Technical Workshop
on preparation towards Terms of Reference for a regional drought centre
in Central Asia

20-21 November, 2007, Tashkent, Uzbekistan

REPORT

1) At the Technical Workshop, a zero draft proposal on the Terms of Reference (ToR) for a
drought management centre in Central Asia in the context of the United Nations Convention to
Combat Desertification (designated in the present document as a Centre), was presented and
discussed with a view of reaching agreement on a revised proposal of the document. The draft
was prepared based on the information provided by the Central Asian countries in a form of the
questionnaire designed by the UNCCD (United Nations Convention to Combat Desertification)
Secretariat and the OSCE Secretariat.

2) The Technical Workshop was organized from 20-21 November 2007 in Tashkent, in
collaboration with the OSCE and the UNCCD Secretariat, and hosted by the Centre of
Hydrometeorological Service of Uzbekistan (Uzhydromet). It was attended by 13
representatives from Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan as well
as representatives from CALCIM, the GEF Operational Focal Point for Uzbekistan, WMO and
Mongolia, as observers.

3) The Workshop was opened by Mr. Viktor Chub, Minister, Director-General of Uzhydromet. In
his opening address the following major points were emphasized:
   a) Desertification and drought in the sub-region influence on sustainable development of each
country by their interactions with the important economic and social questions as well as the
problems arising due to worsening of the environmental conditions. During the last several
decades the economic and social effects of drought were especially significant in Central
Asia.
   b) Reduction of the negative consequences of drought and achievement of the UNCCD aims
are complicated due to the expected deficiency of water in the sub-region and climate
change.
   c) Understanding the problem of the vulnerability increase, in the Central Asian countries, in
respect to natural disasters such as drought, Uzhydromet on behalf of the government of
Uzbekistan, proposed the creation and establishment of a regional Centre on drought
monitoring in the context of realization of the UNCCD and the Sub-regional Action
Program for the Central Asia.
   d) Uzhydromet envisages that the basic aim of the future Centre would be, coordination of
activities of the national hydrometeorological services in the Central Asia region,
concerning monitoring development, through systems of regular or operative observations,
implemented by uniform techniques and programs. These data would be the basis for
assessments of: extreme hydrometeorological situations, the analysis of occurring processes
and duly allocation of tendencies. All this will serve to develop evaluated prevention and
other measures of mitigation, of the consequences of drought for the economy and
population in Central Asia.
e) The negative consequences of drought can worsen, apparently, under the influence of climate change. Hence, it is necessary to create an active, scientifically proved, cooperation for consideration of these problems.

f) Today it is also necessary to consider the fact, that global warming will continue, causing a further increase in the number of extreme weather conditions, i.e. the drought periods and changes in the formation of water resources. All this can lead to additional, negative consequences for the countries located in the basin of the Aral Sea.

g) In Uzhydromet a considerable long-term experience of operative services exists in the field of regional hydrometeorological monitoring and research on drought and its early warning.


a) thanked the UNCCD, the countries for answering the questionnaire and the consultant on preparation towards the draft Terms of Reference for a regional drought Centre in Central Asia

b) emphasized the fruitful cooperation between the OSCE and the UNCCD, over the last year and in relation to the Spanish Chairmanship and the Economic and Environmental Forum.

c) thanked all colleagues who worked on the preparations of the meeting

d) asked all participants to be active during the Workshop and to emphasise what they consider important in terms of their needs

5) Welcome statement: by Mr. Mikhail Outkine, Programme Officer, UNCCD. Mr. Mikhail Outkine:

a) expressed his gratitude to Ms. Saba Nordstrom and OSCE for their initiative on this project without which the organization of this Workshop was not possible today.

In his welcome statement the following items were also underlined:

b) The idea of a sub-regional Drought Management Centre was first mentioned in 1997 when the CIS countries met to discuss implementation of the UNCCD.

c) Gradually the process of cooperation on drought in the sub-region has been developed. This is the opportune time for all Central Asia countries to meet and decide on the establishment of a sub-regional centre.

d) The importance of this Technical Workshop was stressed as it is necessary to approve in the next year the Terms of Reference for a regional drought Centre in Central Asia.

