NAP expo

2022 Gaborone
BOTSWANA

UN4NAPs Forum

Botswana Global Adaptation Week
22-26 August 2022
Gaborone, Botswana

NAP expo | 2022 Gaborone BOTSWANA | UN4NAPs Forum

UN4NAPs:
An introduction

UN4NAPs

- **A UN-wide rapid technical backstopping initiative for NAPs**
- Launched in **August 2021** by the UNFCCC, in response to mandates for engaging int'l organizations in support of adaptation.
- A **platform for countries**, initially for LDCs and SIDS, to **communicate** their **needs for technical assistance** on an **ongoing** basis.
- Enables the UN-wide system of organizations and other intergovernmental organizations to **respond** to technical requests identified by **any country that is in the process of formulating or implementing its NAP**.
- When receiving requests, the UNFCCC secretariat immediately communicates with relevant partners from a roster of more than 45 UN and intergovernmental organizations for **prompt response.**

Categories of technical assistance

Simple technical queries which can be answered by relevant agencies via email;

Delivery of specific data/knowledge products (such as datasets, analytical tools, guidance material);

Longer-term capacity development/engagement with the requesting country;

Review of draft NAPs upon request by a country, based on agencies' area of expertise.

Current participating UN and intergovernmental organizations:

- Adaptation Fund
- AfDB
- ADB
- CBD
- CGIAR
- Commonwealth Secretariat
- CTCN
- FAO
- GCF
- GEF
- GWP
- ICIMOD
- IFAD
- IFRC
- ILO
- IOM
- IPCC
- IRENA
- ITU
- SPREP
- UN OCHA
- UN Women
- UNCCD
- UNCDF
- UNDP
- UNDRR
- UNECA
- UNECLAC
- UNEP
- UNESCAP
- UNESCO and UNESCO/IOC
- UNESCWA
- UNFPA
- UN-Habitat
- UNHCR
- UNICEF
- UNITAR
- UNOHCHR
- UN-OHRLLS
- UNOOSA
- UNU
- UNWTO
- WFP
- WHO
- WIPO
- WMO
- WTO

Profiles of the participating organizations are being displayed on the UN4NAPs website

http://unfccc.int/topics/adaptation-and-resilience/resources/un4naps/relevant-resources-and-participating-organizations

Thematic sectors covered by UN4NAPs partner organizations

Thematic expertise of UN4NAPs partner organizations

Early warning and disaster management	32
Agriculture, food security and food systems	31
Water resources	30
Gender	29
Ecosystems, biodiversity and conservation	26
Coastal zones and oceans	25
Infrastructure	22
Land management	20
Others	20
Forestry	17
Human settlements and living spaces	14
Health services	12
Economic planning	9
Tourism	9
Transport	9
Cultural heritage	4

Climate hazards under the purview of partner organizations

Floods	81.82%
Drought	79.55%
Extreme heat	63.64%
Storm surges	61.36%
Land and forest degradation	61.36%
Shifting precipitation patterns	59.09%
Shifting (growing) seasons	56.82%
Tropical cyclones/typhoons	54.55%
Increasing temperatures	54.55%
Desertification	52.27%
Sea level rise	47.73%
Loss of biodiversity	47.73%
Salinization	34.09%
Vector and water-borne diseases	31.82%
Glacial retreat	29.55%
Extreme cold	29.55%
Wildfires	27.27%
Others: - Zoonotic diseases - Changed patterns and habitat of wildlife - Multi-hazard approaches	

UN4NAPs in practice

- About 60 requests have been received from 16 countries through UN4NAPs.
- Fast responses: Resources and offers for additional guidance/technical support, in-depth conversations that have helped to refine the technical assistance and to connect relevant actors within the country and region.
- Many countries submit several requests at once. For each request, countries tend to receive responses by several organizations within a few weeks.

Examples of requests and responses:

A country requested case studies on nature-based solutions for adaptation. Within two weeks, the country had received relevant case studies, guidelines and fact sheets from four different UN4NAPs partner organizations.

A request to support national efforts on research and systematic observation for adaptation assessments, planning and implementation, led to a series of virtual and in-person meetings, based on which the partner organization decided to establish a workshop in the region to strengthen national capacities.

How to submit requests for technical assistance

Country representatives are invited to submit any technical queries or requests for technical assistance in relation to NAP formulation or implementation, on an ongoing basis, to un4naps@unfccc.int.

These will be disseminated to those organizations that are relevant to the thematic area in question for prompt response.

Contacts in the UNFCCC secretariat:
Mr. Paul Desanker – Pdesanker@unfccc.int
Ms. Angela Wagner – awagner@unfccc.int

