# CREWS PROJECT PROGRESS REPORT

**(July – December 2021)**

<table>
<thead>
<tr>
<th>1. Project title</th>
<th>Afghanistan - AF-ECLIM: Enhancing hydromet, early warning and climate Services for Resilience</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Project reference</td>
<td>P168141 (AF-ECLIM)</td>
</tr>
</tbody>
</table>
| 3. Implementing Partners involved in the project | World Bank  
World Meteorological Organization (WMO) |
| 4. Regional/National Partners involved in the project | Under revision (no direct engagement policy): AMD, NWARA (GDWR), MAIL, MRRD, SMDM, NSIA |
| 5. Project Duration/Timeframe (from year – to year) | September 2019 – December 2023 |
| 6. Total Funding Approved by Steering Committee (in US dollars), including fees | 3,660,000 |
| 7. Reporting focal point(s) from Implementing Partners | Arati Belle, DRM Specialist – abelle@worldbank.org  
Fatih Kaya, Project Officer – fkaya@wmo.int |
| 8. Project overview | Please include objectives, key project deliverables, leveraging, contextual information/statistics, significant events during the reporting period in bullet points. (max 250 words)  
Key deliverables:  
- Production, translation and communication of weather forecasts, hydrological forecasts, and impact-based information;  
- Delivery of services to stakeholders and end-users for priority sectors including improvement in the dissemination of warnings for public safety and economic sectors;  
- Improvement of the information, including through regional collaboration.  
- Enhanced decision-making to mitigate the adverse impacts of natural hazards on life, livelihoods and property. |
9. Progress summary

What has been achieved during this reporting period? – Please list in bullet points the most significant and tangible outcomes? (Highlight at least 1 key achievement that can be elaborated in the 2021 Annual Report). (max 250 words)

- Production, translation & communication of weather and climate services to UN and humanitarian agencies
- Implementation of the mesoscale model ICON in the cloud
- Completion/finalization of already initiated reports:
  - Hydromet Concept of Operations (CONOPS) for AMD
  - Hydromet Service Delivery Strategy
  - ICT assessment and roadmap
  - Policy Note: Advancing the Road Map for Afghan-Tajik cooperation in Hydromet data exchange
  - Afghanistan Hydromet Atlas
- WRF model for Afghanistan domain became operational and inclusion to FFGS is completed
  - Riverine Flood forecasting and warning system together with Seasonal-to-Subseasonal component will cover Afghanistan
- Design of Landslide forecasting system for Afghanistan is completed, ToRs developed.

10. Project Performance

<table>
<thead>
<tr>
<th>Interpretation of color coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>High  ➡️ Green</td>
</tr>
<tr>
<td>Medium ➡️ Orange</td>
</tr>
<tr>
<td>Low ➡️ Red</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rate of expenditure</th>
<th>Rate of delivery</th>
<th>Alignment of Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coding</td>
<td></td>
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</table>
### 11. Risk Management Status

<table>
<thead>
<tr>
<th>Risk Status</th>
<th>What is the current risk status as compared to what was identified in the project proposal?</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>• The risk levels are high because of the FCV context and the added constraints due to the COVID situation although all efforts are ongoing to move ahead through virtual work situation.</td>
</tr>
<tr>
<td></td>
<td>• Operational limitations in directly engaging with Afghan Governmental Agencies.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measures to address</th>
<th>What mitigation measures have been developed to address the risk status? <strong>In bullet points</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Virtual communications and meetings. &quot;In consideration of the COVID related travel limitations and the precarious security situation in the country;</td>
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<td></td>
<td>• Enhance regional linkages and service delivery through international organizations and regional agencies active in the Country (e.g. FAO, RIMES, UN-OCHA, WFP);</td>
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<td></td>
<td>• Discussion with the WBG Country Management Unit to repurpose some of the CREWS funding towards:</td>
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<td></td>
<td>• Monitoring the situation on the ground (through the AF-DEWS and interactions with UN agencies);</td>
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<td></td>
<td>• Informing international partners/communities (Drought Bulletin, WMO Seasonal Forecasts and winterization Plans, attendance to country update events);</td>
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<tr>
<td></td>
<td>• Supporting new programs, particularly in the Agriculture sector: currently under discussion within the WBG.</td>
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</tbody>
</table>

### 12. Contributions to CREWS Output(s)

*(use number for activities and products and % for project component completion)*
# 11.1 National Output(s)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**

