CACIP platform

Stakeholders Consultation Report, Turkmenistan

Ashgabat, Turkmenistan
September 9, 2019

Project: Central Asia Regional Climate Information Platform.

The main objective is the development a Central Asia Regional Information Platform which will help stakeholders to access, analyze, and visualize public-domain data to support improved awareness, assessment, and decision support. This is expected to make available comprehensive and up-to-date relevant data and information, linking with high-quality datasets (including time series and spatial information) from global, regional, and local sources, provide analytical tools and interfaces for the visualization and interpretation of data and information (e.g. mapping tools to layer data and map hotspots and areas at risk, screening tools, etc.).
For more information, please visit:
https://mel.cgiar.org/projects/cacip
www.CentralAsiaClimatePortal.org

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Contents

Introduction

Central Asia Climate Information Platform (CACIP) will help stakeholders to access, analyse, and visualize public-domain data to support improved awareness, assessment, and decision support. This is expected to make available comprehensive and up-to-date relevant data and information, linking with high-quality datasets (including time series and spatial information) from global, regional, and local sources, provide analytical tools and interfaces for the visualization and interpretation of data and information (e.g. mapping tools to overlay data and delineate hotspots and areas at risk, screening tools, etc.).

Consultation process with stakeholders in conceptualising CACIP is important and were planned as part of approach to develop the platform. The following national workshops (Annex 1) were planned and conducted in Central Asian countries:

- June 11, 2019 – Tashkent, Uzbekistan
- June 14, 2019 – Almaty, Kazakhstan
- July 11, 2019 – Bishkek, Kyrgyzstan
- July 15, 2019 – Dushanbe, Tajikistan
- September 9, 2019 – Ashkhabad, Turkmenistan

The media coverage of consultation workshop in Turkmenistan has been done in "Нейтральный Туркменистан" (translation, "Neutral Turkmenistan") on 2nd October 2019. The text can be found by these links:
http://cac-program.org/files/Статья_HT.PDF
https://www.parahat.info/nt/24.

As well the news about the event also has been published in Russian and English at The Regional Program for Sustainable Agricultural Development in Central Asia and Caucasus.
The workshop material has been published on ICARDA interoperable repository with reference available here: https://dx.doi.org/20.500.11766/10254.

The CACIP team wants to acknowledge the excellent support of CAREC Turkmenistan in organization of the event by commendation for Irana Bagirova, Viktoriya Chariyeva and support services team.

Figure 1 Participants of country consultation

Objectives of the workshop

The overarching objectives of the CACIP were to set the scene and discuss about the platform with stakeholders (list of invited organizations and participants in Annex 2) with following objectives:

- Brief introduction of the project and platform;
- Discuss platform concept, design framework and main building blocks;
- Assess the needs of the platform and its application from the end user's segments;
- Assessment of data and information available and possibility to have a sample for different datasets/information available to start piloting;
- Learn about needs and services expected from the platform; (what products/info/services stakeholders would like to obtain or access on the platform?)
- Participation process and sustainability plan;
- To build partnerships for collaboration and exchange of the data (list of stakeholders to develop their profile to include in CACIP in Annex 3);

Selection of the participants for consultation workshop

The stakeholders for the consultation workshop were selected with the objective of meeting the goal of the CACIP. The consultation workshop was organized with an aim at engaging those stakeholders who were directly or indirectly involved in or had interest in dealing with the effect of climate change in different ways such as environment, agriculture, health, investment, insurance, policy, research, extension and education sectors. Participants were invited from both public and private sectors as well as from donor agencies. The participants were invited to seek their inputs on the proposed CACIP and who would use and take ownership of the platform after its completion.

Figure 2 Country consultation in Turkmenistan. Plenary

Multiple sources were used to identify the participants for the consultation workshop. ICARDA database of partners for Central Asia who had previously collaborated on the projects on environment and climate issues implemented in the region were included. We also approached ICARDA's focal point in the Ministry of Agriculture to identify relevant partners. In addition, CAREC coordinators made valuable suggestion in populating the list of the participants. Donor organizations in the country with interest in climate change programs were also included in the list of participants.

The workshop in Turkmenistan was initially planned for June and again in August. The postpone of the event to properly arrange visas and other logistics has delay CACIP Task 1 delivery of about a month. The project team will ensure this is recovered during Task 2 and 3 implementations. CAREC office provided all needed support and the consultation was followed by a meeting with CAREC Director in order to initiate the preparation of meetings with stakeholders in the first quarter of 2020 from the month of October 2019.

Results of the questionnaire

As part of workshop short questionnaire was distributed among participants to learn about their interests and expectations in different areas of climate information platform. Questionnaire is presented in Annex 4, major focus to infer was about:

- information to have by participants or to share by them;
- data either available or accessible or required;
- services that platform can provide;
- knowledge and analytical tools and materials that one expects to receive or to provide.

Analysis of the questionnaire

The results of the survey have been summarized and presented in tabular format. To make easier the comparison of the results between different sections, a summarized score for each question has been calculated. To calculate the "score" for each item different weights have been assigned to the answers ("0" to "no interest", "0.5" to "some interest", "1" to "very interested").

The following tables present the results for each question.

