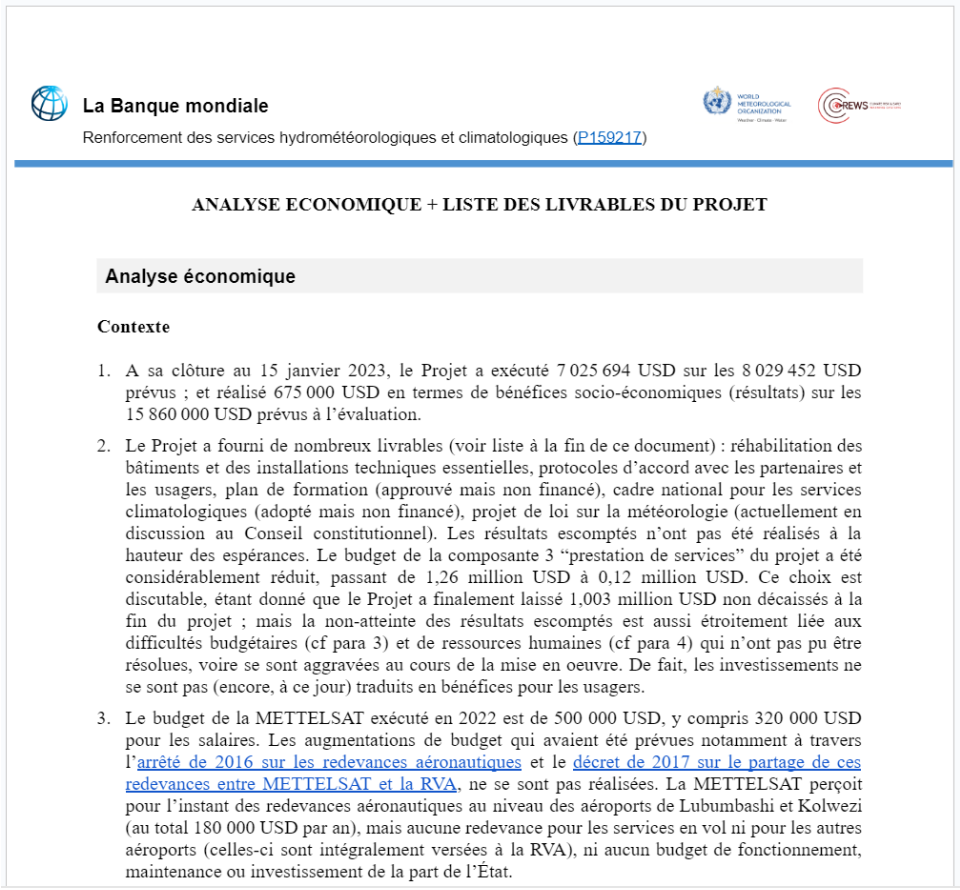
CREWS PROJECT PROGRESS REPORT

(January - June 2023)

1. Project title	DR Congo - Strengthening Hydro-Meteorological and Early Warning Services	**2. Project reference**	CREWS/CProj/01/DRC
3. Implementing Partners involved in the project	World Bank (Lead) World Meteorological Organization	**4. Regional/National Partners involved in the project**	Agence Nationale de Météorologie et de Télédétection par Satellite (Mettelsat)
5. Project Duration/Timeframe (from year – to year)	December 2017 – June 2025 (extension granted in June 2032)	6. Total Funding Approved by Steering Committee (in US dollars), including fees	3,090,000
7. Reporting focal point(s) from Implementing Partners	Christian Vang Eghoff – ceghoff@worldbank.org Tania Gascon – taniagascon@wmo.int Eric Kipasa – ekipasa@worldbank.org - in cc Bernard Gomez – begomez@wmo.int & Jean-Baptiste Migraine - jbmigraine@wmo.int - in cc		

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)**
	• The development objective is to improve the quality of the Government of the DRC's hydro-meteorological and climate services in selected sectors.
	• The CREWS funding seeks to improve the country's hydromet services through:
	  ○ Strengthening institutional, partnerships and regulatory frameworks and capacity building for early warning
	  ○ Provision of technical assistance to Mettelsat at national level for early warning procedures and at local level for early warning systems in selected watersheds
	  ○ Development of QMS for aviation meteorology and institutional support on cost recovery from aviation
	  ○ Supporting Mettelsat development strategy
	• The CREWS financing is implemented by the World Bank (US$2,790,000) and WMO (US$300,000). Subdivided into two components:		

