

CREWS Project Status Report

1	Project Title	<i>Strengthening national capacities for EWS Service Delivery in Burkina Faso</i>
2	Project Reference	<i>[As provided by the Secretariat]</i>
3	Reporting Period	June-November 2017
4	Reporting Focal Point	<i>Jose Camacho, WMO</i>
5	Project Status Overview	<p><i>Funds were received at WMO as Implementing Agency in July 2017 starting the project clock counting. A Letter of Agreement has been signed with Agence Nationale de la Météorologie (ANAM) of Burkina Faso allowing a transfer of 482,000 USD in three tranches. The first payment was transferred late in October. Conversations with Météo-France as second main implementing partner are advanced and a LoA draft is in circulation. Signature is expected in December for a total of 310,000 USD. A tender procurement for PCs, server and software to support regional databases was initiated. A letter to the Director of AGRHYMET, inviting this organization to participate at the project has been delivered.</i></p> <p><i>A Project Manager in Burkina Faso, Dr. Michel Nikiema, has been identified and contract is going to be signed. A recruitment for a CREWS technical coordinator is underway and will be completed in January. To implement each project components, teams are organized and working. Three missions have been conducted in Burkina Faso to make general project implementation, to start the integration of national hydro-meteorological stations in OSCAR/surface, to assess observing systems and databases and to plan the hydrological component</i></p>

6 **Project Activities Contributing to CREWS Outputs**

[For each Output of the CREWS Monitoring Framework please:

- 1. Identify relevant project activities implemented to date. See the indicators identified in the CREWS Monitoring Framework for reference.*
- 2. Indicate the estimated progress achieved to date (as a percentage) relative to the "implementing time frame" set out in the project proposal for this reporting period. See the project proposal timeframe for reference.*

CREWS Output 1: Assessments of NMHSs capacities, user needs, alignment with other programmes socio-economic benefits

Project Activities and Estimated Progress to Date

<ul style="list-style-type: none"> • <i>C1a2. Assessment of observation systems. Recommendations on improvements: Mission to Burkina. 17-19 October 2017. Preliminary internal report at WMO Secretariat started.</i> 	15%
<ul style="list-style-type: none"> • <i>C1b2. Training in statistics and basic tools for climate services</i> 	5%
<ul style="list-style-type: none"> • <i>C1c3. Capacity development of ANAM on interpretation of the available NWP products and satellite information and making best use of it in short-range forecasts and warnings</i> 	2%
<ul style="list-style-type: none"> • <i>C1c4. Hydrological observation assessment and flood forecast modelling.</i> 	1%
<ul style="list-style-type: none"> • <i>C1d1. Access to the hindcast datasets available. Météo-</i> 	

<p><i>France, WMO experts. (Forecast method development / Enhancement)</i></p> <ul style="list-style-type: none"> • <i>C1d2. Calibration by best observation sets (applied to seasonal and sub-seasonal)</i> • <i>C2a2. Assessment of national capabilities on flood forecast for urban or near-by areas.</i> 	<p>0%</p> <p>0%</p>
<p><i>C1a2. Assessment of observation systems. Recommendations on improvements</i> Mission in country from 17 to 19 October. Discussions and visit to central facilities and to some meteorological station. Next activities: November 2017 - January 2018</p> <ul style="list-style-type: none"> – drafting of the assessment report including maps and tables, followed by further discussions with ANAM on the results and recommendations; – final circulation and review, translation and publication of the assessment report. <p>February-April 2018</p> <ul style="list-style-type: none"> – assistance to ANAM to develop their national WIGOS Implementation Plans. 	
<p><i>C1b2. Training in statistics and basic tools for climate services. ArcGIS software under procurement</i></p>	
<p><i>C1c3. Capacity development of ANAM on interpretation of the available NWP products and satellite information and making best use of it in short-range forecasts and warnings. One-week training workshop will be organized in Q2 2018. As part of the assessment visit planned for 6 November (see C1c4 below) it is planned to present to DGRE and ANAM the functionalities available through the Flash Flood Guidance System (FFGS), as well as the other tools/resources/know-how available through WMO, such as Integrated Flood Management</i></p>	
<p><i>C1c4. Hydrological observation assessment and flood forecast modelling. Contacts have been established with Pascal Nakouhoun, Hydrological Advisor of Burkina Faso, and Director, Direction des Etudes et de l'Information sur l'Eau, in the Direction Générale des Ressources en Eau (DGRE) since March 2017. An assessment visit, originally planned for early August, has been postponed to the week of 6 November 2017. This assessment visit, planned for a duration of 4 days, will help identify needs and gaps of the DGRE in terms of flood forecasting and early warning. Based on the outcome of this assessment, a detailed work plan for the hydrological component of CREWS BF will be developed for 2018. The assessment visit will also help to identify main causes behind flooding, especially in urban areas, understanding which weight in flood-induced damages is due to elevated vulnerability, exposure and poor/inexistent land use planning or enforcement. For this purpose, it is expected to involve in the discussion, through DGRE, also those Ministries whose mandate covers urban development, sanitation, and land-use. Also under this component, a training workshop to develop capacities on Integrated Flood Management project proposal formulation is being organized in Ouagadougou for the week of 20 November, involving all Volta Basin countries. This workshop will also be beneficial to assess the needs of Volta Basin countries, and further develop a concept note on Integrated Flood Management in the Volta Basin, to be submitted by January 2018 to the Adaptation Fund (pre-concept note approved by the AF Board of review)</i></p>	
<p><i>C1d1. Access to the hindcast datasets available. Meteo-France, WMO experts. (Forecast method development / Enhancement). Météo-France has proposed some initial approaches to carry the task, and it is agreed that these should be finalized with the overarching aim to enable sustainable capacities at ANAM for operational sub-seasonal and seasonal forecasting, including the continued access to hindcast as well as real-time forecast data from global models. A meeting between MF-WMO-ANAM would be held in Toulouse on January 2018 to provide a detailed technical workplan.</i></p>	