How to read the table (hints useful for all sections)

Bold black values are the highest scores. **Bold red values** show the answers considered less interesting. The percentages in the first row show an aggregated "average interest" for the whole section.

Sections related to the CACIP from the USER point of view

Interest as USER of CACIP				60%
Do you think that it could be interesting if the Platform could provide a centralized access to the following information/data/services ?				
Question	Answer			
	No interest	Some interest	Very interested	Score
Documents case studies papers		12	7	68%
Training materials, best practices		10	9	**74%**
Models, tools, software	1	6	10	68%
General reports		11	6	61%
Specific bulletins	1	12	5	58%
Expert consultant services	1	10	5	53%
Maps (ready format)		10	7	63%
Access to spatial database (WMS, WFS, …)	1	10	6	58%
Raw spatial data (basic spatial files)	1	11	4	50%
Structured databases		10	1	**32%**
In general, are you interested in DATA			15	**79%**
In general, are you interested in SERVICES			10	53%

The most interested topics are **training materials and best practices**, but the general interest is almost homogeneous, with the exception of the **structured databases and raw spatial data that obtained the lowest regional scores** compared to the results of all the other countries of Central Asia. The interest in

data is lower that the interest in documents, and it is one of the lowest of the whole region. The general interest (60%) is one of the smallest (and share the position with Kyrgyzstan, 59%, even if the results calculated by aggregating the specific single items seems to be significantly lower than the "general interest in DATA").

Interest for USING specific GEOGRAPHICAL DATA			6%
Are you interested on new products, not available now, with a set of information and numerical data related to the climate change in Central Asia?			
Question		Answer	
		to USE	Score
HISTORICAL DATA (TIME SERIES)			
Hydrological databases on river basins		3	**16%**
Climate induced natural disaster		2	11%
Historical climate variability			
• **Temperature**		3	**16%**
• **Precipitation**		3	**16%**
• Lake/reservoir levels		1	5%
• Flows		2	11%
• Evapotranspiration			0%
• Glaciers		1	5%
• NDVI, EVI			0%
• Burned areas			0%
• Fire			0%
• Soil moisture		2	11%
Climate characterization			
• **Monthly temperature (avg, min, max)**		4	**21%**
• **Precipitation**		4	**21%**
• Bioclimatic variables		1	5%
CURRENT DATA			
Temperature		4	**21%**
Surface temperature		3	**16%**
Precipitation		4	**21%**
FORECASTS			
Short term forecasts			
• **Temperature**		4	**21%**
• **Precipitation**		4	**21%**
• Snow water equivalent		1	5%
• Snow melt			0%
• Stream flows		2	11%
Seasonal weather forecasts		1	5%
Long term climate projections		1	5%
PHYSICAL CHARACTERISTICS			
Land cover			
• Cover type		1	5%
• Glaciers/snow cover		1	5%
• Cropland		1	5%
• Irrigated areas		2	11%
• Crops and crop types			0%
• Tree cover change			0%
Field data (such as crops, rotation)		1	5%
Soil map		1	5%
Soil carbon density			0%
Global aridity index			0%
Potential Evapotranspiration			0%
OTHER RELEVANT DATASETS			
Agricultural productions			0%
Spatial production allocation mode 2000, 2005, 2010 (SPAM)			0%
Land degradation and desertification			0%
Monitoring locations			0
• Snow			0%
• Climate		2	11%
• Water levels		2	11%
• Flows			0%
• Water quality		1	5%
• Water divisions			0%
GENERAL DATA			
Topography			0%
Drainage			0%
Basins, watersheds, major aquifers			0%
DEM			0%
Administrative boundaries			0%
Basic infrastructures			0%
Protected areas			0%

This section of the questionnaire confirms the low interest for data: **only 6% of interest for using geographical** data (it is the lowest value in the whole Central Asia). The higher interests are toward weather and climate data. It is important to highlight that this section of the survey was at the end of the form. In other countries the results was in general low (with an average score of 17%).

Interest for USING specific KNOWLEDGE DATA

	9%

Are you interested on new products, not available now, with a set of information and numerical data related to the climate change in Central Asia?

Question	Answer	
	to USE	Score
Publications (reports, webinars, atlases, posters, infographics, proceedings, studies)	2	11%
SLM practices and methodologies		**0%**
Projects on CC Adaptation Mitigation	2	11%
News	3	16%

The analysis of the section related to using knowledge data provided by the platform **confirms the very low interest** (9% compared to a regional average of 23%).

Interest for NEW PRODUCTS

	49%

Are you interested on new products, not available now, with a set of information and numerical data related to the climate change in Central Asia?

Question	Answer			
	No needed	Some interest	Very interested	Score
In general		9	7	**61%**
Information summarized at regional and country level		10	5	53%
Information updated systematically		11	4	50%
Information homogeneous on the whole region		11	2	**39%**
Information with an advanced visualization...		10	3	42%

The interest for new product is in line with the results of the previous sections: the **interest in information homogeneous for the whole region is the lowest** compared to the other countries.

Sections related to the CACIP from the CONTRIBUTOR point of view

In the following tables, the survey focuses on the interest of stakeholders to contribute to the CACIP platform, and the availability to become data provider of the platform.

