

CREWS Project Status Report

1	Project Title	DRC Strengthening Hydro-Meteorological and Early Warning Services
2	Project Reference	CREWS/CProj/01/DRC
3	Reporting Period	June 2018 - November 2018
4	Reporting Focal Point	Lorenzo Carrera, Disaster Risk Management Specialist, The World Bank, lcarrera@worldbank.org , +1 202 813 5847
5	Project Status Overview	<p>CREWS is contributing to the improvement of hydro-meteorological and early warning services in the Democratic Republic of Congo by providing:</p> <ul style="list-style-type: none"> - improved weather forecasts disseminated through different media, including television, radio and internet; - agrometeorological information services; - extreme weather warnings (mostly in urban areas and along fluvial navigation channels), and; - support to aviation services. <p>The activities as presented in the Investment Plan are reflected below:</p> <ul style="list-style-type: none"> - Component A. Institutional and regulatory strengthening, capacity building and implementation support (cost US\$0.95M): (i) strengthening the partnerships between MettelSat, civil protection, RVF and RVA relevant to early warning systems (severe weather, flash flooding); (ii) institutional strengthening; (iii) capacity building; - Component B. Improvement of hydromet information service delivery (cost US\$2.14M): In line with the global framework for climate services, this component will support (i) identification of requirements by decision-makers and the population at-risk; and (ii) support the design and production of more accurate, timely and relevant warnings and information. The component will strengthen the capacity of specific users for optimal use of products and services relevant to early warning systems (severe weather, flash flooding). <p>More specifically, CREWS is leveraging on the World Bank Strengthening Hydro-Meteorological and Climate Services (P159217) investment project to deliver new early warning systems and improved hydromet services. CREWS supports and builds on the implementation of the investment project in MettelSat and other partners.</p> <p>CREWS funds have been received by the World Bank and the creation of a specific trust fund has been completed in December 2017. The investment project Strengthening Hydro-Meteorological and Climate Services (P159217) became effective in February 2018. CREWS and the investment project are implemented in close synergy.</p>

On January 3-4, 2018, flood events in Kinshasa caused 51 fatalities, affecting around 16,000 people and causing damages and losses for around US\$76 million. A rapid Post-Disaster Assessment carried out by the Government of DRC and Kinshasa Municipality, with the support of GFDRR and the World Bank, highlighted the lack of early warning systems as a major cause of impacts, particularly on the loss of human lives and people affected. In agreement with MettelSat and other governmental counterparts, CREWS will start focusing its activities by supporting the design and installation of a flood early warning systems in a pilot vulnerable area of Kinshasa, leveraging from the World Bank Strengthening Hydro-Meteorological and Climate Services Project and in synergy with other initiatives, including the Agence Francaise de Development (AFD) Project on Urban Development in Kinshasa (around US\$20M) and the Kinshasa Multisectoral Urban Resilience Project (around US\$150M funded by IDA).

The section below describes major activities that have been carried out during the reporting period:

- Starting of flood exposure mapping in selected area of Kinshasa
- Training (71 individuals) on flood exposure mapping in selected area of Kinshasa
- 3 Community Focus Groups (workshops) on flood risk in in selected area of Kinshasa
- Workshop and training on QMS for aviation meteorology (1)
- Institutional workshop with hydromet information users (1)
- Recruitment of technical support firm
- Technical support to project implementation through international advisors
- Technical support to Mettelsat development strategy and action plan
- Recruitment of firm for flood risk modelling in in selected area of Kinshasa (flood EWS)
- Technical support for the design and installation of real-time monitoring system in N'Djili watershed

6 **Project Activities Contributing to CREWS Outputs –National Projects**

[For each Output of the CREWS Monitoring Framework please:

- 1. Identify relevant project outputs identified in the Project Proposal as "tasks" or "components", adding detail as needed and reporting progress in their implementation. 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. Please maintain the percentage reported in the November 2017 report in the middle column.*

Please note that it is expected that for some outputs no activities may have been undertaken during this reporting period. For regional projects, please also complete section 6.1 on Regional Outputs.