	○ 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 supports (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. Thus, the component strengthens the capacity of specific users for optimal use of products and services relevant to early warning systems. ○ It leverages the Strengthening Hydro-Meteorological and Climate Services Project, US$8M (US$5.3 GEF, US$2.7M GFDRR) **Significant events during the reporting period:** • Closure of the GFDRR-GEF Hydromet leveraging project P159217_DRC Hydromet ICR_Offical document.pdf • The Steering Committee approved the restructuring of the CREWS DRC project and the proposed no-cost extension until 30 June 2025 for the activities implemented by the World Bank
9. Progress summary	**What has been achieved during this reporting period? – Please list in bullet points the most significant and tangible outcomes? (max 250 words)** • **Analysis of benefits resulting for GFDRR-GEF project and recommendations for follow-up under CREWS DRC additional financing** **https://docs.google.com/document/d/1BC7O7_KuJpGWa860zSGzGtcRnhaEe8tEO30xzqgJOgY/edit** **https://docs.google.com/spreadsheets/d/1MmCAOvhI1POmjQ6TJBi37PoNhWXeCCKwJn8V_175frY/edit#gid=1280991603** The economic analysis updated at project completion evaluated that 31% of the benefits expected for the aviation sector during project implementation were realized, in relation to the enhanced provision of services to aviation in Kolwezi airport. The project was intended to affect several sectors of the DRC economy including directly or indirectly floods, agriculture, aviation, and households. The economic analysis at appraisal was expecting the project to generate a total of US$107.41 million in benefits over 15 years, out of which US$15.86 million including US$2.2 million for the aviation sector were expected to be realized during the project lifetime. However, with the late installation of equipment and workstations mostly towards the end of the project, services have not been fully supplied as predicted to the different sectors.



La Banque mondiale

Renforcement des services hydrométéorologiques et climatologiques (P159217)

ANALYSE ECONOMIQUE + LISTE DES LIVRABLES DU PROJET

Analyse économique

Contexte

1. A sa clôture au 15 janvier 2023, le Projet a exécuté 7 025 694 USD sur les 8 029 452 USD prévus ; et réalisé 675 000 USD en termes de bénéfices socio-économiques (résultats) sur les 15 860 000 USD prévus à l'évaluation.
2. Le Projet a fourni de nombreux livrables (voir liste à la fin de ce document) : réhabilitation des bâtiments et des installations techniques essentielles, protocoles d'accord avec les partenaires et les usagers, plan de formation (approuvé mais non financé), cadre national pour les services climatologiques (adopté mais non financé), projet de loi sur la météorologie (actuellement en discussion au Conseil constitutionnel). Les résultats escomptés n'ont pas été réalisés à la hauteur des espérances. Le budget de la composante 3 "prestation de services" du projet a été considérablement réduit, passant de 1,26 million USD à 0,12 million USD. Ce choix est discutable, étant donné que le Projet a finalement laissé 1,003 million USD non décaissés à la fin du projet ; mais la non-atteinte des résultats escomptés est aussi étroitement liée aux difficultés budgétaires (cf para 3) et de ressources humaines (cf para 4) qui n'ont pas pu être résolues, voire se sont aggravées au cours de la mise en oeuvre. De fait, les investissements ne se sont pas (encore, à ce jour) traduits en bénéfices pour les usagers.
3. Le budget de la METTELSAT exécuté en 2022 est de 500 000 USD, y compris 320 000 USD pour les salaires. Les augmentations de budget qui avaient été prévues notamment à travers l'arrêté de 2016 sur les redevances aéronautiques et le décret de 2017 sur le partage de ces redevances entre METTELSAT et la RVA, ne se sont pas réalisées. La METTELSAT perçoit pour l'instant des redevances aéronautiques au niveau des aéroports de Lubumbashi et Kolwezi (au total 180 000 USD par an), mais aucune redevance pour les services en vol ni pour les autres aéroports (celles-ci sont intégralement versées à la RVA), ni aucun budget de fonctionnement, maintenance ou investissement de la part de l'État.

- **Long-term plan for the observation network** – 3 consultants were recruited to develop a master plan for the observing network. DRC operated a network of 120 weather stations in the sixties. Due to instability and low investments, the current number of operational weather stations is less than 20, with no clear criterion for the selection of the location of stations. The masterplan seeks to provide a rational network for both hydrological and meteorological observing stations, based on an analysis of the density of stations required to meet both national

	needs and global standards. The masterplan will also provide an economic analysis of the cost of equipping, operating and maintaining the networks. The outputs will be delivered in Q3 2023. • **Support to the implementation of Quality Management System (QMS) applied to the aviation sector** The implementation process of QMS till the certification of METTELSAT has got five stages: initiation, planning, implementation, control, and closure. The initiation and planning phases proceeded normally. The roadmap included 21 activities to be carried out to implement the QMS within approximately 15 months. The support to the process consisted of the recruitment of national consultants to (1) finalize the definition and description of all relevant processes (management processes; business processes and support processes) and help to train process drivers and internal auditors; (2) review existing quality documents (human resources, instruments, and observation methods, QMS management processes, synoptic meteorology, aeronautical meteorology), and develop those for missing processes, notably for customer relations, purchasing, and finance; and (3) accompany METTELSAT for the deployment of processes and the holding of process reviews. At the end of the consultancy mission, only the definition and description of relevant processes have been finalized. The situation of METTELSAT's QMS implementation in line with ISO 9001:2015 requirements is then as follows: • METTELSAT's QMS complies with only 10.6% of the ISO 9001:2015 requirements. • METTELSAT's QMS partially complies with approximately 8.02% of the ISO 9001:2015 requirements. • METTELSAT's QMS does not comply with approximately 22.4% of the ISO 9001:2015 requirements. • Approximately 59% of the ISO 9001:2015 requirements are not yet auditable because they are linked to aeronautical meteorology activities at N'DJILI international airport which is not yet under the control of METTELSAT. It can also be noted that there is no purchasing process within METTELSAT and the requirements relating to this are covered in 8.4 of the ISO 9001:2015 standard. Deliverables: MTS-SMQ-13-FORM Cartographie de la METTELSAT.pdf MTS-SMQ-05-FORM Liste des documents internes SMQ.pdf