6) The Workshop proceeded with the election of a Chairperson of the meeting. In accordance with the established practice, a representative of the host country (Uzbekistan) was proposed to chair the Workshop. After informal discussion and consultations the candidature of Mr. Bakhtior Kadyrov, First Deputy Minister, Deputy Director-General of Uzhydromet, was presented to the Workshop participants. Mr. Bakhtior Kadyrov was elected as a Chairman of the Workshop. Then the agenda of the Workshop was adopted by the participating countries.

7) Following the Item 2 (“Background and objectives of the workshop”) of the Workshop agenda, Ms. Saba Nordstrom, Project Manager and Environmental Adviser, OSCE, presented the project and its background:
a) Drought affects sustainable development through specific relationships with social and economic issues e.g. poverty, poor health/nutrition, lack of food security and environmentally induced migration/displacement of persons. This may lead to tension within and between countries. Drought mitigation and implementation of the objectives of the UNCCD need national, as well as cross-border cooperation.

b) Drought does not recognise national boundaries. Cross-border cooperation helps build confidence between nations. Transboundary cooperation can build long term systems for tackling collective issues/problems. Regional collaboration between governments, institutions, research and development, strengthens the region as a collective player in the political sphere. Duplication, at national level, of efforts is avoided and progress in further areas can thus be sought.

c) In 2007, the Spanish Chairmanship of the OSCE chose “Key challenges to ensure environmental security and sustainable development in the OSCE area “Land degradation, soil contamination and water management” as a theme for the 15th OSCE Economic and Environmental Forum. The establishment of a Drought Management Centre in Central Asia was raised during the 15th OSCE Forum process as an essential element for ensuring sound drought management in the region, fostering collaboration and ensuring environmental security in the region.

d) The UNCCD, in cooperation with the OSCE and World Meteorological Organisation (WMO), prepared and sent a preliminary survey questionnaire to the UNCCD National Focal Points, meteorologists and the scientific community in five Central Asian countries in order to assess the need and expectation for a Drought Management Centre in the context of UNCCD. This questionnaire was designed to receive basic information from each Central Asian country regarding their interest in and readiness for the establishment of a Central Asia Drought Management Centre in the context of UNCCD.

e) The consultant of OSCE, Dr. Vesselin Alexandrov summarized all answers from the questionnaire and wrote a zero draft proposal on the Terms of Reference for a drought management Centre in Central Asia in the context of the UNCCD. At this meeting, the zero draft proposal on the Terms of Reference will be presented and discussed with a view of reaching agreement on a revised proposal of the document.

f) The draft Terms of Reference will be updated, considering the discussion and proposals during the technical Seminar in Tashkent, including also the recommendations made later on by national experts in Central Asia.

g) A possible, political level, follow-up meeting is foreseen for 2008, under the project.

8) A presentation on sub-regional cooperation of Central Asian states on combating desertification and mitigating effects of drought within the UNCCD context was given by Ms. Yukie Hori, Programme Officer, UNCCD Secretariat. Ms. Hori underlined the following points:

a) The UNCCD objective is to combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification through effective action at all levels.

b) “Drought” is naturally occurring phenomenon that exists when precipitation has been significantly below normal recorded levels, causing serious hydrological imbalances that adversely affect land resource production systems.

c) “Mitigating the effects of drought” includes activities related to the prediction of drought and intended to reduce the vulnerability of society and natural systems to drought as it relates to combating desertification.
d) According to the UNCCD Article 4 “General obligations” it is necessary to: adopt an integrated approach addressing the physical, biological, and socio-economic aspects of the processes of desertification and drought […]; integrate strategies for poverty reduction into efforts to combat desertification and mitigate the effects of drought.

e) According to the UNCCD Article 5 “Obligations of Affected Country Parties” it is required, among others, to establish strategies and priorities, within the framework of sustainable development plans and/or policies, to combat desertification and mitigate the effects of drought;

f) All the Central Asian countries have prepared national action programmes (NAPs) to address their issues related to combating desertification and land degradation in accordance with provisions of the Convention. At present, the UNCCD secretariat is assisting some countries to update the National Action Programme, taking into account the recent development such as launching the implementation of CALCIM.