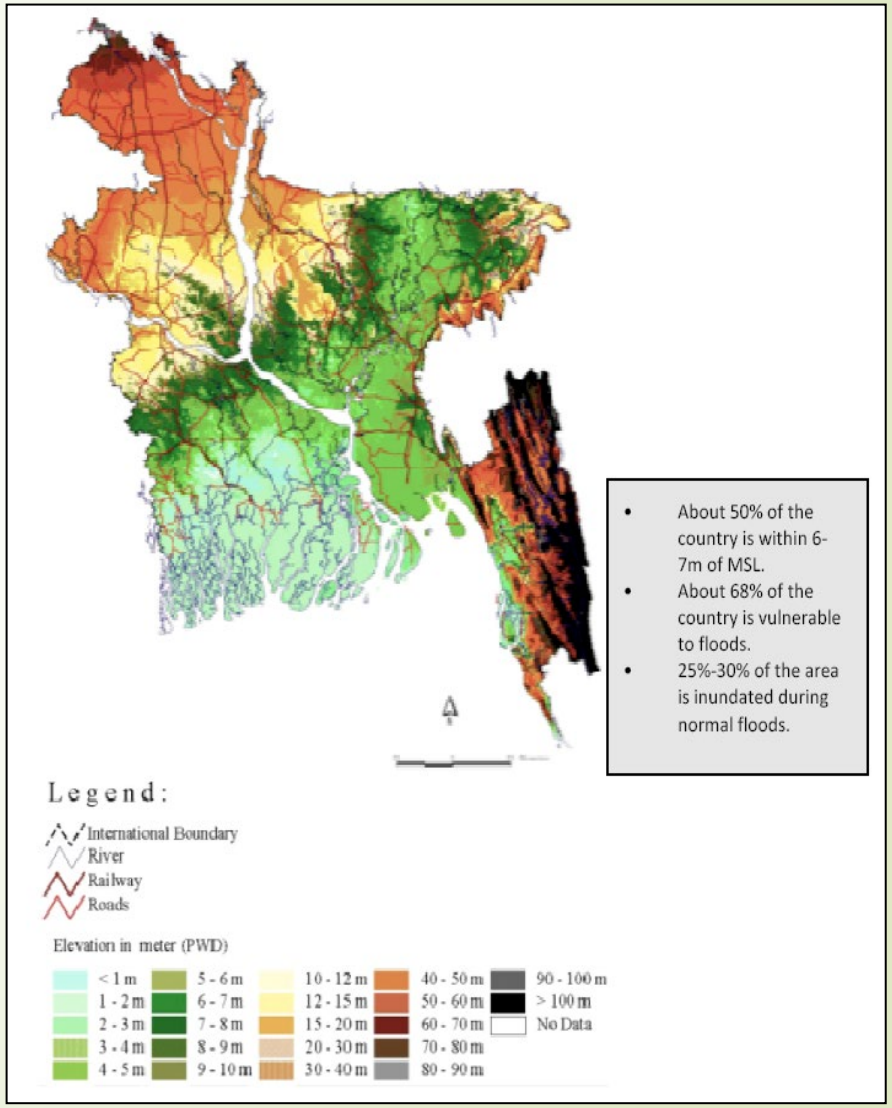
More information:
http://unfccc.int/un4naps

Floods in Bangladesh: Major Challenges and Best Adaptation Practices

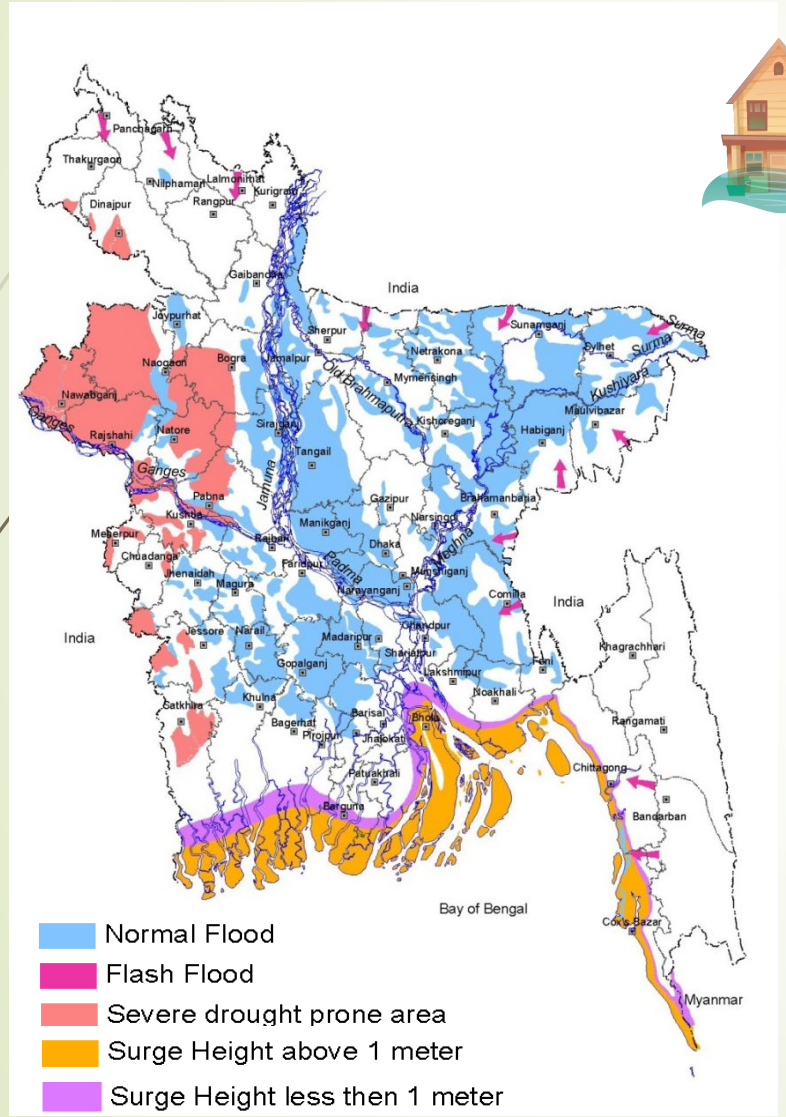
Md Mahmud Hossain
Department of Environment, Bangladesh

Why Bangladesh is Highly Vulnerable to Flood?