Interest as CONTRIBUTOR to CACIP

	22%

Are you available to contribute to CIP in the following ways?

Question	Answer			
	Not available	Available	I don't know	Score
Basic user: user of the platform	1	6	7	32%
Basic user: join the forums	3	5	6	26%
Basic user: use documents and training materials	2	10	4	**53%**
Basic user: use models, tools, software	3	6	6	32%
Data provider: allowing the permanent upload on CIP	4	1	7	**5%**
Data provider: allowing live link to your published data	5	4	5	21%
Data provider: API for documents				**0%**
Data provider: WMS server				**0%**
Data provider: WFS server				**0%**
Data provider: API for geographical data		1		**5%**
Promoters: promoting the use of the CACIP among colleagues, clients, partners		6	5	32%
Promoters: do you want to promote for forum?		7		37%
Promoters: do you want to promote for documents?		5		26%
Promoters: do you want to promote for maps?		6		32%
Promoters: do you want to promote for data?		6		32%

In general, the interest to participate to CACIP as contribute is very low, the **higher score relates with the use of documents and training materials**. It is interesting to highlight that **there is a substantial number of participants answering "I don't know"**: probably this is because most of the participants have managerial roles and then they are not involved in more technical matters for data contribution to other platforms.

Interest to be PART OF THE TEAM

	46%

Do you want to contribute m as an expert member or active contributor (your name/institution listed/acknowledge in the portal) ?

Question	Answer			
	No	Maybe	Yes	Score
At individual level	1	2	10	58%
At institutional level	1	1	6	34%

The interest to be part of the CACIP team is more or less in line with the other countries, **with a preference to be involved as individual.**

Interest for PROVIDING specific GEOGRAPHICAL DATA			1%

Are you interested on new products, not available now, with a set of information and numerical data related to the climate change in Central Asia?

Question		Answer	
		to PROVIDE	Score
HISTORICAL DATA (TIME SERIES)			
Hydrological databases on river basins			**0%**
Climate induced natural disaster			**0%**
Historical climate variability			
• **Temperature**		1	**5%**
• **Precipitation**		1	**5%**
• **Lake/reservoir levels**		1	**5%**
• **Flows**		1	**5%**
• **Evapotranspiration**			**0%**
• **Glaciers**			**0%**
• **NDVI, EVI**			**0%**
• **Burned areas**			**0%**
• **Fire**			**0%**
• **Soil moisture**			**0%**
Climate characterization			
• **Monthly temperature (avg, min, max)**		2	**11%**
• **Precipitation**			**0%**
• **Bioclimatic variables**			**0%**
CURRENT DATA			
Temperature			**0%**
Surface temperature			**0%**
Precipitation			**0%**
FORECASTS			
Short term forecasts			
• **Temperature**			**0%**
• **Precipitation**			**0%**
• **Snow water equivalent**			**0%**
• **Snow melt**			**0%**
• **Stream flows**			**0%**
Seasonal weather forecasts			**0%**
Long term climate projections			**0%**
PHYSICAL CHARACTERISTICS			
Land cover			
• **Cover type**			**0%**
• **Glaciers/snow cover**			**0%**
• **Cropland**			**0%**
• **Irrigated areas**			**0%**
• **Crops and crop types**			**0%**
• **Tree cover change**			**0%**
Field data (such as crops, rotation)			**0%**
Soil map			**0%**
Soil carbon density			**0%**
Global aridity index			**0%**
Potential Evapotranspiration			**0%**
OTHER RELEVANT DATASETS			
Agricultural productions			**0%**
Spatial production allocation mode 2000, 2005, 2010 (SPAM)			**0%**
Land degradation and desertification			**0%**
Monitoring locations			
• **Snow**			**0%**
• **Climate**			**0%**
• **Water levels**			**0%**
• **Flows**			**0%**
• **Water quality**			**0%**
• **Water divisions**			**0%**
GENERAL DATA			
Topography			**0%**
Drainage			**0%**
Basins, watersheds, major aquifers			**0%**
DEM			**0%**
Administrative boundaries			**0%**
Basic infrastructures			**0%**
Protected areas			**0%**

The score of this section is almost null, and it confirms the very low availability (or probably the possibility) to provide to CACIP geographical and knowledge data (see the table below).

Interest for PROVIDING specific KNOWLEDGE DATA		0%
Are you interested on new products, not available now, with a set of information and numerical data related to the climate change in Central Asia?		

Question	Answer	
	to PROVIDE	Score
Publications (reports, webinars, atlases, posters, infographics, proceedings, studies)		0%
SLM practices and methodologies		0%
Projects on CC Adaptation Mitigation		0%
News		0%

Sections related to general preferences and interests

The two tables below describe the interest of the participants to the surveys for some topics related to the climate change.

The **higher score, even if quite low, relates to climate change and long-term forecasts**. Instead, the **lowest score was obtained by socio-economic impacts and smartphone application**.