g) The Convention considers the preparation and implementation of a Subregional Action Programme (SRAP) as an integral part of the countries’ national policy on sustainable development. Central Asia developed a Subregional Action Programme to Combat Desertification (SRAP/CD) in 2003. The activities proposed in SRAP/CD include development of drought early warning system, preparation of desertification map of Central Asia and establishment of a sub-regional monitoring and evaluation system based on a common database. The proposals of these activities address the need of a regional centre, which corresponds to the complex impacts of the desertification and drought not only from environmental aspect but also from socio-economic and political perspectives.

h) Thematic Programme Networks (TPN), established to provide structural support to the Action Programmes at national, subregional and regional levels, has a component (i.e. TPN1) on desertification monitoring and assessment, which has a strong linkage to the idea of the Drought Management Centre. All Central Asian countries participate in TPN1, and accordingly, the linkage between TPN1 and the Drought Management Centre could be considered for possible synergetic implementation.

i) For the establishment of the Drought Management Centre in Central Asia, it is important to promote the collaborative work between the UNCCD national focal points, representatives of National Meteorological and Hydrological Services (NMHS) and experts on drought from the scientific community, along with other relevant stakeholders.

9) In accordance with the Item 3 (“WMO experience in drought centres”) of the Seminar agenda, the WMO representative, Mr. Mannava Sivakumar presented the WMO experience on establishing and functioning of the drought centres in Africa and of the Drought Management Centre for South Eastern Europe within the context of the UNCCD:

a) The overall goal of drought monitoring - to provide information that enables and persuades people and organisations to take action to maximise the probability of successful crop production and/or minimise the potential damage to established crops and other assets.

b) The steps in establishing the viability of a drought monitoring system include: 1) An analysis of the risk of the phenomenon and its likely effect on agricultural production; 2) Ensuring that the agricultural community has the ability to make use of the early warning system; 3) Scientific assessment of the warning situation - are there useful techniques for forecasting the phenomena and adequate real time data to enable these techniques to be used?; 4) A review of the communication systems to ensure timely dissemination of the message to the users.

c) The drought monitoring centres for Eastern and Southern Africa have: 24 participating countries; Two operational centres in Nairobi and Harare charged with timely monitoring of
d) The objective of the drought monitoring centres (DMCs) is to contribute to mitigation of adverse impacts of extreme climate variations on socioeconomic development. This is achieved through the monitoring of near real-time climatic trends and generating medium-range and long-range climate outlook products on monthly and seasonal timescales. These products are disseminated in timely manner to the communities of the sub-region principally through the NMHSs (National Meteorological and Hydrological Services), regional organizations, and also directly through email services to various users who include media agencies. The provision of early warning for the formulation of appropriate strategies to combat the adverse effects of climate extremes affords greater opportunity to decision-makers for development of prudent plans for mitigating the negative impacts on socio-economic sectors.

e) Since establishment, the DMCs have played an important and central role in providing the sub-region with weather and climate advisories and more importantly, timely early warning on drought, floods and other extreme climate events.

f) The operational activities of the above DMCs include: Developing and archiving of global, regional and national quality controlled climate databanks; Providing of climate monitoring, prediction and application services; Conducting training and capacity building activities in the generation and application of climate products; Organizing the climate and malaria outlook forums; Enhancing the interactions with the user through regional users workshops and application pilot projects.

g) Many efforts were necessary to establish the Drought Management Centre for Southeastern Europe. However, a further work still is required.

h) The aims of the Drought Management Centre for Southeastern Europe include: To serve as an operational centre for South-Eastern Europe for drought preparedness, monitoring and management; To create and coordinate a sub-regional network of NMHSs and other relevant institutions; To coordinate and provide the operational guidelines that will assist the NMHSs and other relevant institutions in the sub-region to interpret and apply drought-related products; To prepare drought monitoring and forecast products and make them available on a near real-time basis to relevant institutions in participating countries; To promote and strengthen the technical and scientific capacity for drought preparedness, monitoring and management in participating countries; To facilitate the exchange of knowledge, experience and best practices on drought issues; To enhance synergies among NMHSs, national UNCCD coordinating bodies, other international organizations and the scientific community on drought issues; To enhance the implementation of the UNCCD in the context of drought preparedness, monitoring and management, in particular in working out a national drought strategy; To collaborate actively with international research frameworks and programs, to ensure the full participation of the South-Eastern European countries in such frameworks and programs.