- Geographical Location
- **Deltaic landscape**, 80% **floodplain**; Vast River Network and Floodplains; About 68% area is vulnerable to flood; 3 major rivers of the globe drain their water through Bangladesh;
- About **50%** of the country is within **6-7 meters of MSL**);
- Coastal area is about **32% of the total land area**; 30-year Trend Analysis shows per year SLR is 3-6 mm.
- 39 million people (approx. **25% percent of the total population** of 160 m) live in the coastal area;

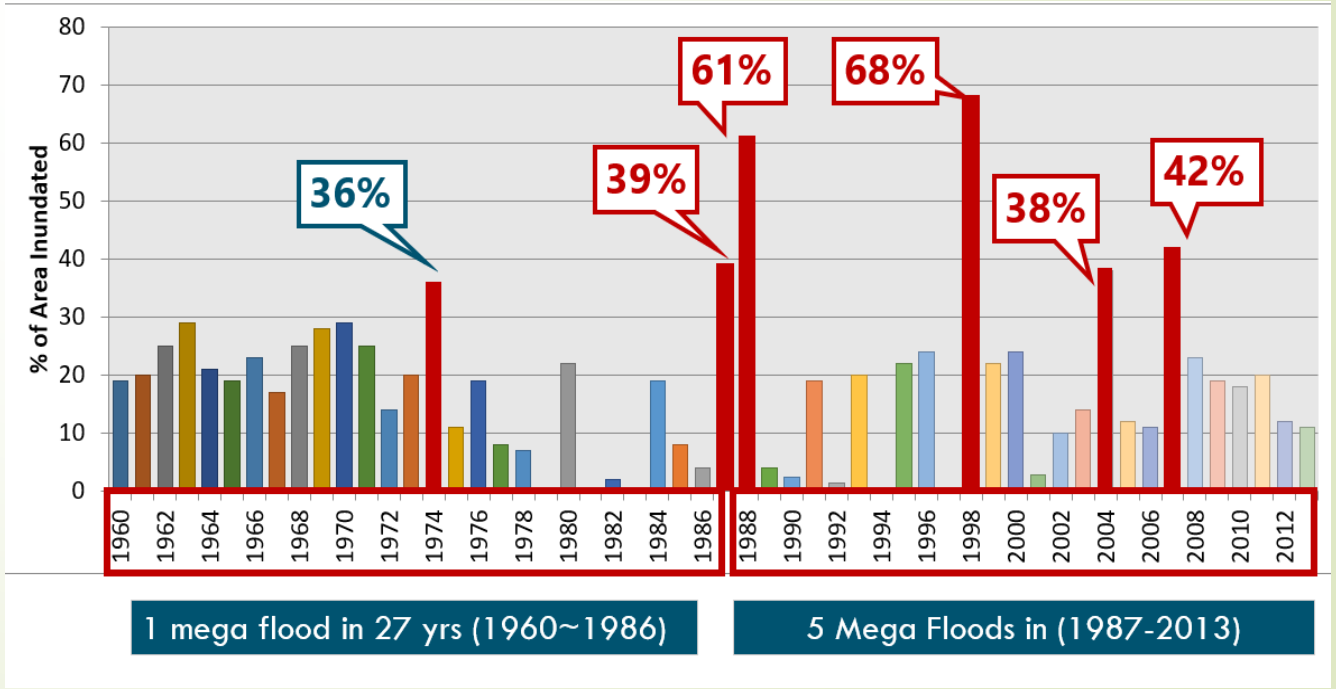


Major Flood Disasters of Bangladesh

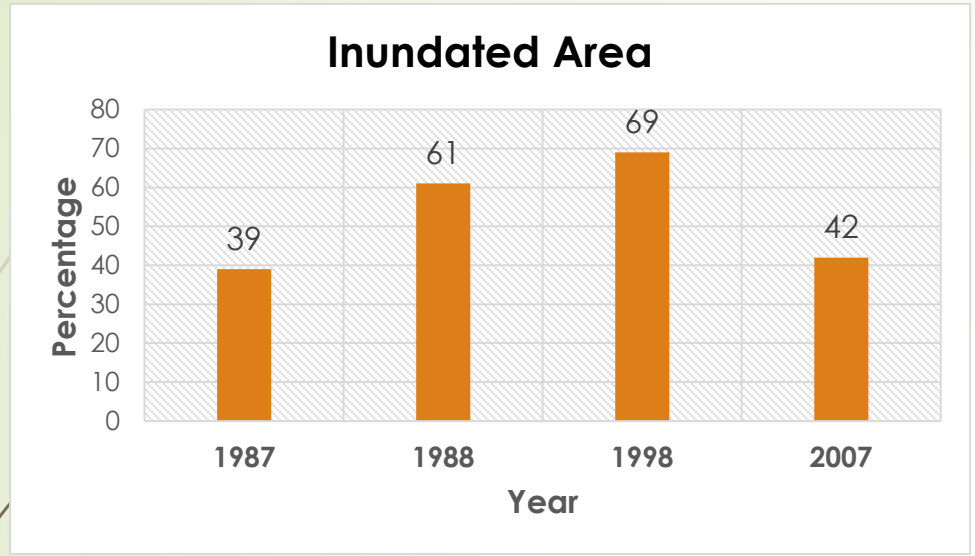


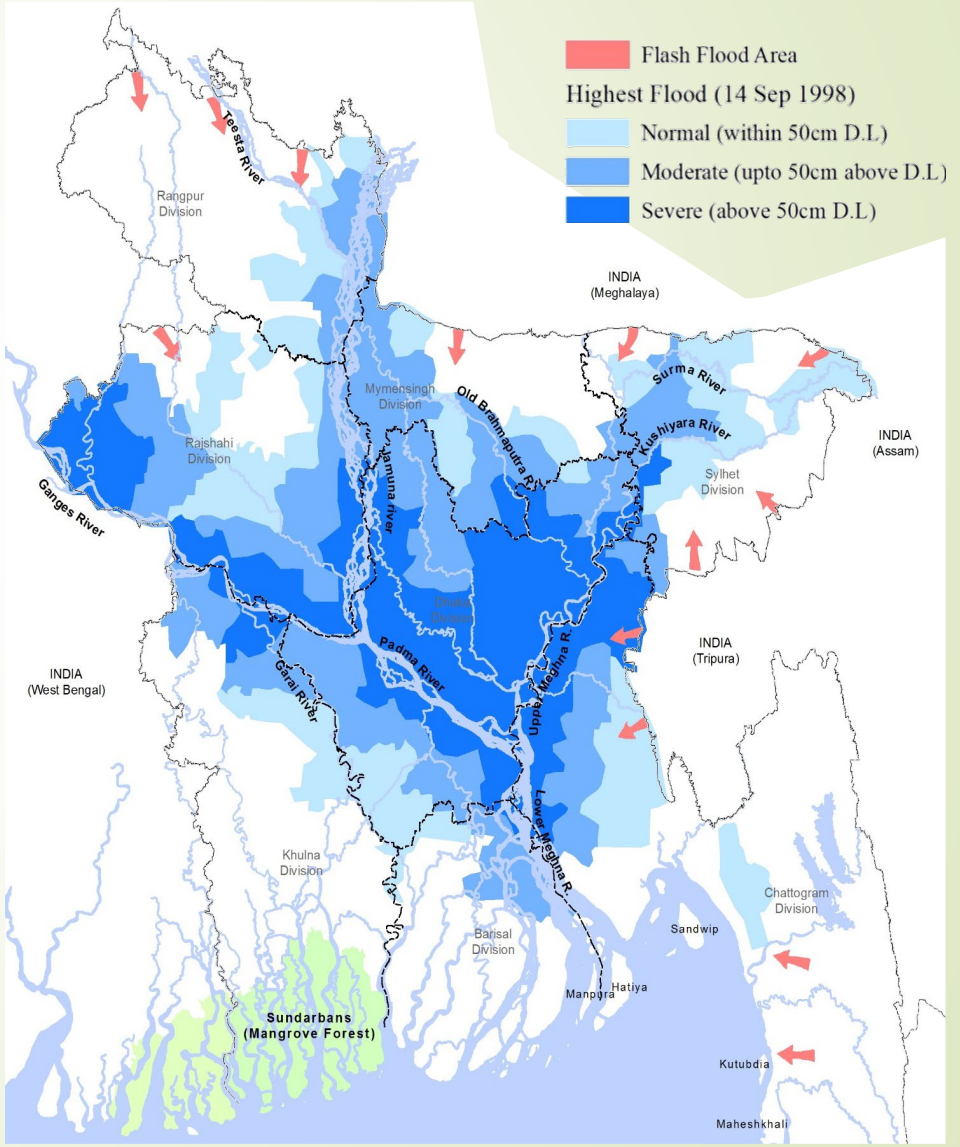
Almost once in **every 4~5 years**, a severe flood **inundates 40~70% land** of Bangladesh, causing severe damage to our lives and livelihood

Climate change impacts the **frequency and extent of monsoon rainfall**, causes increasing frequency and extent of mega floods



Floods in Bangladesh





Floods: Risks, Vulnerabilities, and Challenges

Risk and Vulnerabilities

Frequent River Flood

- Sediment problem
- Prolonged waterlogging
- Damage to infrastructures and properties
- Damage to agriculture, fisheries and livestock
- Injuries, fatalities and deaths

Early or Frequent Flash Floods

- Drainage problems Navigation, Sediment problem
- Damaged Infrastructures, crops and fisheries
- Embankment breach
- Loss of livelihoods
- Climate migration
- Safe WASH crisis