10.Project Performance

Interpretation of color coding		
	High	Good progress; on track in most or all aspects of delivery
	Medium	Moderate progress or on track in some aspects of delivery
	Low	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
Coding			
Narrative	**From WB side:** Disbursed: USD 1,981,871.56 Committed: USD 0 **From WMO side:** Disbursed: USD 216,733 (72%) Committed: USD 27,979 (9%)	Implementation of QMS has been delayed and continued with CREWS support after project closing but could not be achieved. ASECNA mission to METTELSAT delayed due to constraints in acquiring and installing a local area network with N'djili Airport. Consultants for developing the masterplans for the hydrological and meteorological surface observing networks have been hired and have all submitted their Inception Reports. Consultations on the twinning between EAMAC and ISTA are ongoing and EAMAC has provided a draft training programme and awaiting endorsement by ISTA/METTELSAT. Upon approval of the proposed training programme, WMO will sign an LOA with EAMAC for the	Project remains aligned to CREWS objectives. Implementation of CREWS Central Africa has begun and outstanding interventions in the current project will be handed over to the coordination of CREWS Central Africa to continue as part of interventions in the DRC.

		engagement with ISTA/METTELSAT to commence.	

11. Risk Status

Risk Status	What is the current risk status as compared to what was identified in the project proposal? The current risk status of the project is medium, largely linked to the fluctuating commitment of the sector ministry to assure cost-sharing of meteorological revenue from civil aviation. In addition, the risk is linked to a lack of capacity of MettelSat staff to work with the installed system and the lack of MettelSat experience in warning and forecasting floods on the N'Djili and Kalamu rivers.
Measures to address	What mitigation measures have been developed to address the risk status? **In bullet points**

	Closer monitoring and technical support has already contributed to mitigating risk and advancing activities. The World Bank, WMO mobilized and a number of international and local experts to support the development of a business plan and support the financial sustainability of MettelSat. Continued advocacy with national authorities for sustainability of the project's investments as well as strengthened dialogue through the World Bank's Country Management Unit. Mobilization of RSMC-Dakar to provide weather forecast guidance products to the DRC will certainly boost the capabilities for detection and tracking of severe weather phenomena and providing warnings accordingly.

12. Contributions to CREWS Output(s)s

(use number for activities and products and % for project component completion)

12.1 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				
State Project Output(s) in this section	**Overall Project Target**	**Progress by December 2022**	**Target for reporting period**	**Progress by June 2023**
Assessment of capacity for early warning of drought, heavy precipitation, river flooding, flash flooding, wind storm and recommendations for improvement	100%	**80%**	100%	95%
Assessment of user needs (3 stakeholders/users workshops organized)	100%	**100%**	100%	100%
Development and/or review of memorandums of understanding (MoUs) with users	100%	**100%**	100%	100%

Implement a capacity development and training program for staff (including operational training for technicians and engineers, meteorologists, and hydrologists)	100%	**95%**	100%	95%
Development of the MettelSat Strategy, Action Plan, and Business Plan	100%	**100%**	100%	100%

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.

Completion of most activities or at least good progress. The assessment of capacity will continue under CREWS funding. This has a multiplier effect, as the project is expected to generate a wider range of benefits to different users, impacting a considerable number of people over its lifecycle, including better hydromet information to specific user groups and the general population.
For example in case of people-centered approach, the area around the N'djili watershed is mostly inhabited by poor communities and highly exposed to the risk of flooding. These communities are disproportionally vulnerable to floods compared to the average population. While the project did not specifically target poor communities, the modernized equipment installed in the N'djili and Kalamu watersheds has allowed to produce early warnings to the exposed population.

The soon-to-start twinning arrangement between ISTA and EAMAC for strengthening the capacity of resource persons at ISTA in state-of-the-art forecasting skills will result in better forecast products.

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	Progress by December 2022	Target for the reporting period	Progress by June 2023

Development of a national risk geoportal and development of hazard, exposure, and vulnerability information for flood risk assessment and impact forecasting	100%	100%	100%	100%
Establishment of the National Framework for Climate Services	100%	100%	100%	100%

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.

- **Gender-responsive**: The NFCS ensures a continuation of DRC efforts to improve the capacities of rural women to reduce the vulnerability of communities affected by climate change. In fact, women are particularly vulnerable to climate change, especially in poor communities where livelihoods are largely dependent on local natural resources.
- **People-centered:** The NFCS promotes continuous and effective updating of products and services through two-way communication between users and producers as well as easy access to meteorological, hydrological, and climate services data/information.
- **Coherence**: The NFCS provides a framework putting together all actors involved in the national value chain for climate services as well as their existing databases to build multi-sectoral EWS.
- **Integrated and inclusive programming**: The NFCS operationalizes the multi-stakeholder and multi-thematic platform established in accordance with the decree governing the NFCS.
- **Solution-oriented**: The NFCS is intended to provide widespread social, economic, and environmental benefits through more effective climate and disaster risk management. It will support the implementation of climate change adaptation measures. A key objective of the Framework is to bridge the gap between climate information developed by service providers and the practical needs of users. This will be achieved through the introduction of national and regional frameworks for climate services.