Selected FOCUSED AREAS (as BASIC USER)				35%
As a basic user (please select only one as "very interested" (main interest), and if your main interest is not mentioned, you can write your choice in "othe				

Question	MEN			
	No needed	Some interest	Very interested	Score
food and nutritional security	1	3	5	34%
sustainable agroecosystems/mitigation		4	6	42%
risk assessment and mapping		5	5	39%
land degradation/desertification		6	4	37%
reforestation/forest protection		5	3	29%
climate changes/long term forecast		7	6	**50%**
socio-economic impact (*)	1	5	2	**24%**
smartphone services to end users		7	1	**24%**

Selected FOCUSED AREAS (as POLICY / DECISION MAKER)				26%
As a basic user (please select only one as "very interested" (main interest), and if your main interest is not mentioned, you can write your choice in "othe				

Question	Answer			
	No needed	Some interest	Very interested	Score
food and nutritional security	1	3	5	34%
sustainable agroecosystems/mitigation		5	4	34%
risk assessment and mapping		3	2	18%
land degradation/desertification		4	3	26%
reforestation/forest protection		4	1	16%
climate changes/long term forecast		7	6	**50%**
socio-economic impact (*)	2	2	1	**11%**
smartphone services to end users	1	4	1	16%
other…	water resources, agroecology			

Major highlights from questionnaire

In the following table, the summarized scores for each section are listed.

Interest as USER of CACIP	**60%**
Interest for USING specific GEOGRAPHICAL DATA	6%
Interest for USING specific KNOWLEDGE DATA	9%
Interest for NEW PRODUCTS	**49%**
Interest as CONTRIBUTOR to CACIP	22%
Interest to be PART OF THE TEAM	46%
Interest for PROVIDING specific GEOGRAPHICAL DATA	**1%**
Interest for PROVIDING specific KNOWLEDGE DATA	**0%**
Selected FOCUSED AREAS (as BASIC USER)	35%
Selected FOCUSED AREAS (as POLICY / DECISION MAKER)	26%

Based on the stakeholder interest survey, we found that in Turkmenistan the higher interest is for:

- **training materials** and **best practices**, ready to be used in practical situations, or to disseminate such information

And the **main way to participate or to use the CACIP platform is as user**.

The **interest in data seems to be almost null**.
The most interesting information relate with:
- climate and weather data

From the analysis of the general interest for focused areas, it is interesting to highlight that:
- the lowest score is the one of socio-economic impacts and smartphone applications

In general, the interest in participating to CACIP as contributor is quite low, with some exception related to the role of **promoters**.

Summary of stakeholders' feedbacks based on discussions

There were extensive discussions during the event concerning different aspects of the platform. Points raised by participants concerned organizational as well as information and data issues, provision of expertise and sustainability points. Most of the points were in line with results from questionnaire presented above. To demonstrate the full picture of mentioned issues as well as to provide extent of questions and comments the following bullets are presented below. These were helpful to capture various views together with comprehension of presented material by stakeholders.

Figure 3 Country consultations in Turkmenistan with local stakeholders

Key areas mentioned by stakeholders are:

Content and Data Sources
1. Ministry of Heath confirmed the availability of regulatory documents.

2. Hydromet ensured that basic data is accessible with standard parameters however more elaborated data request should be manually prepared.

3. The Agricultural University presented the opportunity to link with specific education projects (ERASMUS) producing knowledge.

4. CAREC expressed the importance to have educational content including e-learning and explain their effort in ensuing information classes in Turkmenistan with high speed internet.

5. The National Institute of Deserts, Flora and Fauna would be interested to educational content beyond knowledge of meteorology.

6. Interested to long-term data related to Climate Change.

7. The general interested is on more coverage with less details than more details with less coverage.

8. Provide option to track the data source especially when data should be paid.

9. Interested to use the platform as online consultation tool on different topics that can be organized in channels.

10. The platform should be a virtual forum to have questions and answers.

Figure 4 Presentation of CACIP

Users and Usage

1. Considering some limitation for social media channels (e.g. Twetter, Facebook) the platform should have some alternatives in the space dedicated for those channels.

2. Users in the platform should be differentiated based on their needs.

3. Importance to publish brochures and use other means of communication to spread knowledge since the web-based may not be enough.

4. Interface should be simple and intuitive.

Maintenance

1. Define platform ownership and Data/Information entry responsibilities.

2. The platform cannot be built entirely in one year. It should be developed by phases to allow stakeholders to suggest new areas to be improved and areas to be dropped.

3. A network of expert should be built.

4. Capacity building of national stakeholders should be implemented as continuous learning after the first year of implementation.

Next steps

Overall, there was great and keen interest from participants. Most of participants expressed soonest demonstration of platform and look forward to experience platform to provide more feedback. Partners provided several comments, team can do collective synthesis with other country partners to incorporate feasible ones during development of the platform.