CREWS Output 1: Assessments of NMHSs capacities, user needs, alignment with other programmes socio-economic benefits			
Project Outputs and Estimated Progress to Date	Output Start & End Date	Progress by June 2018	Progress by Nov 2018
Assessment of capacity for early warning of drought, heavy precipitation, river flooding, flash flooding, wind storm and recommendations for improvement (carried out by an international firm plus international advisors)	Q1 2018- Q4 2019	5 %	20%
Assessment of user needs (3 stakeholders/users workshops organized)	Q2 2018- Q2 2021	-	20%
Development and/or review of memorandums of understanding (MoUs) with users	Q2 2018- Q2 2020	-	10%

CREWS Output 2: Access and use of hazard and risk information			
Project Outputs and Estimated Progress to Date	Output Start & End Date	Progress by June 2018	Progress by Nov 2018
Development of a national risk geoportal and development of hazard, exposure and vulnerability information for flood risk assessment and impact forecasting	Q2 2018- Q2 2020	5%	5%
Design of a flood EWS in a pilot urban watershed of <i>Kinshasa</i> (N'Djili watershed):	Q2 2018- Q2 2020		
<p><i>a. Identification and mapping of exposed assets and population to flood risk (first phase)</i></p> <p>The activity is on-going with OSFAC (Observatoire Satellital des Forêts d'Afrique Centrale) and University of Kinshasa, in collaboration with the GFDRR OpenCity Africa Initiative. Community flood/erosion exposure mapping is carried out in collaboration with relevant stakeholders (e.g. Mettelsat, City-Province of Kinshasa, Ministry of Urbanism, Civil Protection, Agency for Architecture Studies, etc.) in selected neighborhood of the N'Djili watershed (i.e. Matete and Kisenso for the first phase). Exposure mapping will inform flood risk assessments, which are necessary to develop impact-based forecasting models.</p>		30%	67%

Moreover, community flood risk mapping are carried out, through community workshops (3 focus groups have already been completed).			
<i>b. Flood risk modelling</i> An international firm has been selected for flood risk modelling and flood risk mitigation studies. Expected start is December 2018.		-	10%
<i>c. Preliminary design of the EWS in the pilot area:</i> The project has supported (through the provision of technical expertise) the development of the preliminary design for a real-time monitoring system in the pilot watershed. The Technical Assistance Firm (recruited in October 2018) advises on the design of the system, which will be implemented leveraging on the DRC Hydromet investment project.		30%	35%

CREWS Output 3: Improvement of NMHSs service delivery			
Project Outputs and Estimated Progress to Date	Output Start & End Date	Progress by June 2018	Progress by Nov 2018
<p>The project is supporting MettelSat and RVA with the elaboration of Quality Management Systems for air navigation meteorological services. The activity is on-going with the support of ASECNA (Aerial Navigation Safety in Africa and Madagascar) and international experts. A first workshop has been carried out in December 2017, the second in June 2018 and the third in November 2018. Training to Mettelsat on aviation meteorology is provided during the workshops.</p> <p>A guideline and methodology to estimate the re-distribution of air navigation revenues for meteorological services has also been developed for cost-recovery.</p>	Q1 2018-Q4 2020	20%	30%
The project is supporting capacity building of MettelSat by providing technical and operation training. The activity is carried out with the support of international experts and learning visits.	Q1 2018-Q2 2022	15%	15%
The elaboration of a ToR for the selection of a Technical Assistance Firm for the implementation of hydromet activities has been completed with the support of international experts and in collaboration with Mettelset. The Firm has been recruited and activities are on-going.	Q2 2018-Q3 2018	80%	100%
<p>Improve weather forecast capacity including extreme weather event:</p> <p>a. Specifications of the central weather forecast system and central production</p>	Q1 2019-Q2 2022	0%	0%

system; b. Integration of local mesoscale and descent scale models (twinning); c. Update of (location-specific) numerical weather forecasting capacities to better track extreme events			
Development of the management, operation and maintenance procedures of the operational observation network	Q1 2019- Q2 2022	0%	0%
Development of operational procedures to convert extreme weather forecasts (rains, floods, winds, heat waves) in potential impacts	Q1 2019- Q2 2022	0%	0%