The publication of hazard forecasts was integrated into the MettelSat website (https://meteordc.cd) and is thus available to the public.

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

State Project Output(s) in this section	Overall Project Target	Progress by December 2022	Target for the reporting period	Progress by June 2023
Development of operational procedures to convert extreme weather forecasts (rains, floods, winds, heat waves) into potential impacts	100%	80%	100%	80%
Elaboration of Quality Management Systems for air navigation meteorological services and the recovery of meteorological services rendered to RVA	100%	80%	100%	57%

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.

The development of operational procedures advanced, although not to the point of completion. The implementation of the QMS has stalled while MettelSat's access to equipment at the Ndili airport (currently used by RVA) is assured. The operational procedures contribute to bringing life-saving and people-centered early warnings to the communities that need them by making early warnings on extreme weather events to populations at risk and enabling Civil Protection to act on the information in collaboration with communities.

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	Progress by December 2022	Target for the reporting period	Progress by June 2023
Risk mapping and emergency response plans for municipalities including training of operational and decision-making civil servants	100%	20%	100%	20%

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.

This activity has stalled while focus was on support to equipment installation. This activity will eventually aim to allow access to early warning on extreme weather events to population at risk and enabling Civil Protection to act on the information in collaboration with communities.

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

State Project Output(s) in this section	Overall Project Target	Progress by December 2022	Target for the reporting period	Progress by June 2023
Community focus groups for flood risk mapping and awareness	100%	30%	50%	50%
Study tour for the 4 institutions contributing to early warning (MettelSat, DPC, RVF, CVM)	100%	0%	100%	100%

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.

Implementation of community focus groups was stalled while focus was on equipment installation and working on sustainability of project outputs (business plan)
The study tour was converted into a study tour just for Mettelsat, to Niger to learn from the experience of the implementation of a NFCS there. The objective of the study tour was to share experiences on the best approaches to adopt in establishing and operationalizing the NFCS in DRC.
Specifically, it was about:

- Participating in the elaboration of the National Framework for Climate Services report card with the different sectors involved in Niger.
- Analyze with the actors of Niger the constraints and lessons learned in the implementation of the NFCS.

Identify good approaches for the implementation of the NFCS in DRC.

- Strengthen the capacity of participants in the organizational and managerial management of the NFCS.

This resulted in specific recommendations for operationalizing the NFCS in the DRC in terms of institutional organization, flow of information, and the role of MettelSat in the process of delivering early warnings to communities.

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

State Project Output(s) in this section	Overall Project Target	Progress by December 2022	Target for the reporting period	Progress by June 2023
Women participation in training and decision-making venues sponsored by CREWS	30%	10%	30%	10%

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.
Maybe good to elaborate here contributions to gender-responsive value proposition?

12.2 Regional Output(s)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

State Project Output(s) in this section	Overall Project Target	Progress by December 2022	Target for the reporting period	Progress by June 2023

Common Alerting Protocol implementation	100%	95%	100%	100%

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.

Training on CAP implementation has been successfully completed and METTELSAT has commenced issuing alerts. Meanwhile the low skills in forecasting severe weather events are currently offset through support from RSMC-Dakar (Senegal), which provides guidance products for anticipated severe weather phenomena in the DRC and elsewhere in the Central Africa region. Challenges limiting full CAP implementation include internet access as well as training of the user-community on the interpretation of alerts.

13.Certification on Use of Resources

This needs to be provided at the end of the year as part of the submission of the 2nd semester report. Each Implementing Partner to provide a certification of the use of resources signed by their authorized representative.