i) The DMCs: have contributed to the understanding of rainfall variability through climate monitoring; generate and disseminate important prediction products; have contributed to building capacity for climate prediction and applications through Climate outlook Forums.

j) There should be improved collaboration among scientists and managers to enhance the effectiveness of observation networks, monitoring, prediction, information delivery, and applied research and to foster public understanding of and preparedness for drought.
10) Mr. Kanysh Nurymgereyev, the Central Asia Countries Initiative for Land Management (CACILM), made a short presentation for the CACILM project and its relation to the future drought Centre in Central Asia:
   a) The CACILM goal - restoration, maintenance and improvement of the productive functions of the soils in Central Asia, leading to improved economic and social welfare of those who depend on these resources, at the same time keeping the soil ecological functions.
   b) The CACILM program areas and activity are realized in international frameworks which include the 10-years program of activity, based on the National Program Frameworks of each country
   c) The CACILM partnership will carry out demonstration of initial eight priority national projects and two international projects

11) The Workshop participants proceeded with the Item 4 (“National experience of drought management in Central Asian countries”), where each representative of the five Central Asian countries presented their view on the need for the establishment of a Centre as well as how this Centre could relate to the national experience in the field of drought management
   a) Kazakhstan:
      i) The most intensive droughts, covering practically all its territory, occurred in 1991, 1995 and 1998. In these years the productivity of spring wheat decreased by 3-4 times.
      ii) The problems of droughts and their influence on sustainable economic development of Kazakhstan, within the limits of the world community, are considered in the context of various international ecological conventions and agreements.
      iii) The basic goal of the sub-regional Centre on drought management in Central Asia could be consolidation and association of the scientific and technical potential in the sub-region, summary of the world experience and attraction of the international investments for research on drought and solution of the problems on reduction of its negative influence to economy, labour conditions and ecological conditions of the human settlements at national and regional levels.
      iv) With formation of the Centre, Kazakhstan would expect significant implementation of research on droughts, attracting creative teams from various departments and organizations, and also an increase of accessibility to drought information, presently stored in separate departmental archives.
      v) Kazakhstan, can incur the initiative in the organization and coordination of researches, together with institutes of other Central Asian countries, in terms of development of modern drought monitoring and measures reducing drought negative influence.
   b) Kyrgyzstan:
      i) The hydrometeorological service of the Kirghiz Republic, has since 2001, played an important role in carrying out hydrometeorological observations of pollution in the environment, assessment of current hydrometeorological conditions, early warnings and prediction of extreme hydrometeorological events.
      ii) The territory of the Kirghiz Republic, as a rule, is located higher than the territory of Uzbekistan causing related impacts on ground water in the neighbour areas
iii) The borders of zones of ground water formation are often located in a zone of frontiers. That is why, it is necessary to consider assessments of the influence of water-economic actions on the resources of ground waters in the neighbour areas.

c) Tajikistan:

i) Droughts are usual phenomenon in the country. Practically every year in any region during the spring months droughts of different intensity were registered. Only 1960, 1969, 1972, 1991 and 1992 (for the period 1940-2006) droughts were not observed anywhere as these years were wet and cool. The droughts covering all three spring months, were observed in 1971, 2000 and 2001 on all territory of the country, and in 1974, 1977, 1981, 1984 and 1997 – in separate areas.

ii) In Tajikistan methods of drought monitoring and assessment are not developed yet.

iii) The unique organization which conducts work in this sphere is the Agency of Hydrometeorology, the Ministry of Agriculture and Environmental Protection of Republic Tajikistan.

iv) During the period 2001-2002 the First National Communication of Republic Tajikistan on Climate Change was prepared. The Second National Communication of Republic Tajikistan on Climate Change (2006) considers the questions on drought frequency and its trend in the country.

v) Supporting regional cooperation in the field of drought and related development of a drought Center, the Agency on Hydrometeorology is ready to monitor drought in the terms of its early warning and prediction.

vi) From the Center it is expected a scientific and technical guidance on gathering, an estimation and distribution of data on droughts, technical support, training, etc.