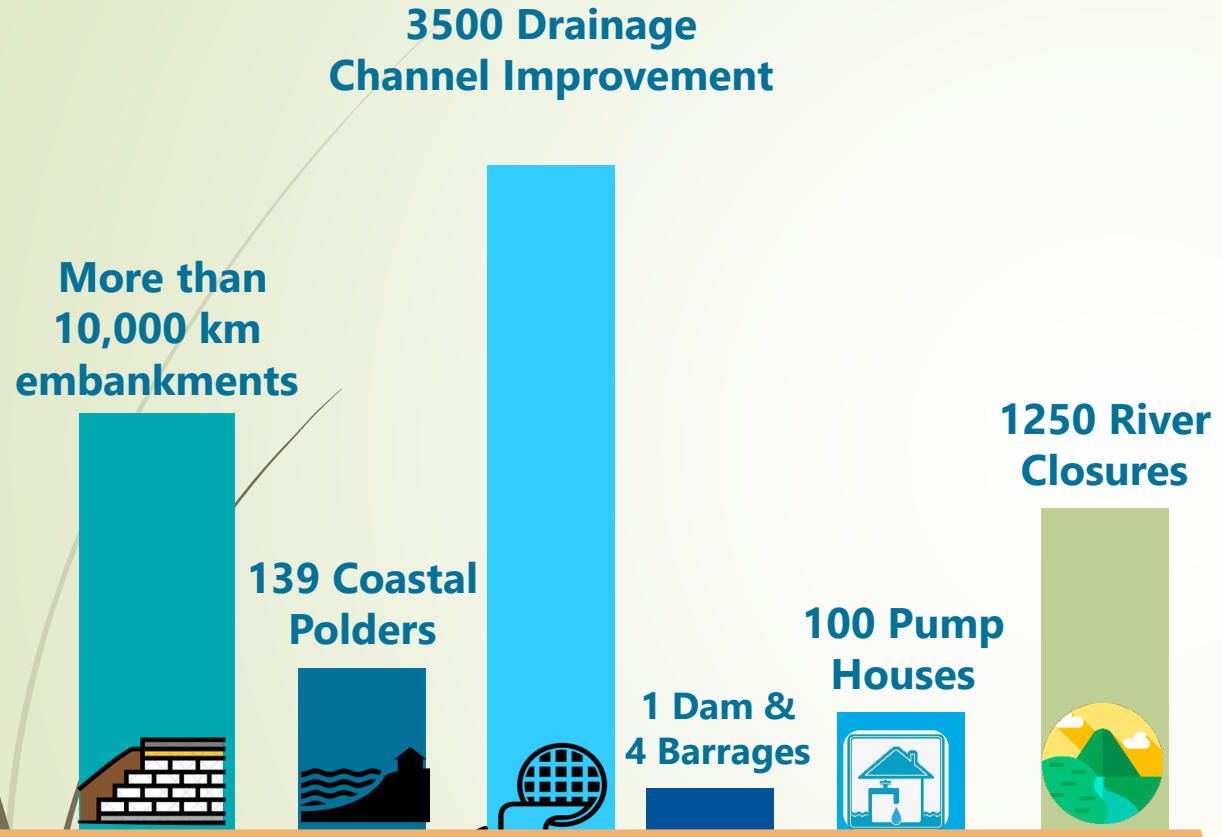
Urban Floods

- Urban drainage problems
- Damaged drainage, road and communication infrastructures
- Outbreak of vector and water borne diseases
- Traffic congestion
- Disrupted urban economy

Key Challenges

- Mobilisation of adequate resources on time
- Ensure safe WASH services during and post-disaster period
- Coordination among multi-level stakeholders
- Introducing risk recovery mechanism
- Engagement of the private sector for flood risk management
- Alternative livelihoods generation
- Strengthening early warning services
- Risk-informed planning and implementation at the local level
- Uncertainties of climate change
- Conservation of wetlands & illegal encroachments of floodplains

Flood Risk Management



Embankments

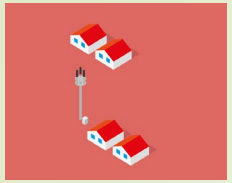
Dams

Submersible Embankments

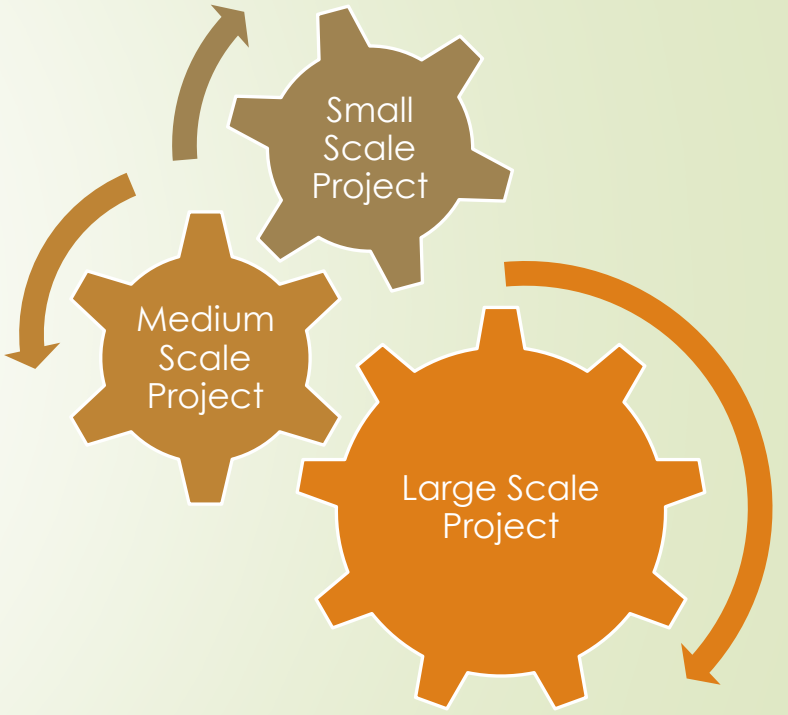
Flood Wall

- 735+ flood management systems
- 5.4 million ha under flood protection

Structural Measures for Flood Management



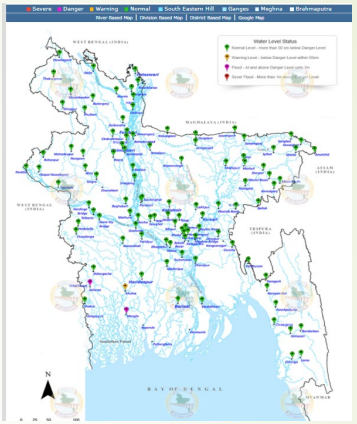
Bangladesh has developed an impressive number of flood management and/or irrigation infrastructure development projects, which have accounted for about **one half of the funds** spent on **water development projects** since **1960**



