More than 60 community radio stations participated in the initiative to promote the protection of soil fertility in the country and to explain the various aspects and problems of desertification. The campaign presented the vision of those who combat desertification locally, and what the UN is doing to face what it describes as a major economic, social and environmental problem that affects humanity. The campaign also identified key practices that threaten soil fertility in Chile, such as urban sprawl, monoculture, mining, indiscriminate use of fertilizers in agriculture, and poor, almost non-existent, state policies on environmental protection.

One of the experiences on the seriousness of soil degradation was explained by Juana Curía, a woman from a Mapuche community affected by the timber industry: "the forest has life, hope, health, harmony, culture; it has knowledge, love; it has all that holds the harmony of our people; pine or eucalyptus, instead, is something that is coming



Promotional poster of the radio campaign, "Suelos de Vida" or "Lands of Life".

to harm you ... it is like a machine gun, but slower, slower and silent, and in the end it kills you."

The campaign delivered powerful testimonies such as this through 40 audio files (*) categorised in four groups. In the first group, radio drama was used to encourage listeners to gain more knowledge about desertification. The second, included testimonies from witnesses affected by industries that degrade their land and culture and often force them not only to change jobs or activities, but also expel them from their lands. The third group presented the views of experts and scientists from different countries on desertification. The last group of audio files disseminate the

ties that have succeeded in implementing small scale projects for sustainable production.

The name of the campaign "Lands of Life", represents the strong belief that an informed society can and will stand up against hardship, but that it also needs to take strength from the land to be able to fight for the recognition of its social and environmental rights.

(*) The audio files were distributed in CDs and are also available on www.olca.cl and www.dry-net.org

By Drynet partner: Javier Karmy, OLCA, Chile