



## CREWS PROJECT PROGRESS REPORT (January – June 2021)




<b>1. Project title</b>	Afghanistan - AF-ECLIM: Enhancing hydromet, early warning and climate Services for Resilience	<b>2. Project reference</b> P168141 (AF-ECLIM) CREWS/CProj/10/Afghanistan
<b>3. Implementing Partners involved in the project</b>	World Bank (Lead) World Meteorological Organization	<b>4. Regional/National Partners involved in the project</b> AMD, NWARA (WRD), MAIL, Ministry of Rural Rehabilitation and Development (MRRD), SMDM, NSIA (National Statistic and Information Authority)
<b>5. Project Duration/Timeframe</b>	September 2019 – December 2023	
<b>6. Reporting focal point(s)</b>	Masatsugu Takamatsu DRM Specialist, World Bank ( <a href="mailto:mtakamatsu@worldbank.org">mtakamatsu@worldbank.org</a> ) Arati Belle, Senior DRM Specialist, World Bank ( <a href="mailto:abelle@worldbank.org">abelle@worldbank.org</a> ); Fatih Kaya, Project Officer, WMO ( <a href="mailto:fkaya@wmo.int">fkaya@wmo.int</a> )	
<b>7. Project overview</b>	<p><b>Please include synergies, leveraging, key project deliverables and total funding in bullet points. (max 250 words)</b></p> <p>Project Development Objective: To strengthen the capacity of provider and user agencies for the development and delivery of weather, water and climate-related early warning services.</p> <p>The CREWS grant funding is implemented by the lead partner, World Bank (US\$2.45 million exclusive of fees) and the technical partner, WMO (US\$ 0.86 million) and has been effective as of end-September 2019.</p> <p>Key deliverables:</p> <ul style="list-style-type: none"> <li>• Production, translation and communication of weather forecasts, hydrological forecasts, and impact-based warnings;</li> <li>• Delivery of services to stakeholders and end-users for priority sectors including improvement in the dissemination of warnings for public safety and economic;</li> <li>• Improvement in the information base, including through regional collaboration;</li> <li>• Enhanced decision-making to mitigate the adverse impacts of natural hazards on life, livelihoods and property.</li> </ul>	






<b>8. Progress summary</b>	<p><b>What has been achieved between (reporting period)? – Please list the most significant and tangible developments?</b></p> <ul style="list-style-type: none"><li>• Design of the World Bank ENETAWF (EARLY WARNING, EARLY FINANCE AND EARLY ACTION) Project’s component on <b>Early Warning, Hydromet Services and Community Resilience</b> (\$15.8 m) approved by the WB Board Feb 2021;</li><li>• <b>Several documents are being developed:</b> (i) the Service Delivery Strategy (SDS) guidance document for the General Directorate of Water Resources (GDWR); (ii) the framework document on capacity assessment of GDWR; (iii) the Legal and institutional framework document; (iv) Surveys and ICT assessment/preliminary results; The <b>prototype of the Afghanistan Drought Early Warning Decision Support Tool (AF-DEWS)</b> has been developed and will be rolled out through the Early Warning, Early Finance and Early Action Project;</li><li>• <b>Community-Based Disaster Risk Management (CBDRM)</b> successfully piloted in 10 communities. The TA established a DRM Resource Center stationed at MRRD, implemented 6 low cost weather stations in Badakhshan, Kandahar and Panjshir provinces, rolled out a weatherboard mobile app, and developed an open-source community risk mapping system. The success is measured by the intake of the CBDRM efforts by community members and strong buy-in from GOA in scaling up this approach to additional communities through the early warning component of the ENETAWF project in the coming four years.</li><li>• <b>Mesoscale implementation of the ICON-in the cloud</b> (Numerical Weather Prediction Model) by DWD (German Weather Service) covering Afghanistan and Central Asia Countries in place;</li><li>• <b>Twinning arrangement</b> between Afghanistan Meteorology Department (AMD) and Turkish State Meteorological Services (TSMS). AMD delivered on new interface Flash Flood Guidance System.</li></ul>
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## 9. Project Performance

Interpretation of color coding		
	<b>High</b>	Good progress; on track in most or all aspects of delivery
	<b>Medium</b>	Moderate progress or on track in some aspects of delivery
	<b>Low</b>	Less than moderate or poor progress. Not on track in critical areas of its delivery. Requires remedial attention