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

Project Outputs and Estimated Progress to Date	Output Start & End Date	Progress by June 2018	Progress by Nov 2018
Development of the MettelSat Strategy, Action Plan and Business Plan The strategy for MettelSat is under preparation. A first workshop has been organized in December 2017, a second stakeholder workshop in June 18-22, 2018 and a third in November 5-9, 2018. Well recognized international experts are supporting MettelSat in the preparation of the workshops and the elaboration of the analysis and the strategy.	Q1 2018- Q2 2019	20%	35%
Identification of network operating costs per various scenarios		0%	0%

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

Project Outputs and Estimated Progress to Date	Output Start & End Date	Progress by June 2018	Progress by Nov 2018
NA			

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

Project Outputs and Estimated Progress to Date	Output Start & End Date	Progress by June 2018	Progress by Nov 2018
Strengthening the legal and regulatory framework for EWS at territorial level and definition and implementation of a Quality Management System for municipal and territorial warning systems	Q1 2018-Q4 2020	0%	0%
Specifications of decision-making tools for warning based upon forecasts and location-specific risk information and contribution to its operating costs		0%	0%
Specifications of the severe weather forecast production tool for river and lake navigation		0%	0%
Specifications of the crisis center of the civil protection and contribution to its operating costs		5%	5%
Risk mapping and emergency response plans for municipalities including training of operational and decision-making civil servants (77 individuals trained on exposure mapping)		10%	20%

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

Project Outputs and Estimated Progress to Date	Output Start & End Date	Progress by June 2018	Progress by Nov 2018
The Faculty of Science, University of Kinshasa has co-organized an event with MettelSat, Civil Protection and the World Bank in April 2018 at the University of Kinshasa on Disaster Risk Management in DRC and Kinshasa. The event showed large participation from academics, researchers and students. MettelSat and the Civil Protection had the opportunity to present the activities of the project and discuss its importance in urban contexts	Q1 2018-Q2 2018	100%	100%
Training for regional and local food security and disaster management committees	Q1 2018-Q4 2020	0%	0%
Study tour for the 4 institutions contributing to early warning (MettelSat, DPC, RVF, CVM)	Q1 2018-Q4 2020	0%	0%
Individuals (Open Street Map community, students, local communities, etc.) trained on exposure mapping (77) – phase one (neighborhoods of Kisenso and Matete)	Q1 2018-Q2 2019	0%	67%

Community focus groups for flood risk mapping and awareness (3 focus groups organized in the areas of Matete and Kisenso)	Q1 2018- Q4 2020	0%	30%
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CREWS Output 8: Activities promoting gender equality in all aspects of early warning systems			
Project Outputs and Estimated Progress to Date	Output Start & End Date	Progress by June 2018	Progress by Nov 2018
CREWS will support to develop indicators to monitor the number of people with improved HydroMet services access and in particular, number of females with improved HydroMet access, the percentage of female beneficiaries from the project or proportion of female population satisfied with improved HydroMet services, the number of women involved of Hydromet activities, the numbers/percentages of representation of women, including in leadership roles and the percentage of women in Hydromet-related employment, such as in a utility company or a selected Ministry.	Q1 2018- Q4 2022	10%	10%
Woman trained on exposure mapping (17 individuals amongst Open Street Map community, students, local communities, etc.) – phase one (neighborhoods of Kisenso and Matete)	Q1 2018- Q4 2020	0%	30%

7	Funding Spent	Disbursed: US\$220,00 Committed: US\$428,000 Total disbursed and committed: US\$648,000 (A previous technical assistance (firm) contract was not assigned because of lack of suitable candidates and re-opened with revised scope and amount)
8	Changes in Organization and Operating Procedures, Project Viability and Sustainability	No changes
9	Lessons Learned	Significant technical support is required to MettelSat for the implementation of project's activities. CREWS is implementing in close synergy with the DRC Hydromet investment project, hence following

	similar challenges and timing. Activities carried out during the last reporting period have been focusing on reinforcing Mettelsat capacity to implement the project. Moreover, flood risk mapping and modelling activities in targeted areas of Kinshasa are running in parallel involving several stakeholders (such as the City-Province of Kinshasa, Mettelsat, Civil Protection, etc), the University of Kinshasa and local communities.
10	Documents <i>[List and annex to the report any documents providing detail on project activities, such as reports of trainings, summaries of high-level discussions, etc.]</i>