d) Turkmenistan:


ii) Drought events will increase in the sub-region because of climate change

iii) Expectations from the activity of a Centre would be the following: development of regional cooperation in the field of drought on a long-term and steady basis; delivery of drought information to end users; the products of the Centre should be accessible to all users in the countries of Central Asia;

iv) completely supports the location of this Centre in Tashkent

e) Uzbekistan:

i) Uzbekistan is located in the centre of the Euro-Asian continent in a zone of continental and sharply continental climate. Except for small-mountain and high-mountainous sites, which can be regarded as dry sub-humid ones, all other territory is qualified as arid or semi-arid landscapes.

ii) Large-scale developments of irrigation during the last 40-50 years has essentially affected ecosystems, having caused drying of the Aral Sea, desertification, loss of the rivers and their deltas as natural sources of biological productivity and diversity.

iii) Vulnerability of natural ecosystems and agricultural production to changes in climate has increased

iv) Strengthening and development of a system for hydrometeorological and agrometeorological monitoring and prediction is one of the basic measures toward adaptation, management and mitigation of consequences related to drought.
v) Creation and functioning of a regional Centre on drought monitoring are important issues under the conditions of the contemporarily climatic changes in Central Asia and represent a huge practical interest for all countries in the sub-region and especially the countries located in the zone of the rivers Amu Darya and Syr-Darya.

vi) The aim of the Centre could be: to coordinate actions of the national hydrometeorological services in the sub-region in developing monitoring systems for regular or operative observations, carried out by uniform techniques and programs, for assessment of extreme hydrometeorological situations. Also, the centre could coordinate the analysis and trends of occurring processes, with the results leading towards the prevention and development of measures of mitigation on the consequences of drought to the economy and population.

12) The participants of the Workshop continued with the Item 5 („Preparation of a draft Terms of Reference for a drought management centre for Central Asia in the context of the UNCCD”) from the agenda. Dr. Vesselin Alexandrov, Consultant to the OSCE, presented a zero draft proposal on the Terms of Reference for the Centre, based on sent out questionnaires. It contents were as follow:

a) INTRODUCTION: Necessity of regional cooperation on drought; Background activities; Assessments of past droughts, recent drought events in Central Asia and lessons learned; Drought monitoring, assessment, prediction and early warning in Central Asia; National-level policies in Central Asia related to drought; Background on regional structures already agreed by the Central Asian states.

b) AIMS OF THE CENTRE

c) FUNCTIONS OF THE CENTRE

d) MAIN EXPECTATIONS FROM THE CENTRE

e) CONTRIBUTIONS OF THE COUNTRIES TO THE CENTRE

f) NAME OF THE CENTRE

13) The Workshop participants had before them a “draft Terms of Reference for a drought management centre for Central Asia in the context of the UNCCD”. There was a general discussion on the “Terms of Reference” with questions and answers. The floor was given to representatives of each interested country to present the position of their countries on this paper. After that the participants proceeded with negotiations with the purpose of achievement of an agreement on the given document

14) The Item 6 of the Workshop agenda was “Adoption of the results of the discussions”. The following aim, tasks, functions and name of the Centre were adopted by the participants:

a) AIM OF THE CENTRE: To serve as an advisory body on drought monitoring and mitigation of drought consequences in Central Asia

b) TASKS OF THE CENTRE:

i) Strengthening of the implementation of UNCCD in a context of maintenance of drought preparedness, monitoring and management, especially by development of national and regional drought strategies in participating countries;
ii) Development and creation of a system of regular drought monitoring in Central Asia, based on transboundary cooperation and contemporary methods with application of satellite data and ground observations in the region;

iii) Increase of synergies among UNCCD national focal points, NMHSs (National Meteorological and Hydrological Services), Scientific Community, international and nongovernmental organizations on drought issues;

iv) Coordination and provision of operational guidelines which will promote the respective institutions in understanding drought phenomena and applications of related drought products;

v) Development of methods for estimation of atmospheric, hydrological and soil drought (intensity, coverage, duration), its early diagnostics, assessment of its impact on crops, pastures and haymaking, according to ground and satellite information;

vi) Collect, compile, process, analyse and interpret, assessment, validation and dissemination of relevant data on drought events in Central Asia, applying common methodologies;

vii) Summarize and disseminate best practices and research. Selection of drought-resistant cultivars and species for agriculture, forestry and pastures

viii) Organization of prediction of river runoff, on the basis of modern methods and models, in collaboration with other regional initiatives.