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***

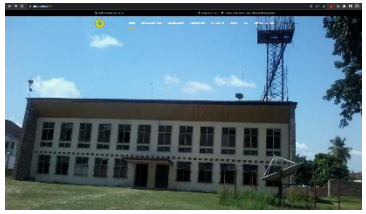
15. Supporting documents

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.***

*16.*Project History

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

17. Site Internet



18. Plan de formation (développé par EAMAC)

19. Cadre national pour les services climatologiques (+Décret)

20. Liste des stations nouvelles ou réhabilitées (voir WDQMS)

Num	Nom	ID OMM	ID OACI	Latitude	Longitude	Altitude	Altitude Piste	SYNOPTIQUE HYDROMET	PLUVIOMETRE HYDROMET	LIMNIMETRE HYDROMET	AUTOMATIQUES CHINOISES	CLASSIQUES CHINOISES	CIMEL	CLASSIQUES MTSAT	Obs transmises dans WIS par jour
1	BANDUNDU	64108	FCBD	3,300	17,350	424	324					1	1	1	4
2	BASANKUSU	64008	FCEN	1,217	19,800	343	353					1			4
3	BENI			0,483	29,467								1		0
4	BOENDE	64126	FCGN	0,217	20,850	351	356					1	1		4
5	BOMA	64204	FCAJ	5,850	13,100	8	8					1	1		4
6	BUKAVU	64180	FCMA	2,517	28,850	1612	1612	1							24
7	BUNIA	64072	FCKA	1,500	30,217	1239	1233						1	1	4
8	BUTA	6403	FCKK	2,783	24,783	410	410					1			4
9	BUTEMBO	64072	FC	0,133	29,267	1840							1		0
10	GBADOLITHE	64010	FC	4,300	21,200	404							1		0
11	GEMENA	64009	FCFK	3,283	19,783	317	317						1	1	4
12	GOMA	64184	FCNA	1,683	29,233	1552	1552	1							24
13	ILEBO	64224	FCVS	4,333	20,583	420	420					1			4
14	INGA	64206	FCAN	5,517	13,583	300	300					1	1		4
15	INONGO	64115	FCBA	1,267	18,267	324	324	1			1				24
16	ISIRO	64062	FCJA	2,787	27,650	764	764						1	1	4
17	KABINDA	64256	FCWK	6,133	24,433	862	865						1		0
18	KALEMIE	64285	FCRF	5,883	29,183	776	818							1	4
19	KANANGA	64235	FCUA	5,883	22,417	647	657	1			1				24
20	KASONGO	64264	FCOK	4,517	26,583	544	544					1	1		4
21	KENGE	64217	FCCS	4,917	17,067	551	551					1			4
22	KIKWIT	64222	FCCA	5,033	18,800	479	449				1		1		24
23	KINDU	64155	FCOA	2,950	25,917	497	497	1							24
24	KINSHASA-BINZA	64220	-	4,367	15,250	445	-				1	1			24
25	KINSHASA-N'DJILI	64210	FCAA	4,383	15,717	312	309	1							24
26	KINSHASA-NDOLO	64211	FCAB	4,317	15,300	282	282					1			4
27	KISANGANI/GBANGOKA	64040	FCIA	0,517	25,183	396	396	1							24
28	KOLWEZI	64328	FCQM	10,717	25,450	1526	1526					1	1		4
29	KONGOLO	64276	FCRQ	5,350	27,000	561	561					1			4
30	LISALA	64014	FCGA	2,317	21,567	463	463						1		0
31	LODJA	64146	FCVA	3,483	23,467	479	502	1			1				24
32	LUBUMBASHI	64306	FCQA	11,667	27,483	1298	1298	1			1				24
33	LUSAMBO	64246	FCVI	4,967	23,433	424	429						1	1	4
34	MANONO	64262	FCRA	7,283	27,433	633	633					1			4
35	MATADI	64207	FCAM	5,800	13,433	340	340				1	1	1	1	24
36	MBANDAKA	64005	FCEA	0,083	18,450	317	345	1							24
37	MBANZA-NGUNGU	64208	-	5,200	14,850	589	-					1			4

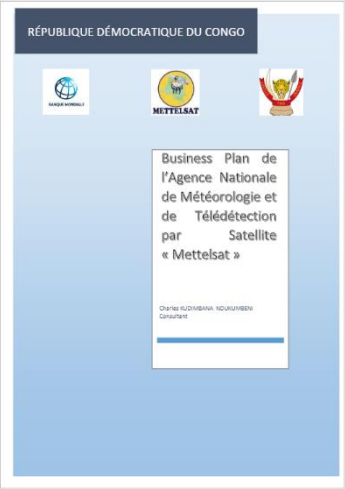
21. Sauvetage des données (MCH + ClimSoft + Excel)

Les données des stations ont toutes été numérisées dans la base de données MCH (125 stations). Les données de surveillance des précipitations et du niveau d'eau doivent encore être numérisées.

22. Projet de Stratégie de la METTELSAT (2021)

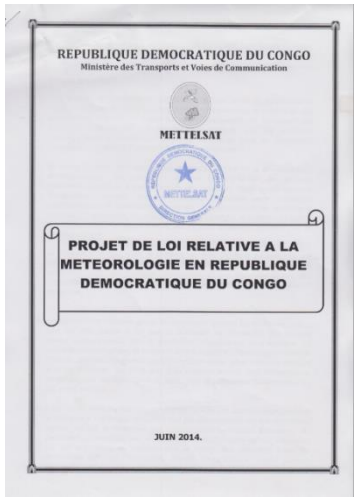
Ce document de stratégie n'a pas été adopté, ni mis en œuvre.

23. Projet de plan d'affaires (2022)



Ce document a été adopté, mais pas mis en œuvre.

24. Projet de loi (2014 & 2023)


REPUBLIQUE DEMOCRATIQUE DU CONGO
Ministère des Transports et Voies de Communication

METTELSAT

PROJET DE LOI RELATIVE A LA METEOROLOGIE EN REPUBLIQUE DEMOCRATIQUE DU CONGO

JUIN 2014.


PROJET DE LOI PORTANT ORGANISATION DES SERVICES DE LA METEOROLOGIE ET DE L'HYDROLOGIE OPERATIONNELLE

Exposé des motifs

Membre de l'Organisation Météorologique Mondiale et de l'Organisation de l'Aviation Civile Internationale, la République Démocratique du Congo subit, dans son écosystème, les effets du changement climatique touchant plusieurs secteurs de la vie, notamment l'agriculture, le secteur alimentaire, les ressources en eau et en énergie, le tourisme, les transports et voies de communication ainsi que la santé. Elle ne dispose pas, à ce jour, d'une loi sur les services de la météorologie et de l'hydrologie opérationnelle.