<table>
<thead>
<tr>
<th>State Project Output(s) in this section</th>
<th>Overall Project Target</th>
<th>Progress by July 2021</th>
<th>Target for reporting period</th>
<th>Progress by December 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydromet Concept of operations (CONOPS)</td>
<td>TOR developed</td>
<td>Drafting of the CONOPS document initiated</td>
<td>None</td>
<td>Activity completed</td>
</tr>
<tr>
<td>Services delivery strategy</td>
<td>TOR developed</td>
<td>Drafting of the strategy document initiated</td>
<td>None</td>
<td>Activity completed for GDWR, on-hold for AMD (no direct engagement possible)</td>
</tr>
<tr>
<td>Reinforcing the legal and institutional framework</td>
<td>TOR developed</td>
<td>Drafting of the framework document and regulations initiated</td>
<td>None</td>
<td>Activity completed</td>
</tr>
<tr>
<td>Introducing QMS across operations of AMD and WRD-MEW to interact with their user communities</td>
<td>-</td>
<td>On-hold</td>
<td>None</td>
<td>On hold due to ongoing political situation.</td>
</tr>
<tr>
<td>Developing stakeholder/user surveys to tailor the services for users</td>
<td>Surveys completed</td>
<td>Preparation of surveys initiated, but not completed yet.</td>
<td>None</td>
<td>Activity on hold (no direct engagement possible)</td>
</tr>
</tbody>
</table>
Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list in bullet points.

Given the existing operational constraints, activities which could be undertaken remotely – such as assessments and reports – have been revised by international stakeholders and then finalized.

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

<table>
<thead>
<tr>
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<th>Progress by July 2021</th>
<th>Target for the reporting period</th>
<th>Progress by December 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design of Drought Early Warning System</td>
<td>Design completed</td>
<td>Drafting of the technical brief underlining the design of the Drought Early Warning System completed</td>
<td>None</td>
<td>Activity completed</td>
</tr>
<tr>
<td>Development of Drought Early Warning System</td>
<td>Established and functional</td>
<td>Preliminary prototype for the Drought Early Warning System developed</td>
<td>Engagement of a regional entity to host the tool and provide support</td>
<td>Interaction with RIMES, UN-OCHA and Central Asian Country undertaken. Currently, RIMES and UN-OCHA seems the best options, given the limited interest demonstrated</td>
</tr>
<tr>
<td>Service Area</td>
<td>Status</td>
<td>Description</td>
<td></td>
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<td>----------------------------------------------------------------------------</td>
<td>-------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
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</tr>
<tr>
<td>Design of Agrometeorological services</td>
<td>Drafting of the draft document completed.</td>
<td>by Central Asian countries in adopting the tool. The CREWS team is currently discussing with the WBG CMU to be fully aligned with new initiatives being explored at the country level.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flood Early warning designed and Flash Flood forecasting and alerting systems enhanced</td>
<td>On-hold</td>
<td>Concept note is approved and project implementation is launched on December 11 2022. HRC is contracted for Riverine Routing and Seasonal to Subseasonal forecasting and warning components. Implementation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Flood EW Design developed; Link with CAR FFGS established and capacity enhanced
Draft concept on FFGS developed. PARFFGS system new NWP (Numerical Weather Prediction) module WRF (Weather Research & Forecasting) is operational and covering Afghanistan
| Afghanistan is re-connected with Regional Climate Services | Completed | Communications between AMD and IMD initiated | Support attendance of AFG NMHS to regional initiatives | AMD attended the South Asia Hydromet Forum 3 (held virtually in November 2021) |

will be finalized in March 2023. Landslide forecasting and warning components are designed and TORs are developed. ToRs developed for landslide and riverine forecasting enhancements.

Landslide component will use WRF and ICON models as the backbone of the forecasting operation as an integral part of the PARFFGS system.
<table>
<thead>
<tr>
<th>Concept note for the Amu Darya Flow Forecasting and Early Warning System</th>
<th>Completed</th>
<th>AMD and NWARA included in development of the EWS. Focal points from both organizations have been identified for follow-ups</th>
<th>Concept note is finalized and CAFEWS is launched on December 11 2021 on International Mountain day. Afghanistan is included within the Riverine Routing and Seasonal-to-Subseasonal forecasting components of the CAFEWS (Please check references below to access more information on the launch of CAFEWS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengthening the use of NWP for improving forecast accuracy</td>
<td>Expand regional NWP to cover Afghanistan</td>
<td>NWP domain has been decided and DWD is working on pilot runs. Development of local datasets are in progress</td>
<td>Afghanistan Domain; WRF Model implementation is finalized. WMO will continue working on</td>
</tr>
</tbody>
</table>
model performance in 2022 in coordination with Pakistan Meteorological Department and Hydrological Research Center.