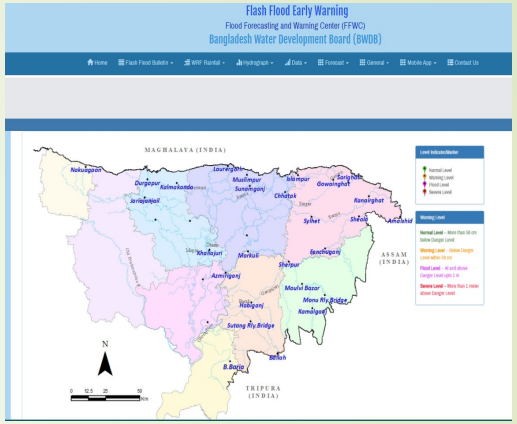
- At present, there are over **1000 flood control, drainage and irrigation (FCDI) schemes** in the country, **covering more than 6 million ha** area.
- **4 barrages** across the rivers Teesta, Tangon, Buri-Teesta, and Manu, have been constructed as diversion structures for irrigation purposes

Non-Structural Measures for Flood Management

- Established FFWS of BWDB predicts **water level in 39 locations**
- A **flood forecast model for the NE flashy region** has been developed and operated
- Introduction of **Community Flood Risk Level**
- **Flood Proofing and Flood Fighting**
- **Flood Evacuation and Shelter Management**



Flood forecasting and early warning system



Flash Flood forecasting and early warning system

Community Flood Risk Level

Major Achievements

Major Achievements						
Flood control, drainage and irrigation facilities have been introduced for about **6 million ha** of land through implementation of over **800 projects**	**85 million people** are being protected and benefitted from **11,500 km flood protection & coastal embankment**	**23 economically important towns are now protected** from river erosion through **265 km river-bank protection works**	**1020 sq. km of land has already been reclaimed** from the estuary in coastal zone	Approximately, **16 sq.km land has been reclaimed in Brahmaputra river through Capital Dredging**	**139 polders have been constructed in the coastal areas for** protection of 30 million of people	**Bangladesh Delta Plan and NAP** in place to combat climate change impacts on floods and ensure safety

Community Preferred & Indigenous Flood Management

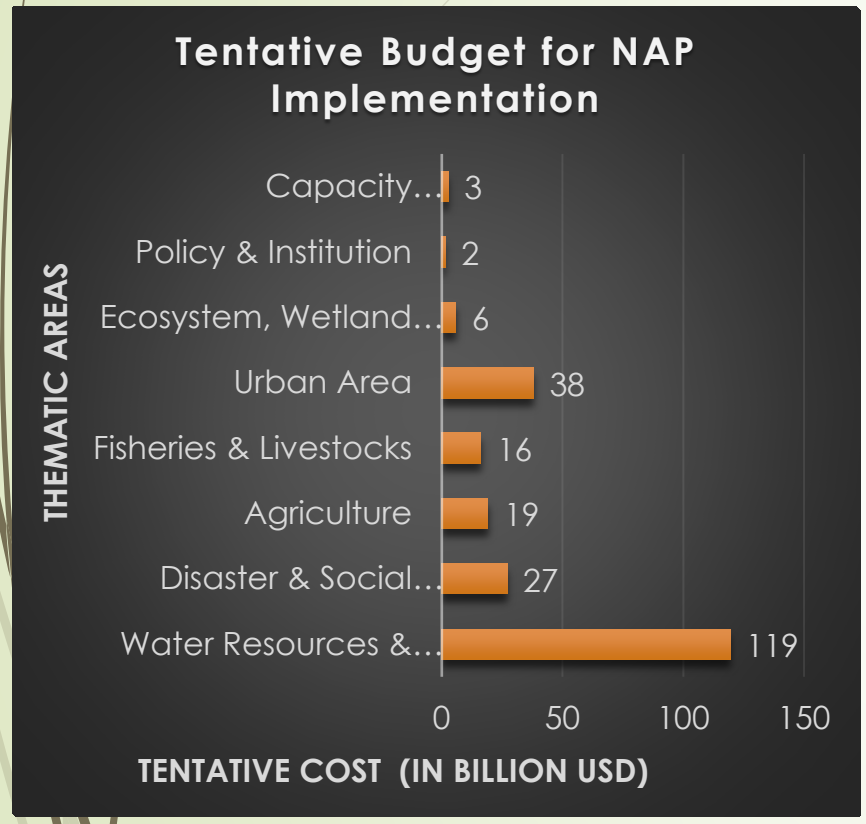
Rehabilitation and construction of polder/ embankment	Dredging of major rivers	Excavation or re-excavation of ponds and canals	Elevated and/or climate resilient house
TRM for tidal flood and sediment management	Strengthened early warning system	Climate proofing of infrastructures, houses or shelters	Storage of excess water in large freshwater reservoirs like Haor areas
Functional participatory water user association	Afforestation and eco-engineering solutions for flood management structures	Climate proofing of water management and drainage structures	Alternative livelihoods generation and insurance mechanism


Climate Resilient House


Rehabilitated Polder


Community Based Afforestation

Major NAP Interventions for Flood Management



- Protection and management of potentially vulnerable areas
- Dredging of rivers for accommodating and smooth drainage of excess floods
- Construction and rehabilitation of flood and drainage management measures
- Protection against flash floods, wave action, erosion and sedimentation
- River management through bank stabilization and other ancillary works
- Ecosystem-based sediment management in coast and estuaries
- Trans-boundary river basin management and basin level cooperation
- Remodeling of water regulating and cross drainage structures
- Strengthen early warning system
- Development of climate resilient houses, health and educational facilities
- Improvement of stormwater drainage networks for reducing vulnerabilities of urban flood and drainage congestion