Pour profiter des retombées positives de substance durable, dans un contexte de changement climatique de plus en plus accru, l'administration météorologique a besoin de renforcer ses capacités d'adaptation et de résilience, à travers un cadre juridique de coordination et d'harmonisation de ses services conduisant au recouvrement des coûts dûs à l'assistance météorologique aux transports multimodal, agrométéorologique ainsi qu'aux activités agricoles , pêche et élevage.

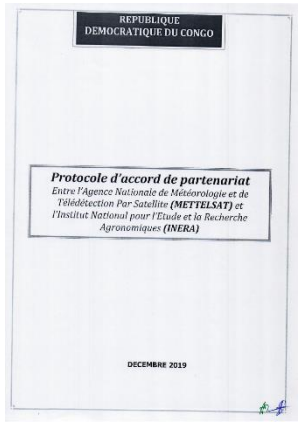
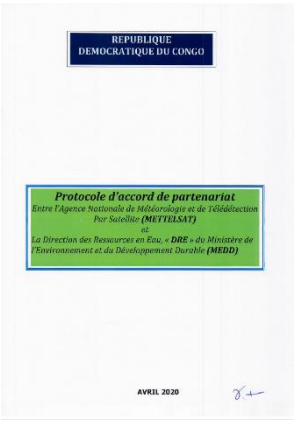
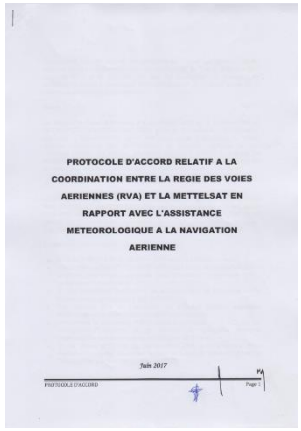
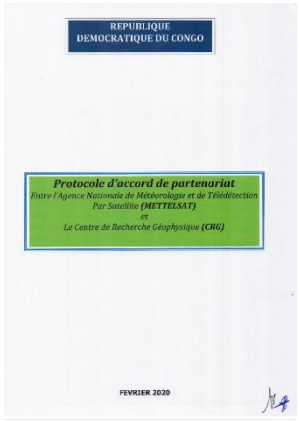
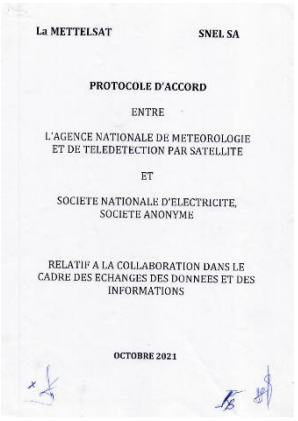
C'est dans ce cadre que le Gouvernement de la République a bénéficié, par le biais du Ministère des Transports, Voies de Communication et de Désenclavement, avec l'Agence Nationale de Météorologie et de Télédétection par Satellite METTELSAT, en sigle, comme agence d'exécution, de l'appui financier de la Banque mondiale destiné à la mise à jour et à la finalisation du projet de loi sur la météorologie et l'hydrologie opérationnelle afin de les conformer aux pratiques normalisées et recommandations des conventions internationales pertinentes auxquelles la République Démocratique du Congo a adhéré.

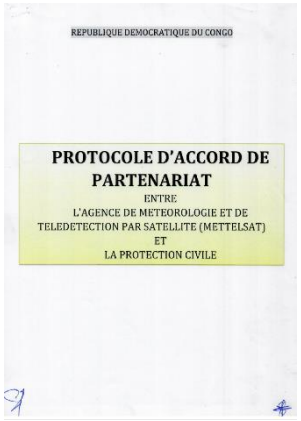
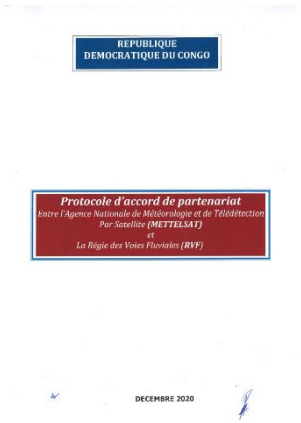
Elaborée en vertu de l'article 202, point 29 de la Constitution, la présente loi vient combler un vide législatif, longtemps observé dans le secteur. Elle organise le Service de la météorologie et de l'hydrologie national et encadre la gestion des eaux, l'assistance météorologique à la navigation aérienne, l'hydrologie opérationnelle, la protection du patrimoine du Service de la météorologie et de l'hydrologie national ainsi que les principes relatifs à l'exploitation des informations météorologiques.
Les innovations qu'elle apporte concernent :

1

Le projet de 2023 a été remis au Ministère de tutelle mais est remis en question par le Conseil constitutionnel.