	Rate of expenditure	Rate of delivery	Alignment of Objectives
<b>Coding</b>			



<b>Narrative</b>	<p>Disbursement June, 2021</p> <p>From WB side: is \$376,689 (15.4% of total amount)</p> <p>From WMO side: is \$249,514 (29% of total amount)</p>	<p>Activities are going on full speed with a rebalancing of virtual interactions.</p>	<p>Fully aligned</p>
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## 10. Risk Management Status

<b>Risk Status</b>	<p>What is the current risk status as compared to what was identified in the project proposal? The risk levels are high because of the FCV context and the added constraints de to the COVID situation although all efforts are ongoing to move ahead through virtual work situation.</p>
<b>Measures to address</b>	<p>What mitigation measures have been developed to address the risk status? Virtual communications and meetings. "In consideration of the COVID related travel limitations and the precarious security situation in the country, a revision of the workplan is currently being undertaken and will be completed by September 2021"</p>

## 11. Contributions to CREWS Output(s)

### 11.1 National Output(s)

**CREWS Output(s) 1: National Meteorological and Hydrological Services service delivery improved, including the development of long-term service delivery strategies and development plans**



State Project Output(s) in this section	Overall Project Target	Target for reporting period	Progress by December 2020	Progress by June 2021
Hydromet Concept of operations (CONOPS)	CONOPS document developed	CONOPS document for AMD completed	Drafting of the CONOPS document completed. Draft being reviewed by AMD	Completed draft CONOPS and delivered to AMD.
Services delivery strategy	Service delivery strategy document developed	Service delivery strategy document completed for AMD and drafted to GDWR	Drafting of the Service delivery strategy document Completed. Virtual workshops for discussion and implementation of the Strategy planned in Jan/Feb 2021	Virtual workshops held with AMD and GDWR and guidance on implementing the Strategy for Service Delivery provided to both entities. Some feedback received from GDWR, feedback from AMD is awaited for assessing service delivery capacity. A strategy document on Service Delivery developed specifically for



				GDWR and delivered.
Reinforcing the legal and institutional framework	A legal framework and regulations document developed	Drafting of the Legal framework and regulations document completed	Draft of the Framework document and regulations in development	Legal framework and regulation document for AMD developed and delivered to AMD.
Introducing QMS across operations of AMD and WRD-MEW to interact with their user communities	Quality Management Systems (QMS) introduced in AMD and WRD-MEW operational processes	Process for introducing QMS in AMD and WRD-MEW initiated	Process for introducing QMS across operations of AMD initiated through the signature of an MoU between AMD and Turkish State Meteorological Service (TSMS), and the delivery of the QMS roadmap by TSMS	The MoU is currently under reviewed by TSMS
Developing stakeholder/user surveys to tailor the services for users	Surveys completed	Progress expected limited to initiating the task	Preparation of surveys initiated	Preparation of surveys initiated, but not completed yet .



**Narrative: briefly indicate the major issues or challenges faced and mitigation steps taken to addressing them. (150 to 200 words)**

Given the existing capacity constraints, the covid related travel restrictions and other incidents in the country, the activities were sequenced and now priority is given to those activities which can be done through virtual communication means.

In particular, the CONOPS, the service delivery strategy and the legal framework documents have been prepared based on the guidance/information shared and discussions during the virtual workshops held with AMD and GDWR during the reporting period.

**CREWS Output(s) 2: Risk Information to guide early warning systems and climate and weather service developed and accessible**

State Project Output(s) in this section	Overall Project Target	Target for reporting period	Progress by December 2020	Progress by June 2021
Design of Drought Early Warning System	Design completed	Base design completed; update to be developed	Technical report on the design of the AF-DEWS being reviewed	Design of the tool completed, technical report, summary report delivered to the Client.
Development of Drought Early Warning System	Established and functional	Prototype of the AF-DEWS developed	Prototype of the AF-DEWS (version 1.0) developed and currently being reviewed/ revised by the Government prior to handover. Further developments and	The prototype (version 1.0) is established and functional. Handover of the Af-DEWS on government servers is still in process.