Thank You for Your Kind Patience

United Nations
Climate Change

INONDATIONS LIEES AUX CHANGEMENTS CLIMATIQUES DU BURKINA FASO: DEFIS MAJEURS

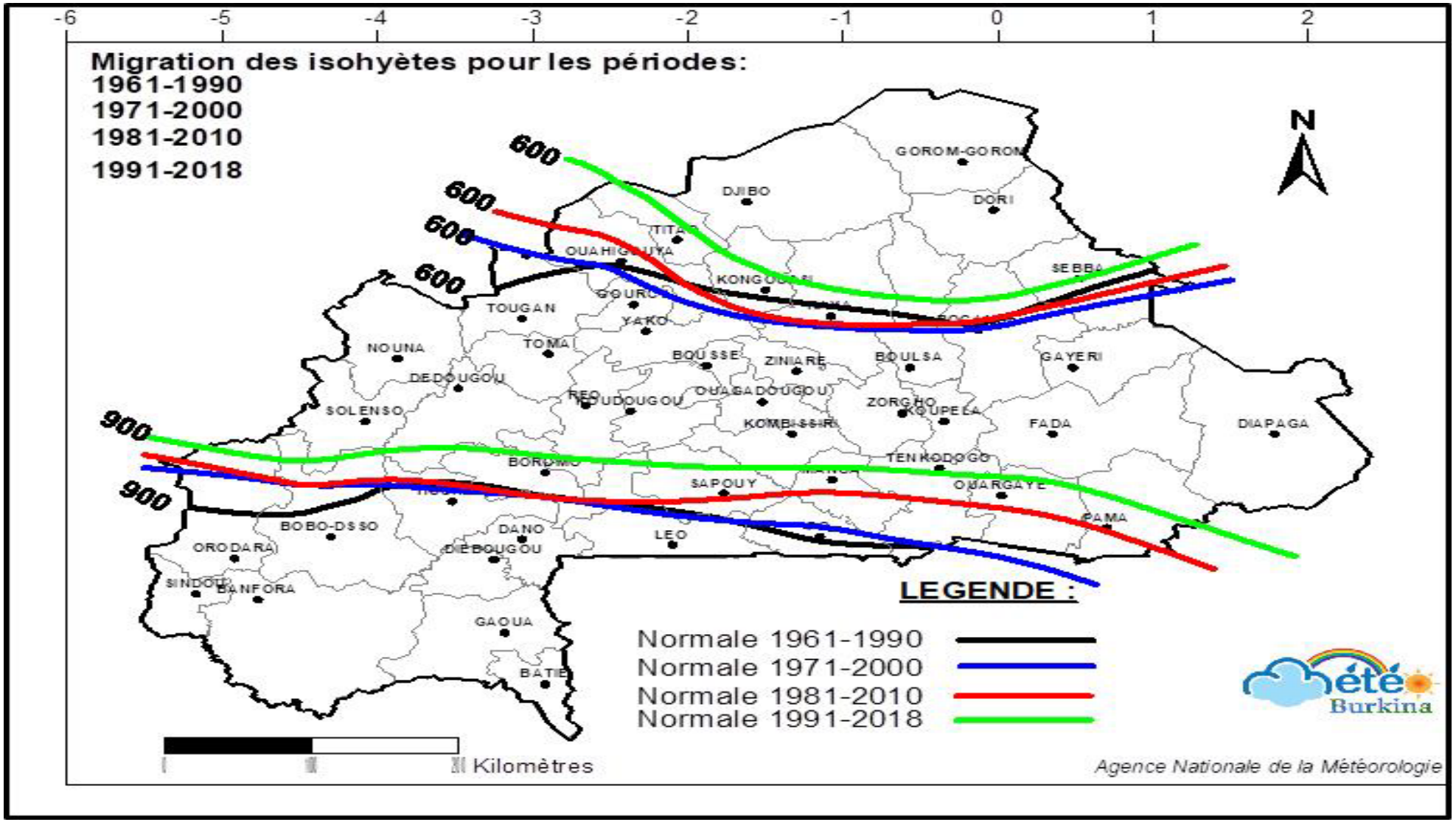
Semaine mondiale de l'adaptation
Botswana, du 22 au 26 août 2022

Kouka OUEDRAOGO
Point Focal PNA, Burkina Faso

PLAN

1. Migration des isohyètes
2. Impacts des inondations
3. Défis

MIGRATION DES ISOHYETES



Carte de migration des isohyètes 600 mm et 900 mm pour les normales

1961-1990, 1971-2000, 1981-2010, et 1991-2018.

IMPACTS DES INONDATIONS

- Multiplication des maladies hydriques;
- Pollution des cours d'eau et des zones de captage;
- Hausse du coût de traitement des eaux de consommation;
- Dégradation des infrastructures;
- Décès
- Quelques chiffres des inondations du 1er septembre 2009(253 mm d'eau en 10 h) : 11 régions touchées, 119 356 sinistrés, 46 morts, 63 blessés, 20 structures de santé publiques et 02 du privé touchées à plus de 80%, 42 000 constructions détruites, 351 écoles endommagées, 22 200 ha d'exploitations céréalières et maraîchères inondées.
- **Pertes et dégâts sont estimés à plus de 130 millions de USD** (source: SP-CONASUR)

IMPACTS DES INONDATIONS

DEFIS

- Construction des infrastructures hydrauliques: insuffisance de collecteurs d'eau (canaux, caniveaux, pavés drainants) de canalisation des eaux pluviales et même des eaux usées,
- Organisation institutionnelle: mieux intégrer l'approche risque dans les décisions de politique publique à travers une synergie d'actions de tous les acteurs; budgétiser les actions d'anticipation et de gestion des inondations;
- Evaluation les pertes et préjudices liés aux inondations;

DEFIS

- Aménagement de l'espace: urbanisation précaire des zones inondables, extension urbaine démesurée (cas de Ouagadougou);
- Accentuer la communication sur les risques et la gestion des inondations;
- Renforcer les capacité de relèvement et d'adaptation des populations et des écosystèmes face au phénomène;
- Organiser une forte mobilisation des ressources financières nécessaires pour relever ces défis énumérés.