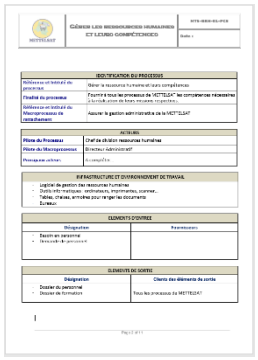
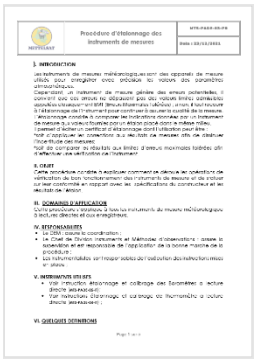
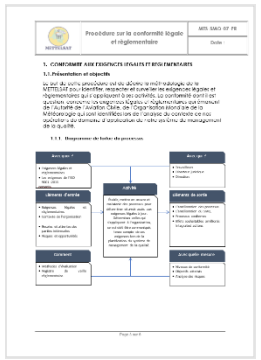
25. Protocoles d’accord avec les institutions

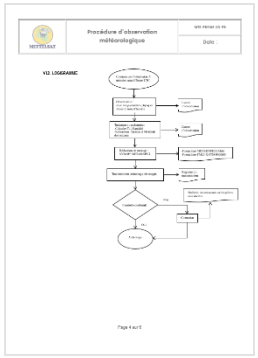
 Institut national pour l'Etude et la Recherche Agronomiques (INERA)	 Ministère de l’Agriculture	 Congolaise des Voies Maritimes (CVM)	 Direction des Ressources en Eau (DRE)
 Régie des Voies Aériennes (RVA)	 Centre de Recherches Géophysiques (CRG)		 Société Nationale d’Electricité (SNEL)

		Bureau d'Etude d'Aménagement et d'Urbanisme (BEAU)	
 Régie de Distribution d'Eau (REGIDESO)	 Direction de la Protection Civile (DPC)	 Office des Voiries et Drainage (OVD)	 Régie des Voies Fluviales (RVF)
			

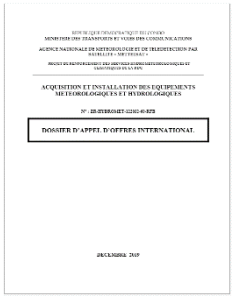
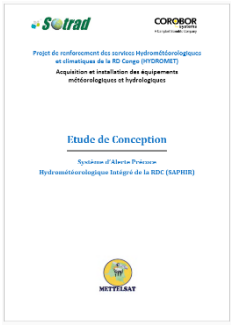
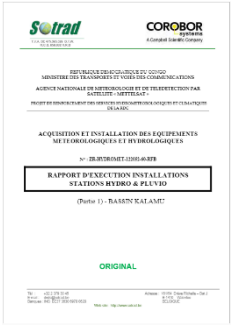
Institut Supérieur de Techniques Appliquées (ISTA)			

26. Projet de manuel qualité + feuille de route + description des processus (octobre 2022)

Projet du Manuel Qualité			
	Ressources humaines	Instruments et méthodes d'observation	Conformité légale et réglementaire

		
[Observation météorologique]	[Prévisions aéronautique]	

27. Livrables du groupement COROBOR / SOTRAD / BRLi

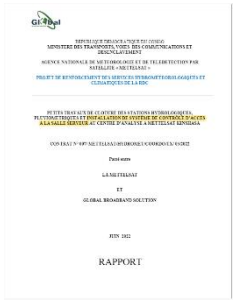
				
[Dossier d'appel d'offres]	[Étude de conception]	[Installation stations synop.]	[Installation échelles & socles]	[Installations bassin Kalamu]

[Installations bassin N'Djili]

[Rapport de formations]

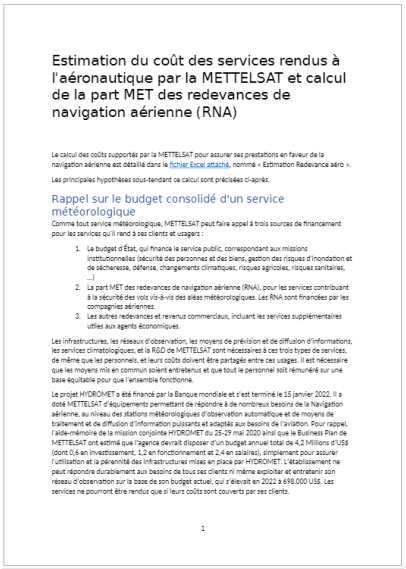
[Centre de Maintenance]

[Listes présence formations]



[Sécurisation installations]

28. [Estimation du coût des services rendus à l'aéronautique]



Estimation du coût des services rendus à l'aéronautique par la METTELSAT et calcul de la part MET des redevances de navigation aérienne (RNA)

Le calcul des coûts supportés par la METTELSAT pour assurer ses prestations en faveur de la navigation aérienne est détaillé dans le fichier Excel attaché, nommé « Estimation Redevance aéro ».

Les principales hypothèses sous-tendant ce calcul sont précisées ci-après.

Rappel sur le budget consolidé d'un service météorologique

Comme tout service météorologique, METTELSAT peut faire appel à trois sources de financement pour les services qu'il rend à ses clients et usagers :

1. Le budget d'Etat, qui finance le service public, correspondant aux missions institutionnelles (sécurité des personnes et des biens, gestion des risques d'inondation et de sécheresse, défense, changements climatiques, risques agricoles, risques sanitaires, [...]
2. La part MET des redevances de navigation aérienne (RNA), pour les services contribuant à la sécurité des vols vis-à-vis des aléas météorologiques. Les RNA sont financées par les compagnies aériennes.
3. Les autres redevances et revenus commerciaux, incluant les services supplémentaires utiles aux agents économiques.