			updates, and operationalization will be rolled out through the ENETAWF project	
Design of Agrometeorological services	Design document ready	ToR for the design of the Agromet Advisory Information System	ToR for the design of the Agromet Advisory Information System drafted	ToR drafted but procurement postponed to next semester (priority was given to drought analytics & response).
Flood Early warning designed and Flash Flood forecasting and alerting systems enhanced	Flood EW Design developed; Link with CA FFGS established and capacity enhanced	Link with CA FFGS initiated and required tools in place	AMD has been delivered with new interface of FFGS, which has enhanced its GIS applications. This upgrade allows Flash-Flood data to be combined with geographical data (e.g. roads, important places) for understanding the impact of the flash floods	PARFFGS (Pakistan-Afghanistan Flash Flood Guidance System) system new NWP (Numerical Weather Prediction) module WRF (Weather Research & Forecasting) is operational and covering Afghanistan, which will significantly contribute to the





				quality of the Flash flood forecast and warning products. Model data will be operational in the second half of the 2021.
Afghanistan is re-connected with Regional Climate Services	Completed	Ongoing participation of Afghanistan in regional activities	Afghanistan is actively participating in SASCOF, and communications between AMD and IMD are ongoing	Afghanistan has participated in SASCOF-19 (June 2021), and communications between AMD, India Meteorological Department (IMD) and the Regional Integrated Multi-hazard Early Warning System for Africa and Asia (RIMES) are ongoing. Coordination with UKMO has been sought to ensure synergies with the Asia Regional Resilience to a Changing Climate (ARRCC) program



				activities on climate services.
Concept note for the Amu Darya Flow Forecasting and Early Warning System	Completed	Concept note for the Amu Darya Flow Forecasting and Early Warning System developed	Concept note developed and approved to support Afghanistan's inclusion in Central Asia flood forecasting and EW, and improve transboundary flood, flash flood and landslide forecasting, warning and advisory services in the Amu Darya and Syr Darya river basins. Implementation will start in 2021	AMD and National Water Affairs Regulation Authority (NWARA) have been invited into the development of the EWS. A process of mapping the technical capacities of the Central Asia Hydromet Services for Central Asia Flash Flood Guidance System (CAFEWS) implementation has been agreed on 11 April 2021. Focal points from both organizations have been



				identified for follow-ups
Strengthening the use of NWP for improving forecast accuracy	Expand regional NWP to cover Afghanistan  Access and use of global and regional NWP	Communications between AMD and global and regional NWP centres initiated	Mesoscale implementation of the ICON-in the cloud (Numerical Weather Prediction Model) by DWD (German Weather Service) covering Afghanistan and Central Asia Countries initiated	NWP domain has been decided and DWD is working on pilot runs. Development of local datasets are in progress
<p><b>Narrative: briefly indicate the major issues or challenges faced and mitigation steps taken to addressing them. (150 to 200 words)</b></p> <p>Given the existing capacity constraints, the covid related travel restrictions and other incidents in the country, the activities were sequenced and now priority is given to those activities which can be done through virtual communication means.</p>				

**CREWS Output(s) 3: Information and Communication Technology, including common alerting protocol, strengthened**

State Project Output(s) in this section	Overall Project Target	Target for reporting period	Progress by December 2020	Progress by June 2021
Supporting MoUs between MRRD and other agencies relevant for the drought early warning system	MoUs signed	- (MoUs drafted)	- (MoUs drafted, incorporating comments from legal team; activity under ENETAWF)	MoUs are drafted and reviewed by legal team. Signing is pending ENETAWF effectiveness.



<p>Developing a modern impact-based weather forecasting process</p>	<p>Impact-based forecasting process guidance document</p>	<p>Impact-based forecasting process guidance document prepared</p>	<p>Drafting of the Impact-based forecasting process guidance document completed</p>	<p>Impact based forecasting process guidance delivered to AMD.</p>
<p>Establishing a HydroMet data management system for AMD, GDWR, and MAIL</p>	<p>Data management system for AMD and WRD established and operating</p>	<p>Preliminary assessment done</p>	<p>TOR for the assessment of the observation networks and related ICT drafted (actual establishment of the system will be under ENETAWF)</p>	<p>Assessment of the HydroMet ICT system has started. Virtual workshops held with AMD, GDWR and MAIL, and virtual meetings were held with other development partners supporting projects in Afghanistan (Commonwealth Scientific and Industrial Research Organisation (CSIRO), Japan International Cooperation Agency (JICA) and Asian Development Bank (ADB)). Feedback (filled in questionnaires) received from all entities. Assessment questionnaires and preliminary assessment done.</p>



**Narrative: briefly indicate the major issues or challenges faced and mitigation steps taken to addressing them. (150 to 200 words)**

Given the existing capacity constraints, the covid related travel restrictions and other incidents in the country, the activities were sequenced and now priority is given to those activities which can be done through virtual communication means.

In particular, the impact-based forecasting document has been prepared, and the ICT assessment has been questionnaires and preliminary assessment were done based on the discussions during the virtual workshops held with Afghanistan Meteorological Department (AMD), General Directorate of Water Resources (GDWR) and the Ministry of Agriculture, Irrigation and Livestock (MAIL), as well as with other development partners (such as CSIRO, JICA, and ADB) during the reporting period.