Annex 1 Workshop Agenda

Agenda
9 September 2019. Venue: Ashgabat, Grand Turkmen Hotel

TIME	AGENDA ITEM	PRESENTER
9.00-9.30	Registration	A. Akramkhanov
9:30-10.00	Welcome and Opening Remarks − Dr. Ram Sharma, Regional Coordinator, ICARDA-CAC − Ms. Irana Bagirova, Director, CAREC Country Office, Turkmenistan − Mr. Berdy Berdiev, Head, Department of Coordination of International Environmental Cooperation and Projects, Ministry of Agriculture and Environment Protection of Turkmenistan − Introduction to Central Asia Climate Information Platform and Regional Framework	R. Ibragimov A. Akramkhanov/ E. Bonaiuti
10.00-10.45	− Platform Concept, Design Framework and main building blocks − Action plan, Participation and Sustainability − Q&A − Informative Survey on current situation on Data and Information	E. Bonaiuti/ A. Akramkhanov
10.45-11.00	*Coffee break*	
11.00-12.00	− Workgroup "Partners' Requirements and Data Contribution" Partners are organized by the focus areas resulting from the previous sessions. Time is dedicated to group discussion about: 1) "What do we know, and what scientific information **have to be available via information Platform** for usage in policy making processes at national level and/or in decision making at local level" 2) Main **formats/channels to share** knowledge (e.g. SMS, MobApp, Telegram, mobile version of web-site) 3) Should knowledge be free or paid? Do you have existing examples? The team rapporteur will consolidate summary of discussion.	Facilitated by A. Akramkhanov/ E. Bonaiuti/ R. Ibragimov
12.00-13.00	− Plenary Restitution − Q&A − Group Photo	Facilitated by A. Akramkhanov/ E. Bonaiuti
13.00-14.00	*Lunch break*	
14.00-14.45	− Stakeholder profiling	
14.45-16.30	− One-to-One meeting (based on participants interest indicated inside the previous "Informative Survey")	Akramkhanov/ E. Bonaiuti

Annex 2 List of invited organizations and participants

A total of 27 participants (30% female) from 21 organizations attended consultation (out of 31 invited). Typology of stakeholders encompassed Ministries/Government Agencies, International Organizations, Academia and National agricultural research and extension services, Regional and sub-Regional Organizations

Personal Data have been removed in Accordance with the EU General Data Protection Regulation (EU GDPR).

Annex 3 Stakeholder profiles

The following stakeholder profiles were partly filled with some information, and further complemented with desk review. These and other stakeholder profile information will be further collected and filled as per template.

Academy of Sciences, Centre of Technologies

Academia

Centre of Technologies is composed of following laboratories and departments:
- Central laboratory;
- Laboratory of medicine production technologies;
- Laboratory of the environmental protection technologies;
- Nanotechnology laboratory;
- Laboratory of GIS technologies;
- Laboratory of synthesis of new materials technologies;
- Laboratory of biotechnologies;
- Laboratory of information and communication technologies;
- Laboratory of energy production and energy saving technologies;
- Laboratory of food processing technologies;
- Financial and economic department;
- Human Resources;
- Department of introducing of technology into production;
- Department of design, assemby and maintenance of experimental equipment;
- Maintenance department;
- Patent information and special department;
- Department of International relations;
- Office of postgraduate studies;
- e-Library;
- Typography.

Some projects of the Centre are developed based on climatic conditions of the research area, i.e. radiation, humidity, soil, precipitation, air quality, soil and air temperature.

Main instruments used are meteorological station, high resolution metering, measurement complex, soil evapotranspiration.

Laboratory of biotechnologies. The research on cultivate herbal and medicinal plants by biotechnological methods in-vitro, development of DNA passports of agricultural crops (in example of cotton and wheat), microbiological research of plants and development of new biological medical products, development of practices on soil salinity.

Laboratory of the environmental protection technologies: research on Ecological monitoring of Caspian Sea, Ecology of Altyn Asyr lake.

Ashgabat, Turkmenistan

Website http://science.gov.tm/organisations/technocenter/

Contact persons:

Laboratory of biotechnologies

Ministry of health and medical industry

Ministry of Health and the Medical Industry of Turkmenistan implements measures for realization of state policy in the field of protection of public health, development and program implementation on health care development, ensuring efficiency of functioning of bodies and healthcare institutions, carrying out sanitary and epidemiologic work, improvement of quality of rendering the treatment-and-prophylactic and medicinal help, and also enhancement of the medical services provided to the population.

Works on adaptation of public health to the climate change.

Holds Health Information Center, International Educational – Scientific Center, State Medical University of Turkmenistan, Hospital with scientific clinic center of cardiology.

Partners on Central Asia Drug Action Programme, Border Management Programme in Central Asia.

Ashgabat, Turkmenistan

Website http://www.saglykhm.gov.tm/

State Committee for Water Management

Government Agency

New State Committee for Water Management is established to deal with issues on providing the population with drinking water and the agriculture – with irrigation water.

The water management Unit: Project on protection of Altyn Asyr biodiversity.

MOU with CAREC

Archabil str, Ashgabat, Turkmenistan

Website

Ministry of Defense

Government Agency

The ministry is the central executive body implementing state policy in the field of defense, as well as the leadership of the Armed Forces of Turkmenistan.

Civil protection and rescue work Unit:

Development objective #13 of SDG targets of Turkmenistan.

Sendai Framework Programme on disaster risk reduction

National strategy of Turkmenistan on climate change.

Holds: Military Institute of the Ministry of Defense of Turkmenistan.

Projects with UNICEF Disaster Risk Reduction in Education (DRR) initiative

Ashgabat, Turkmenistan

Website http://www.milligosun.gov.tm/

Ministry of Agriculture and Environment Protection of Turkmenistan

Government Agency

The Ministry of Agriculture and Environment Protection of Turkmenistan is a legal successor of the Ministry of Agriculture and Water Resources of Turkmenistan and the State Committee for Environment Protection and Land Resources to deal with agricultural matters.