ix) Coordination of preparation of regional scientific research directed to improve methods, criteria and approaches to early warning of drought, mitigation of its consequences as well as assessment of ecological conditions in human settlements and the influence of drought on human health and labour conditions

x) Assistance to develop and strengthen the technical and scientific potential of institutions and population in the field of maintenance of drought preparedness, monitoring and management in the countries-participants;

xi) Preparation and delivery to users of information on drought prediction and early warning (monthly drought monitoring bulletin, annual review of droughts and related impacts on agriculture, recommendations on drought mitigation practices, etc.). Creation of a web page of the Centre.

c) FUNCTIONS OF THE CENTRE:

i) To coordinate the interaction between the Central Asian countries on timely exchange of information, publications and best practices;

ii) To support the development of methods for drought assessment and prediction, being specific for each participating country;

iii) To gather, analyze and disseminate data and information on drought as well as to create related information databases in each participating country;

iv) To initiate and coordinate the development of a regional strategy on drought management under current and expected climate with its integration into the national strategies for sustainable development;

v) To develop and improve the regional infrastructure related to drought monitoring and early warning systems;

vi) To promote development and transfer of technologies to cope with drought in the sub-region;
vii) To initiate the development of a decision support system for coordinated actions in case of drought and liquidation of its consequences;

viii) To provide technical and financial support for joint research and respective training on drought in the sub-region

ix) (To strengthen the potential and capacity building on drought early warning, through transboundary cooperation);

x) To promote dissemination on drought management, based on transboundary cooperation

xi) To organize regional and national conferences, seminars and meetings for a target audience as well as to attract drought experts to work at the Centre;

xii) To collaborate with international, regional and national research frameworks and programmes;

d) PROPOSED NAME OF THE CENTRE:

i) Several examples for a name of the centre were in zero-draft Terms of Reference.

ii) The meeting decided on proposing the following name for a Centre: “Drought Management Centre for Central Asia in the context of the UNCCD (DMCCA)”

iii) The OSCE noted that the ownership of the centre should clearly lie with the participating countries and questioned why the convention was important in the name of the centre, indicating that OSCE work on setting up bilateral water commissions under the UNECE Water Convention, held no reference to the convention but rather the countries or the rivers in question.

iv) The WMO, noted that the first part of the name “Drought Management Centre for Central Asia” would likely be the main title in the future, with the sub-title of “in the context of the UNCCD”.

v) It was concluded that the name would likely be decided upon at the political level and the next meeting.

15) The ambassador of Mongolia in Uzbekistan (Mr. Khatanbaatar Ravdan) suggested to inform Russia and China on the establishment of this Centre

16) The following important decisions were agreed by the participants of the Workshop:

a) The participation in the Centre is open for all interested countries

b) The Terms of Reference need to be further elaborated/improved

c) The next Workshop will be organized in Kyrgyzstan, May/June, 2008

d) Uzhydromet will draft a statute, based on the Terms of Reference decided, to be discussed at the second meeting.

17) In accordance with the Item 7 (“Next steps on the Establishment of a Centre”) of the Workshop agenda Ms. Saba Nordstrom, Project Manager and Environmental Adviser, OSCE, made a short presentation:

a) The Terms of Reference will be updated taking into account the discussion and suggestions during the meeting in Tashkent

b) The updated Terms of Reference will be sent to all Workshop participants
c) All UNCCD National Focal Points in the sub-region will be provided with the updated Terms of Reference, including a cover letter explaining what happened during the Tashkent meeting

d) OSCE will provide the above-mentioned documents also to the OSCE delegations of the Central Asian countries, including Mongolia and Afghanistan

e) Feedbacks and comments on the Terms of Reference are expected by March, 2008

f) Identification on further partners for the process of establishing a Centre, will take place

g) Setting up a meeting on political level for 2008, to be held in Kyrgyzstan

h) Inform Tashkent participants and UNCCD National Focal Points about the meeting to be held in Kyrgyzstan

18) After a short discussion the above-listed next steps were adopted by the participating countries and the Workshop was closed.

November 21st, 2007, Tashkent