CREWS Output 2: Access and use of hazard and risk information

Project Activities and Estimated Progress to Date	
<ul style="list-style-type: none"> • C1e1. Sand and Dust Warnings and Advisories for sectors • C2b3. Pilot testing and evaluation of agriculture warnings and advisories in areas identified in WB GCF proposal (in preparation) based on prior stakeholder consultation • C2c1. Development of an enhanced multi-channel weather forecast and warnings communications system. 	<p>0%</p> <p>1%</p> <p>0%</p>
<p>C2b3. Pilot testing and evaluation of agriculture warnings and advisories in areas identified in WB GCF proposal (in preparation) based on prior stakeholder consultation . A visit to agricultural pilot areas is expected by November 2017 to identify crops, user and local stakeholders.</p>	

CREWS Output 3: Improvement of NMHSs service delivery

Project Activities and Estimated Progress to Date	
<ul style="list-style-type: none"> • C1a1: Integration of national hydrometeorological observing systems in OSCAR/surface. Mission in Burkina. October 2017. Preliminary internal report at WMO Secretariat started. • C1c1. Enhancing availability of NWP products from Global NWP centres including Meteo France and other European partners for use in short-range forecasting. Purchase of a ECMWF License for graphic products. Improved access to web products from Global Forecast centres. • C1c2. Develop Limited Area modeling (LAM) capabilities at ANAM linked with GFCS-USAID project. Provide foreign guidance and support. HPC procurement underway. • C1d3. Forecast co-production (regional (ACMAD), national) Tailored derived products for sectors developed. forecast co-production (regional (ACMAD), national) Tailored derived products for sectors developed. • C1e2. Climate watch. Improving Drought Monitoring, extreme weather and climate events, including dry spells, rain onset, crop status, forest fire risk and pasture status • C2a3. Co-development of severe weather and flood forecasts (user consultation including civil protection, hydrologist, meteorologist and other uses, and tailored forecast-joint training) • C2a4. Pilot testing and evaluation of flood warnings in areas identified in WB GCF proposal (in preparation) based on prior stakeholder consultation. Community based approach for flood management • C2b2. Development of identified products (e.g. drought monitoring, severe weather, season onset, sub-seasonal and seasonal forecasts). • C2b5.) Introducing impact-based warnings services for improved decision 	<p>20%</p> <p>10%</p> <p>10%</p> <p>0%</p> <p>1%</p> <p>0%</p> <p>0%</p> <p>0%</p> <p>0%</p>
<p>C1a1. Integration of national hydrometeorological observing systems in OSCAR/surface . Mission in country from 17 to 19 October, including discussions and visit to central facilities and to some meteorological stations. Next activities: November 2017 - April 2018</p> <ul style="list-style-type: none"> – further discussions and assistance to ANAM for the validation and insertion of the detailed metadata into OSCAR/Surface; – final checking and further assistance to ANAM to ensure comprehensive metadata available and updated in OSCAR/Surface; 	

<p><i>C1c1. Enhancing availability of NWP products from Global NWP centres including Meteo France and other European partners for use in short-range forecasting . ECMWF license agreement (effective 15 November 2017) has been finalized after its review by WMO's Legal Counsel. It will be signed by all three Parties including Burkina Faso via DocuSign within next few weeks. A remote training on ECMWF eccharts tool will be organized in November/December 2017 (after signing of agreement) for forecasters of Burkina Faso on how to use the tool to access to ECMWF products. Websites of global centres of NOAA/NCEP and UK Met Office are shared with ANAM Burkina Faso. NWP products from these centres are available for NMHSs in West Africa including Burkina Faso. RSMC Dakar website enhancement expected to be completed by Q3 2018. Participation of one expert from ANAM Burkina Faso in Technical Planning workshop for Severe Weather Forecasting Demonstration Project (SWFDP) implementation in West Africa held in Abidjan, Ivory Coast during 4-8 September 2017. The meeting developed implementation plan for SWFDP-West Africa which will be sent out to potential global NWP centres for preparation and implementation of their contributions.</i></p>
<p><i>C1c2. Develop Limited Area modeling (LAM) capabilities at ANAM linked with GFCS-USAID project. Provide foreign guidance and support. Activity subject to the implementation of the High Performance Computer through Project USAID-GFCS Sahel. Procurement under development.</i></p>
<p><i>C1e2. Climate watch. Improving Drought Monitoring, extreme weather and climate events, including dry spells, rain onset, crop status, forest fire risk and pasture status . Météo-France and AGRHYMET would be involved on climate watch for agriculture users with ANAM and WMO.</i></p>