DWD pilot run for ICON in the Cloud is ongoing and further efforts are planned for 2022 under the WBIA Central Asia Hydromet Modernization Project, which is also covering Afghanistan Domain.

Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list in bullet points.

Given the existing operational constraints, some activities within this output have been restructured by repurposing the focus towards UN and other international stakeholders rather than NMHS. As the situation evolves, CREWS team stands ready to support new initiatives currently under design with weather and climate cross-cutting components.

Additional and new emphasis has been placed in providing multi-hazard early warning services through regional mechanisms to a range of new stakeholders, including the UN agencies that remained engaged in the Country.
CREWS Output(s) 3: Information and Communication Technology, including common alerting protocol, strengthened

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</thead>
<tbody>
<tr>
<td>Supporting MoUs between MRRD and other agencies relevant for the drought early warning system</td>
<td>MoUs signed</td>
<td>(expected to be done under the ENETAWF) during Sept-Dec 2020</td>
<td>None</td>
<td>Activity cancelled</td>
</tr>
<tr>
<td>Developing a modern impact-based weather forecasting process</td>
<td>Impact-based forecasting process guidance document</td>
<td>Drafting of the guidance document initiated</td>
<td>None</td>
<td>Completed</td>
</tr>
<tr>
<td>Establishing a HydroMet data management system for AMD, GDWR, and MAIL</td>
<td>Data management system for AMD and WRD established and operating</td>
<td>Draft assessment done</td>
<td>Completion of the ICT assessment.</td>
<td>The assessment of the HydroMet ICT system has been finalized, incorporating all comments received from AFG CREWS team and relevant international partners (CSIRO, ADB and JICA).</td>
</tr>
</tbody>
</table>

Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list in bullet points. 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 or with the support of a regional agency. In particular, the impact-based forecasting document has been prepared, and the ICT assessment report has been completed.
### CREWS Output(s) 4: Preparedness and response plans with operational procedures that outline early warning dissemination processes developed and accessible

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</tr>
</thead>
<tbody>
<tr>
<td>Capacity assessment for hydromet and DRM agencies</td>
<td>Current capacity assessed and training plan developed</td>
<td>A framework document on Capacity Assessment and questionnaires developed specifically for GDWR and delivered.</td>
<td>Capacity Assessment completed</td>
<td>Activity completed for hydromet agencies (AMD/GDWR-NWARA); and reports being finalized. Activity for DRM Agency (ANDMA) on hold.</td>
</tr>
</tbody>
</table>

**Additional information:** Briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list in bullet points. 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, Capacity Assessments of AMD and GDWR have been done and results analyzed; reports are being finalized.
<table>
<thead>
<tr>
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<th>Target for the reporting period</th>
<th>Progress by December 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan Hydromet Atlas</td>
<td>Completed</td>
<td>Document completed, pending foreward ahead of publication.</td>
<td>Completion of the document.</td>
<td>The document is completed and has been shared internally and with a limited number of stakeholders (UN agencies), given the current limitations in engaging with in-country institutions.</td>
</tr>
<tr>
<td>Afghanistan is a member of the South Asia Hydromet Forum and its engagement in SAHF to be strengthened</td>
<td>Full participating member of SAHF (member of RIMES led SAHF executive council)</td>
<td>Virtual meetings of the SAHF Executive Committee and Working Groups held. ToRs for 4 Working Groups (IBF, NWP, Observations, and</td>
<td>AMD is engaged in regional SAHF activities.</td>
<td>Afghanistan NMHS were officially invited and attended the South Asia Hydromet Forum 3, held virtually in November 2021.</td>
</tr>
</tbody>
</table>
Linkage with Central Asia and Indian Meteorological Department established

**Capacity Building**

- Strong linkage with CA and MOU with IMD established
- Communications with IMD initiated
- Consultations with CA are ongoing. Communications with IMD are ongoing and are supported by RIMES through SAHF activities
- RIMES and IMD are fully engaged and chairing the SAHF (regional) activities.