**CREWS Output(s) 4: Preparedness and response plans with operational procedures that outline early warning dissemination processes developed and accessible**

State Project Output(s) in this section	Overall Project Target	Target for reporting period	Progress by December 2020	Progress by June 2021
Capacity assessment for hydromet and DRM agencies	Current capacity assessed and training plan developed	Capacity Assessment of hydromet agencies in progress	Capacity assessment of the DRM agency completed. Capacity assessment of hydromet agencies being developed	Virtual workshops held with AMD and GDWR and guidance on the staff capacity assessment process provided to both entities. Some feedback (filled in questionnaires) received from GDWR, feedback from AMD is awaited for



				assessing staff capacity. A framework document on Capacity Assessment and questionnaires developed specifically for GDWR and delivered.
<p><b>Narrative: briefly indicate the major issues or challenges faced and mitigation steps taken to addressing them.</b></p> <p>Given the existing capacity constraints, the covid related travel restrictions and other incidents in the country, the activities were sequenced and now priority is given to those activities which can be done through virtual communication means.          In particular, the framework documents on Capacity Assessment have been prepared based on the guidance/information shared and discussions during the virtual workshops held with AMD and GDWR during the reporting period.</p>				

**CREWS Output(s) 5: Knowledge products and awareness programmes on early warnings developed**

State Project Output(s) in this section	Overall Project Target	Target for reporting period	Progress by December 2020	Progress by June 2021
Afghanistan Hydromet Atlas	Completed	Afghanistan Hydromet Atlas developed	Afghanistan Hydromet Atlas developed and being reviewed;	Forewords received from Director General NWARA and

			coordinated with CAWEP	Head of Afghanistan Civil Aviation Authority (ACAA) from the Gov. of Afghanistan, and former Afghanistan Country Director and Regional Director of Sustainable Development from the World Bank.
Afghanistan is a member of the South Asia Hydromet Forum and its engagement in SAHF to be strengthened	Full participating member of SAHF (member of RIMES led SAHF executive committee)	SAHF executive committee virtual meeting held; and working groups established	TOR developed and firm contracted (RIMES) to led SAHF executive committee; preliminary discussions / e-meeting with DGs of SA NMHSs (Executive Committee members) organized	Virtual meetings of the SAHF Executive Committee and Working Groups held. ToRs for 4 Working Groups (IBF, NWP, Observations, and Capacity Building) developed and approved by



				the SAHF Executive Committee. SAHF Executive Committee members appointed experts to the 4 Working Groups.
Linkage with Central Asia and Indian Meteorological Department established	Strong linkage with CA and MOU with IMD established	Consultations with CA and communications with IMD ongoing	Communications with IMD initiated	Consultations with CA are ongoing. Communications with IMD are ongoing and are supported by RIMES through SAHF activities.
<p><b>Narrative: briefly indicate the major issues or challenges faced and mitigation steps taken to addressing them. (150 to 200 words)</b></p> <p>Based on the covid related travel restrictions and other incidents in the country, activities are being undertaken virtually. There is also a heavy burden on coordination as several partners and entities are involved in SAHF activities.</p>				

**CREWS Output(s) 6: Gender-sensitive training, capacity building programmes provided**





State Project Output(s) in this section	Overall Project Target	Target for reporting period	Progress by December 2020	Progress by June 2021
Supporting the development of the training needs for Drought Early Warning System	Training completed	Draft needs developed	Training ongoing.	<p>Remote training on-going with the managing authority (AMD). Further mainstreaming of trainings to additional agencies under ENETAWF.</p> <p>GeoGLOWS – Hydrological drought monitoring for Afghanistan training was provided to GDWR.</p>
Capacity building for cost-effective observation network through establishing local capacities and capabilities (3D Printed Agromet Stations for research and academia)	Training completed	Training needs assessed	3D-PAWS: low-cost observation network equipment delivery in progress; training for Observers planned in Jan-Mar 2021	UCAR (NOAA) has shipped to Afghanistan two 3D printers and equipment for 20 stations on 24 April 2021.



**Narrative: briefly indicate the major issues or challenges faced and mitigation steps taken to addressing them. (150 to 200 words)**  
 Because of travel restrictions, the capacity assessment of hydromet agencies is being undertaken virtually. There is also a heavy burden on coordination as several partners and entities are involved in capacity building in the region/country.