CREWS Output 4: Development of long-term service delivery strategies and development plans for NMHS

Project Activities and Estimated Progress to Date	
<ul style="list-style-type: none"> <i>C2a5. Recommendations and specifications for observing and forecast system improvement and product enhancement based on pilot test (to be addressed to WB GCF project funding)</i> 	0%
<ul style="list-style-type: none"> <i>C2b4. Recommendations and specifications for observing and forecast system improvement and product enhancement based on pilot test (to be addressed to WB GCF project funding)</i> 	0%
<ul style="list-style-type: none"> <i>C3. Long term development plan for ANAM</i> 	1%
<i>C3. Contacts started with Météo-France as main supporting entity</i>	

CREWS Output 5: Procurement and installation of high priority observation and information and communications technology (ICT) equipment

Project Activities and Estimated Progress to Date	
<ul style="list-style-type: none"> <i>C1a3. Pilot-activity: Assessment and implementation of soil moisture sensors for crop assessment and flood management . Preliminary talks</i> 	1%
<ul style="list-style-type: none"> <i>C1b1. CDMS Implementation. Computer procurement started. Assesesment mission in Burkina in October 2017</i> 	10%
<i>C1a3. Pilot-activity: Assessment and implementation of soil moisture sensors for crop assessment and flood management . Visit to agricultural pilot areas in</i>	

November. Identification of crops and needs on soil moisture observations.
<i>C1b1. CDMS Implementation</i> . Procurement process has been initiated for 12 PCs, 2 laptops, 1 server, 13 external disks, ten mobile broadband devices with Internet connectivity for 30 months Implementation of CLIMSOF databases at regional delayed by software development problems. Delays to be estimated soon.

CREWS Output 6: Preparedness for response plans with operational procedures for dissemination, readiness to act with regular simulation exercises

Project Activities and Estimated Progress to Date	
<ul style="list-style-type: none"> <i>C2a1. Identification of flood prone areas and flood causes</i> 	0%
<i>C2a1. After visit on week 6 November.</i>	

CREWS Output 7: Targeted education and public awareness programmes available for warning systems and related public action

Project Activities and Estimated Progress to Date	
<ul style="list-style-type: none"> <i>C2b1. Stakeholder consultation to identify most critically needed products which are also feasible within capacity and technical constraints.</i> 	1%
<i>C2b1. Working plan details after visit in November 2017 to three pilot sites to identify crops, management information needs and local stakeholders</i>	

CREWS Output 8: Activities promoting gender equality in all aspects of early warning systems

Project Activities and Estimated Progress to Date	
<ul style="list-style-type: none"> <i>C2a3. Co-development of severe weather and flood forecasts (user consultation including civil protection, hydrologist, meteorologist and other uses, and tailored forecast-joint training) Special activities for women in communities with the aim to improve risk management</i> 	0%
<ul style="list-style-type: none"> <i>C2b1. Stakeholder consultation to identify most critically needed products which are also feasible within capacity and technical constraints. Special consultations for women in rural communities</i> 	0%
<ul style="list-style-type: none"> <i>C2b2. Development of identified products (e.g. drought monitoring, severe weather, season onset, sub-seasonal and seasonal forecasts). Development of tailored products targeted to women taking into account their specific roles in rural communities</i> 	0%
<ul style="list-style-type: none"> <i>C2c1. Development of an enhanced multi-channel weather forecast and warnings communications system. Delivery of tailored products for women in rural communities to reinforce awareness</i> 	0%
<i>First reports after visit to pilot sites in November</i>	

6.1 REGIONAL OUTPUTS

CREWS Regional Output A: Assessments of institutional capacities of regional centers to meet NMHSs' needs, alignment with other programmes socio-economic benefits

Project Activities and Estimated Progress to Date	
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CREWS Regional Output B: Training for regional WMO and intergovernmental organizations to provide regional climate/weather services
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Project Activities and Estimated Progress to Date	
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[For all projects]

7	Funding Spent	<i>Spent or committed on 27 October: 255.000 CHF</i>
8	Changes in Organization and Operating Procedures, Project Viability and Sustainability	<i>Project Manager in Burkina Faso: Dr. Michel Nikiema appointed</i> <i>LoA with ANAM : signed September, funds transferred end of October</i> <i>LoA with Météo-France: drafting, first draft end of October, expected signature: December</i>
9	Lessons Learned	