Subordinate organizations:
- Turkmen Agricultural University S.A. Niyazov;
- Turkmen Agricultural Institute;Agricultural Research Institute;
- State Design and Scientific Institute "Turkmensuvylimtaslama";
- Center for Recreation and Health "Khasyl" in Avaza;
- Recreation and health centers for kids "Altyn sümmül" and "Altyn damja"

Structural units:
- State Plant Quarantine Service of the Ministry of Agriculture and Water Resources of Turkmenistan;
- Environmental Protection Service
- State Service for Seed Production and Variety Testing of the Ministry of Agriculture and Water Resources of Turkmenistan;
- Plant Protection Service of the Ministry of Agriculture and Water Resources of Turkmenistan;
- State Veterinary Service under the Ministry of Agriculture and the Water Resources of Turkmenistan Velayat (regional) agricultural production associations (SHPO):
  Akhal; Balkan; Dashoguz; Lebap; Mary.

Space Administration of "Türkmenaragatnaşyk" Agency

Projects:

Effective use of energy and renewable energy sources for sustainable water management in Turkmenistan" (2015-2021)

Action Plan for the development of the renewable energy in Turkmenistan till 2030

"The Concept of Turkmenistan Chairmanship in IFAS"

Ashgabat, Turkmenistan

Website http://minagri.gov.tm/

Turkmenistan Nature Conservation Society

Nongovernmental Organization

The public organization "Society for the Protection of Nature of Turkmenistan" was founded at its constituent assembly in 1968 in Ashgabat.

Climate data and projects: ?

M. Kosaeva str, Ashgabat, Turkmenistan

Website   http://ngo-turkmenistan.org/ngo/2017/01/10/obshchestvo-okhrany-prirody-turkmenistana/

GIZ

Financing Institutions (including Foundations)

Since 2002, GIZ has been implementing a project for the sustainable management of pasture and forest resources in Turkmenistan commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ) and recently co-funded by the European Union.

Projects:

Sustainable and climate sensitive land use for economic development in Central Asia The project focuses on forest, pastures, environmental economy, climate change adaptation, eco-education, awareness raising, capacity building, training Turkmen Hydromet staff on climate modelling, Development of a Regional Environmental Protection Program for Sustainable Development of Central Asia. Instrument: knowledge management – Klink. Database of integrated land management. This project can cooperate with CACIP.

Transboundary Water Management in Central Asia

Capacity development for climate policy in the Western Balkans, Central and Eastern Europe and Central Asia - Phase II

Equipping children and young people for the future: improving education in the countries of Central Asia

Ashgabat, Turkmenistan

Website https://www.giz.de

Turkmen Agricultural University named after S. A. Niyazov

Academia

The Agricultural Institute was founded in 1930. In 1998, the Institute became the Turkmen Agricultural University named after S. A. Niyazov. Scientists from all 6 faculties and 16 departments participate in the development of fundamental issues in the development of agriculture. The basis of these works is new technologies for growing strategically important crops of Turkmenistan cotton and grain; seed production; sericulture; increase livestock production and the fight against their diseases; improving the construction and use of hydraulic structures, the introduction of effective methods of rational use of water in production; efficient use and storage of agricultural machinery; processing of livestock and crop products.

In 7 faculty, there are around 3000 students studying. 3 departments.

The university is participating in Erasmus + "New and innovative courses for precision agriculture", which focuses on use of GIS in agriculture.

The University needs GIS trainings for lecturers and students.

Korogly str, Ashgabat, Turkmenistan

Website http://www.science.gov.tm/organisations/agroculture_institut/

Annex 4 Questionnaire for informative survey

CENTRAL ASIA CLIMATE INFORMATION PLATFORM

INFORMATIVE SURVEY

INSTITUTION, ORGANIZATION

Name _____   Email _____

Organization _____

Address _____

_____

YOUR INTEREST ON CONTENTS (EXPECTATIONS FROM CACIP)

Do you think that it could be interesting if the platform could provide a centralized access to the following information/data/services ?

Documents, case studies, papers	No interest ☐	Some interest ☐	Very interested ☐
Training materials, best practices	No interest ☐	Some interest ☐	Very interested ☐
Models, tools, software	No interest ☐	Some interest ☐	Very interested ☐
General reports	No interest ☐	Some interest ☐	Very interested ☐
Specific bulletins	No interest ☐	Some interest ☐	Very interested ☐
if interesting, with which interval update	Yearly ☐	Monthly ☐	Other_____
Expert consultant services	No interest ☐	Some interest ☐	Very interested ☐
Maps (ready format)	No interest ☐	Some interest ☐	Very interested ☐
Access to spatial DB (WMS, WFS, …)	No interest ☐	Some interest ☐	Very interested ☐
Raw spatial data (basic spatial files)	No interest ☐	Some interest ☐	Very interested ☐
Structured databases	No interest ☐	Some interest ☐	Very interested ☐
In general, are you interested in…..	DATA ☐	SERVICES ☐	BOTH ☐

YOUR INTEREST FOR "NEW" PRODUCTS

Are you interested on new products, not available now, with a set of information and numerical data related to the climate change in Central Asia?