Les infrastructures, les réseaux d'observation, les moyens de prévision et de diffusion d'informations, les services climatologiques, et la R&D de METTELSAT sont nécessaires à ces trois types de services, de même que les personnels, et leurs coûts doivent être partagés entre ces usages. Il est nécessaire que les moyens mis en commun soient entretenus et que tout le personnel soit rémunéré sur une base équitable pour que l'ensemble fonctionne.

Le projet HYDROMET a été financé par la Banque mondiale et s'est terminé le 15 janvier 2022. Il a doté METTELSAT d'équipements permettant de répondre à de nombreux besoins de la Navigation aérienne, au niveau des stations météorologiques d'observation automatique et de moyens de traitement et de diffusion d'information puissants et adaptés aux besoins de l'aviation. Pour rappel, l'aide-mémoire de la mission conjointe HYDROMET du 25-29 mai 2020 ainsi que le Business Plan de METTELSAT ont estimé que l'agence devrait disposer d'un budget annuel total de 4,2 Millions d'US$ (dont 0,6 en investissement, 1,2 en fonctionnement et 2,4 en salaires), simplement pour assurer l'utilisation et la pérennité des infrastructures mises en place par HYDROMET. L'établissement ne peut répondre durablement aux besoins de tous ses clients ni même exploiter et entretenir son réseau d'observation sur la base de son budget actuel, qui s'élevait en 2022 à 698.000 US$. Les services ne pourront être rendus que si leurs coûts sont couverts par ses clients.

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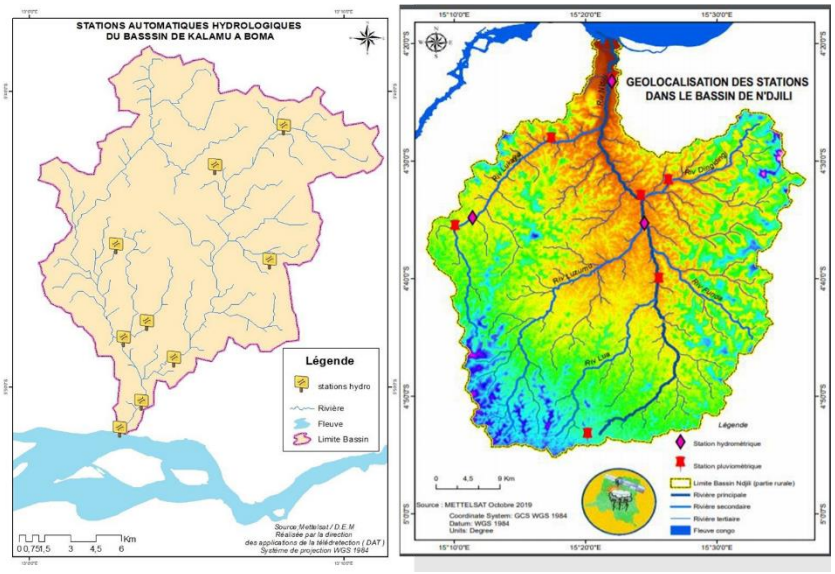
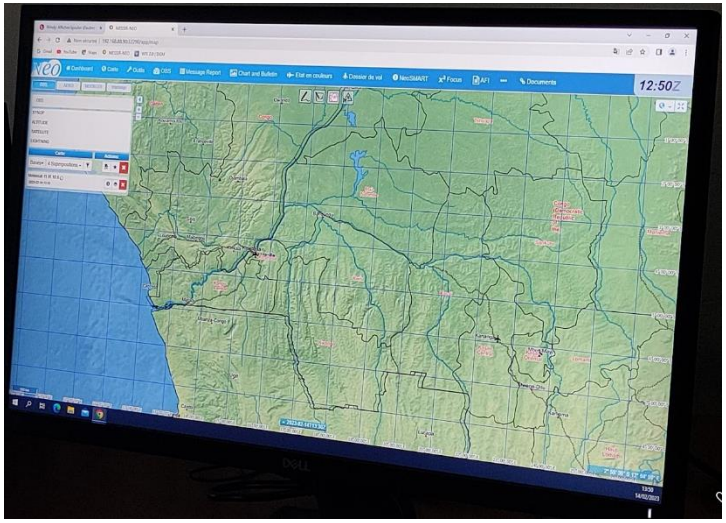
29. Systèmes d'alerte aux crues à N'Djili et Kalamu (SAPHIR)



Chaque bassin est équipé de 3 limnimètres + 5-7 pluviomètres, le modèle GR4H développé par BRLi fournit des prévisions des zones inondées.

30. Système MESSIR de gestion des données climatologiques, de prévision et d'aide à la production de services



31. Présentation de la METTELSAT à la clôture du projet

32. IMPLEMENTATION COMPLETION AND RESULTS REPORT : Strengthening Hydro-Meteorological and Climate Services Project (P159217)

P159217_DRC Hydromet ICR_Offical document.pdf