**Additional information:** Briefly indicate the contributions, with concrete examples, to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list bullet points.

The WBG/WMO team is exploring opportunities to restructure the engagement through international agencies (UN) and regional partners (RIMES, IMD, PMD, Central Asian MDs) to ensure that the achievements made are preserved while the situation stabilizes. Engagement through RIMES initiated, and engagement with Central Asia being explored.

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

<table>
<thead>
<tr>
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<th>Target for the reporting period</th>
<th>Progress by December 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community awareness on drought early warning (technical support)</td>
<td>Technical assistance for training developed</td>
<td>Remote training with the key agencies initiated</td>
<td>None – activity on hold</td>
<td>Activity is on hold until the institutional...</td>
</tr>
</tbody>
</table>
in the first semester 2021. However, given the current situation in the country, the activity was put on hold.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Status</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity building for cost-effective observation network through establishing local capacities and capabilities (3D Printed Agromet Stations for research and academia)</td>
<td>Training completed</td>
<td>On hold Activity will wait until further time 3DPAWS printers arrived to Afghanistan but due to ongoing political situation AMD couldn’t get the printers, stations and other equipment from Kabul Airport Customs</td>
</tr>
</tbody>
</table>

Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list in bullet points. Activities under this output are currently on hold.

**11.2 Regional Output(s) (for Regional Projects)**
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

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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</tbody>
</table>

Additional information: briefly indicate, with concrete examples, the contributions to CREWS value propositions (gender-responsive, multiplier, people-centered, promote coherence, solution-oriented, unique), as relevant (150 – 200 words). Please list in bullet points.

13. Certification on Use of Resources

This is for authorized representatives from the Implementing Partners to certify that the resources allocated are used for their intended purpose. Please fill one table per Implementing Partner.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Response Measures Taken</th>
<th>Date of Response</th>
<th>Active/Closed</th>
</tr>
</thead>
<tbody>
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<td>Click or tap to enter a date.</td>
<td>Choose an item.</td>
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<td>Choose an item.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Institution</th>
<th>Choose an item.</th>
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</thead>
<tbody>
<tr>
<td>Firstname, LASTNAME of authorized representative</td>
<td></td>
</tr>
</tbody>
</table>

□ Yes  □ No
Has there been any cases of non-compliance with the financial rules, regulations and procedures of your institution? If yes, please fill below

<table>
<thead>
<tr>
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</tbody>
</table>

Institution: 
Choose an item.

Firstname, LASTNAME of authorized representative

Position Title

Date and Signature:

Has there been any cases of non-compliance with the financial rules, regulations and procedures of your institution? If yes, please fill below

<table>
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</tbody>
</table>

Institution: 
Choose an item.

Firstname, LASTNAME of authorized representative

Position Title

Date and Signature:
14. Visibility products

a. Insert or copy any links to press releases, videos or communication items and/or social media links produced during the reporting period only

Launch of CAFEWS on International Mountain Day:

i. Link to International Mountain Day: https://public.wmo.int/en/media/news/international-mountain-day#:~:text=International%20Mountain%20Day%20is%20celebrated,is%20sustainable%20tourism%20in%20mountains.


15. Supporting documents

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

Annexed

7) ICT Assessment Report and roadmap finalized
8) Policy Note - Policy Note: Advancing the Road Map for Afghan-Tajik cooperation in Hydromet data exchange
9) Afghanistan Hydromet Atlas
10) Sample drought bulletin in English and dari

16. Project History

a. Highlight key achievements since project started in bullet points, include all visibility and supporting documents other than those from the last 12 months

• Concept of Operations (CONOPS) developed
• Modern Impact-Based Weather Forecasting guidance document prepared
• Hydromet Service Delivery Strategy framework document prepared
• Rapid Assessment of DRM Capacities completed
• Afghanistan Drought Early Warning Decision Support Tool (AF-DEWS) prototype developed
• Central Asia and Afghanistan Flood Early Warning System (CAFEWS) concept note developed
• ICON in the Cloud started
• Capacities of HydrometServices: Dynamic Water Resources Assessment Tool (DWAT) utilized
• Cooperation and Twinning with TSMS
• ICT Assessment report developed
• Policy Note: Advancing the Road Map for Afghan-Tajik cooperation in Hydromet data exchange
• Afghanistan Hydromet Atlas
• CAFEWS Launched (11 December 2021)