In general	No needed ☐	Some interest ☐	Very interested ☐

Do you thing the following characteristics could be valuable for you?

Summarized at regional and country level	No interest ☐	Some interest ☐	Very interested ☐
Updated systematically	No interest ☐	Some interest ☐	Very interested ☐
Homogeneous on the whole region	No interest ☐	Some interest ☐	Very interested ☐
With an advanced visualization…	No interest ☐	Some interest ☐	Very interested ☐

Central Asia
CLIMATE PORTAL

Which of the following areas (groups) are of your interest?

As a **basic user** (please select only one as "very interested" (main interest), and if your main interest is not mentioned, you can write your choice in "other area of interest")

focus area 1: food and nutritional security	No interest ☐	Interested ☐	Very interested
focus area 2: sustainable agroecosystems/mitigation	No interest ☐	Interested ☐	Very interested
focus area 3: risk assessment and mapping	No interest ☐	Interested ☐	Very interested
focus area 4: land degradation/desertification	No interest ☐	Interested ☐	Very interested
focus area 6: reforestation/forest protection	No interest ☐	Interested ☐	Very interested
focus area 7: climate changes/long term forecast	No interest ☐	Interested ☐	Very interested
focus area 8: socio-economic impact (*)	No interest ☐	Interested ☐	Very interested
focus area 9: smartphone services to end users	No interest ☐	Interested ☐	Very interested

Other area of interest: _____

As a **policy / decision maker** (please select only one as "very interested" (main interest), and if your main interest is not mentioned, you can write your choice in "other area of interest")

focus area 1: food and nutritional security	No interest ☐	Interested ☐	Very interested
focus area 2: sustainable agroecosystems/mitigation	No interest ☐	Interested ☐	Very interested
focus area 3: risk assessment and mapping	No interest ☐	Interested ☐	Very interested
focus area 4: land degradation/desertification	No interest ☐	Interested ☐	Very interested
focus area 6: reforestation/forest protection	No interest ☐	Interested ☐	Very interested
focus area 7: climate changes/long term forecast	No interest ☐	Interested ☐	Very interested
focus area 8: socio-economic impact (*)	No interest ☐	Interested ☐	Very interested
focus area 9: smartphone services to end users	No interest ☐	Interested ☐	Very interested

other area of interest: _____

(*) it includes migration, health, economic performance, livelihoods, etc.

Are you available to contribute to CACIP in the following ways?

As a **basic user**

| user of the platform | Not available ☐ | Available ☐ | I don't know |

| join the forums | Not available ☐ | Available ☐ | I don't know |

| use documents and training materials | Not available ☐ | Available ☐ | I don't know |

| use models, tools, software | Not available ☐ | Available ☐ | I don't know |

your notes _____

As a **data and knowledge provider**

| allowing the <u>permanent upload</u> on CACIP | Not available ☐ | Available ☐ | I don't know |

| allowing the <u>live link to your published data</u> | Not available ☐ | Available ☐ | I don't know |

in case data available, what type of interface is available to <u>access data and documents</u>:

API ☐ if possible, please detail _____
<div align="right">(example: DataVerse API)</div>

your notes _____

_____

in case, what type of interface is available to <u>access your geographical data</u>:

WMS server ☐ if possible, please detail _____
<div align="right">(example of sat image: https://www.gebco.net/data_and_products/gebco_web_services/web_map_service/mapserv?)</div>

WFS server ☐ if possible, please detail _____
<div align="right">(example of dams in CA: http://ihp-wins.unesco.org/geoserver/wfs)</div>

API ☐ if possible, please detail _____
<div align="right">(examples: GeoServer API, ArcGIS API, CartoDB API, MapQuest API, …)</div>

your notes _____

_____

As **promoters** **and** **facilitators**
promoting the use of the CACIP among
your colleagues, clients, partners   Not interested ☐   Interested ☐   I don't know

If interested, what would you like to find in the CACIP to <u>make useful promoting the use of it</u>

Forum ☐ Documents ☐ what kind: _____

Maps ☐ Data ☐ what kind: _____

your notes _____

_____

If interested, what would you like to find in the CACIP to <u>make useful promoting the use of it</u>

Forum ☐   Documents ☐   what kind: _____

Maps ☐   Data ☐   what kind: _____

your notes _____

_____

DO YOU WANT TO BE PART OF THE TEAM OF CACIP

As an **expert member or active contributor (your name/institution listed/acknowledge in the portal)**

At individual level   Yes ☐   No ☐   May   be

At institutional level   Yes ☐   No ☐   May   be

Do   you   have   some   ideas   on   how   to   actively   contribute   ?
(example: providing monthly data, creating bulletins and disseminating through the CACIP, linking your models to the CACIP and disseminating the outputs, linking many relevant documents to the CACIP from other portals, etc.)

_____

5 KEYWORDS FOR THE CACIP

What 5 keywords should the CACIP brand and logo represent (e.g. sustainable livelihoods, climate change, GHG emissions, etc.)