### 11.2 Regional Output(s)

#### **CREWS Regional Output(s): Institutional and human capacities at Regional WMO and Intergovernmental organizations to provide regional climate and weather services to LDCs and SIDS increased**

State Project Output(s) in this section	Overall Project Target	Target for reporting period	Progress by December 2020	Progress by June 2021
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**Narrative: briefly indicate the major issues or challenges faced and mitigation steps taken to addressing them. (150 to 200 words)**

### 12. Contributions to Value Propositions

<b>Gender Responsive</b>	<p><i>(How did the project capture relevant gender concerns? For example, including gender-inclusive indicators and targets, reporting on sex-disaggregated data, conduct of gender analysis, involvement of gender and/or women’s organisations, documenting effects on women, men and gender-relations, implementing gender specific actions/activities for women and men.)</i></p> <p>Training addresses specific gender needs, by addressing communication channels that women use, and developing content of warning messages that consider women’s knowledge gaps. Drought early warning is a part of the broader program - ENETAWF - where gender issues are mainstreamed by promoting women’s equitable participation in meetings, workshops and capacity building/training activities with the local</p>
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	governments, community leaders and others working on the ground, and at all levels of decision-making early warning systems' (EWS) processes.
<b>Multiplier</b>	<p><b><i>(How did the project contribute to the promotion of a favorable environment for early warning systems? What additional financing has been leveraged or expected to be mobilized as an effect of the project?)</i></b></p> <p>Potentially financing in the order of 200-350 million USD (through two proposed IDA investments, ENETAWF and agro-water climate resilience).</p>
<b>People-centered</b>	<p><b><i>(Which local organisations have been engaged and what is their level of participation? How did the project ensure the involvement and uptake of end-users?)</i></b></p> <p>Focus on reducing impact of hazards on the most vulnerable and improving resilience of highly vulnerable communities, by emphasizing on what a hazard will do and how to manage risks accordingly, and empowering the affected population to most optimally understand early warning messages and take appropriate actions to protect themselves in a disaster.</p>
<b>Promote Coherence</b>	<p><b><i>(What are the approaches undertaken to ensure complementarity and value-added of the project with existing projects and other international partner initiatives ? For example, conduct of joint planning, resource sharing, participation in consultations, workshops, meetings organized by partners.)</i></b></p> <p>Improving coordination on technical capacity support from various partners such as WMO, UKMO, CAWEP etc. This is done through exchanging information and work plans, and establishing synergies and complementarities between related activities.</p>
<b>Solution-oriented</b>	<p><b><i>(What good and innovative practices have been produced or are evident in the project?)</i></b></p> <p>Activities correspond to specific conditions and provide solutions for the Afghan context.</p>



<b>Unique</b>	<p><b><i>(How did the project support building sustained institutional capacity driven by countries?)</i></b></p> <p>Drought EW tool uses the innovative approach developed by the International Water Management Institute (IWMI) for drought monitoring. A Drought Bulletin is regularly prepared using outputs of this tool.</p>

### 13. Visibility products

*a. Insert or copy any links to press releases, videos or communication items and/or social media links*

SASCOF-19 (June 2021): [http://rcc.imdpune.gov.in/ConsensusWin/consensus\\_statement\\_JJAS\\_2021.pdf](http://rcc.imdpune.gov.in/ConsensusWin/consensus_statement_JJAS_2021.pdf)

South Asia Hydromet Forum: [www.worldbank.org/southasiahydrometforum](http://www.worldbank.org/southasiahydrometforum)

[Youtube video on Country Hydromet Diagnostic road-testing results](#)

### 14. Supporting documents

*a. List and annex to the report any documents providing details on project activities such as reports of training sessions, assessment reports, online solutions and tools, manuals, summaries of high-level discussions etc.*

- Strategy for Service Delivery document for GDWR (attached)
- Framework document on capacity assessment of GDWR (attached)
- ICT Survey 1 – Data collection <https://forms.gle/mSQCQ21ttxn4spop8>
- ICT Survey 2 – ICT Systems <https://forms.gle/CY49LU3pqbBQLS696>
- IWMI “AF-DEWS” Final Technical [Report](#); Synthesis Report (attached)
- [Country Support Initiative](#) and [Country Hydromet Diagnostic methodology](#)
- [Confirmation of delivery of 3D printers and equipment](#)
- [Legal Framework and Regulations for AMD \(attached\)](#)



- [Afghanistan HydroMet Atlas](#)
- [CBDRM/EW Bridge Project Final Report \(attached\)](#)