1) _____

2) _____

3) _____

4) _____

5) _____

WHAT GEOGRAPHICAL ELEMENTS AND COLOURS REPRESENT CENTRAL ASIA

If you were to visualize Central Asia, what geographical elements come to mind? (e.g. rivers, mountains, valleys, etc.)

_____

_____

What two colours would you associate with a brand that represents Central Asia?

Color 1) _____   Color 2) _____

ONE-TO-ONE MEETING REQUEST

The   day   of   the   consultation   workshop,   would   you   be   interested   to   have
a one-to-one meeting with our team after the lunch time?   Yes ☐   No

USE OPEN SOURCE DATA OR PROJECT DERIVED WITHIN THE CACIP

The database of CACIP will include the most part of following open source data (the ones included are labeled, and the source is listed **– the list of included data is currently incomplete, a further investigation is in progress**). Are you interested in using them ? Or are you available to distribute your own via CACIP ? If you have any suggestion about source for not included data, or for additional sources, please put a hint.

GEOGRAPHICAL DATA

HISTORICAL DATA				
Content	Included (temporarily)	Use	Provide	Hint
Hydrological databases on river basins		☐	☐	_____
Climate induced natural disaster		☐	☐	_____
Historical climate variability				
• Temperature (source https://modis.gsfc.nasa.gov/data/)	X	☐	☐	_____
• Precipitation (source https://pmm.nasa.gov/GPM)	X	☐	☐	_____
• Lake/reservoir levels		☐	☐	_____
• Flows		☐	☐	_____
• Evapotranspiration (source https://modis.gsfc.nasa.gov/data/)	X	☐	☐	_____
• Glaciers (source https://nsidc.org/)	X	☐	☐	_____
• NDVI, EVI (source https://modis.gsfc.nasa.gov/data/)	X	☐	☐	_____
• Burned areas (source https://modis.gsfc.nasa.gov/data/)	X	☐	☐	_____
• Fire (sources https://earthdata.nasa.gov/earth-observation-data/near-real-time/download-nrt-data/viirs-nrt , https://firms.modaps.eosdis.nasa.gov/)	X	☐	☐	_____
• Soil moisture (source https://smap.jpl.nasa.gov/)	X	☐	☐	_____
Climate characterization				
• Monthly temperature (avg, min, max)> (source http://worldclim.org/)	X	☐	☐	_____
• Precipitation (source http://worldclim.org/)	X	☐	☐	_____
• Bioclimatic variables (source http://worldclim.org/)	X	☐	☐	_____

Your hint: _____

CURRENT DATA				
Content	Included (temporarily)	Use	Provide	Hint
Temperature		☐	☐	_____
Surface temperature (source https://modis.gsfc.nasa.gov/data/)	X	☐	☐	_____
Precipitation (source https://pmm.nasa.gov/GPM)	X	☐	☐	_____

Your hint: _____

FORECASTS

Content	Included (temporarily)	Use	Provide	Hint
Short term forecasts				
• Temperature		☐	☐	_____
• Precipitation		☐	☐	_____
• Snow water equivalent		☐	☐	_____
• Snow melt		☐	☐	_____
• Stream flows		☐	☐	_____
Seasonal weather forecasts		☐	☐	
Long term climate projections		☐	☐	

Your hint: _____

PHYSICAL CHARACTERISTICS

Content	Included (temporarily)	Use	Provide	Hint
Land cover				
• Cover type (sources https://www.esa-landcover-cci.org/ , https://modis.gsfc.nasa.gov/data/)	X	☐	☐	_____
• Glaciers/snow cover (source https://nsidc.org/)	X	☐	☐	_____
• Cropland (source https://modis.gsfc.nasa.gov/data/)	X	☐	☐	_____
• Irrigated areas (source http://www.fao.org/land-water/land/land-governance/land-resources-planning-toolbox/category/details/en/c/1029519/)	X	☐	☐	
• Crops and crop types		☐	☐	_____
• Tree cover change (source http://earthenginepartners.appspot.com/science-2013-global-forest)	X	☐	☐	_____
Field data (such as crops, rotation)		☐	☐	_____
Soil map		☐	☐	_____
Soil carbon density (source https://www.isric.org/explore/soilgrids)	X	☐	☐	_____
Global aridity index (source https://cgiarcsi.community/2019/01/24/global-aridity-index-and-potential-evapotranspiration-climate-database-v2/)	X	☐	☐	
Potential Evapotranspiration (source https://cgiarcsi.community/2019/01/24/global-aridity-index-and-potential-evapotranspiration-climate-database-v2/)	X	☐	☐	_____

Your hint: _____

OTHER RELEVANT DATASETS

Content	Included (temporarily)	Use	Provide	Hint
Agricultural productions (source http://www.earthstat.org/)	X	☐	☐	_____
Spatial production allocation mode 2000, 2005, 2010 (SPAM) (source https://cgiarcsi.community/2019/01/04/global-spatially-disaggregated-crop-production-statistics-data-for-2010/)	X	☐	☐	
Land degradation and desertification (source http://geoagro.icarda.org/cldd/)	X	☐	☐	_____
Monitoring locations				
• Snow		☐	☐	_____
• Climate		☐	☐	_____
• Water levels		☐	☐	_____
• Flows		☐	☐	_____
• Water quality		☐	☐	_____