Dégradation des terres, désertification et sécheresse

NAPexpo | 2022
TRANSFORMATIONS TO ADAPT

Dégradation des terres au Tchad: Défis pour la restauration de **709 330,05 Km² d'ici 2030**

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+235 66257730

Date:
AOUT 23, 2022

Chad profile

Eléphants (parc national de Zakouma)

Lionne (parc national de Zakouma)

Grue Couronnée (parc national de Zakouma)

Forte dégradation des écosystèmes

Vulnérabilité accrue des habitat et des populations

Taux important des zones humides mais mal exploitées

Amélioration de la Résilience

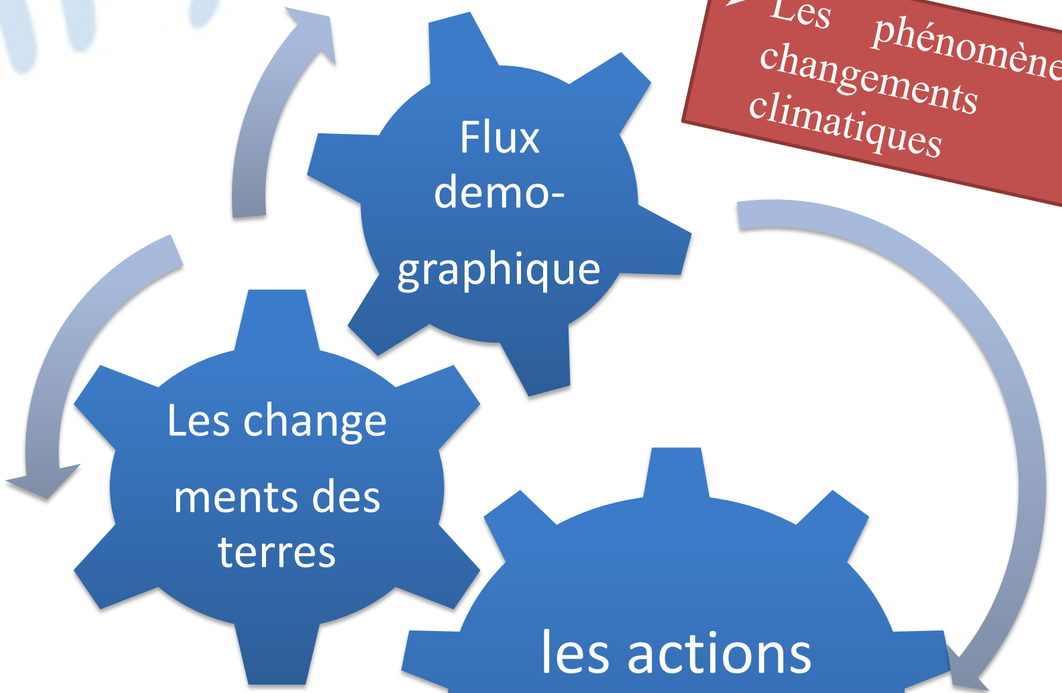
Opportunités d'investissement

GREEN CLIMATE FUND

gef

Etat des dégradation

Des études récentes ont observée une forte dégradation variant d'une province à une autre et est de l'ordre 428 000 km2 soit 33.43 % de la superficie totale du pays (PNLCD, 2018),



- Les phénomènes des changements climatiques

- surpâturage,
- mauvaises pratiques agricoles,
- exploitation des bois

Engagement du pays

- Conformément au Défi de Bonn, le Tchad s'est engagé à restaurer cinq (5) millions d'hectares de terres dégradées dans le cadre de lutte contre la désertification.

Tendances négatives	Sup(Km²)	Mesures correctives	Cible LDN		Investissements requis (M USD)
			Sup (Km²)	Année (échelonnement)	
Forêts	43 268,6	- Mise en défens - Lutte contre les feux de brousse - Contrôle de la transhumance	1 738,8	2040	16 995,79
Zones humides	8 279,75	- Contrôle de la transhumance - Lutte contre les érosions	17,95	2040	14,72
Terres dénudées et autres	657 781,7	- Reboisement - Agroforesterie - Lutte contre l'érosion hydrique - Contrôle de la transhumance	29 000	2040	4 156,67

Selon la LND

Les principaux obstacles pour une restauration réussie des terres

- L’absence de la quantification de l’ampleur des dégradations (évaluer ou mesurer) ;
- L’absence d’implication de la recherche scientifique dans la circonscription des phénomènes résultant de l’incohérence du mécanisme de suivi-évaluation du phénomène de dégradation des terres ;
- L’absence de synergie entre les intervenants, trop d’interventions mais peu d’actions visibles et efficaces pour les bénéficiaires (pas de cluster).

PRIORITES NATIONALES D'ADAPTATION

Améliorer l'intégration de l'adaptation dans la planification du développement

Renforcer la résilience au changement climatique de la société et de l'économie Tchadienne

DOMAINES D'INTERVENTION DU PNA DU TCHAD

Le classement des domaines d'intervention par ordre de priorité est comme suit

Agriculture et élevage

Environnement et forêts

Eau, Hygiène et Assainissement

Énergie renouvelables

Genre et Action Sociale

Éducation et communication

Gestions de risques et de phénomènes extrêmes, infrastructures et Aménagement du territoire, développement de l'habitat et de l'urbanisme

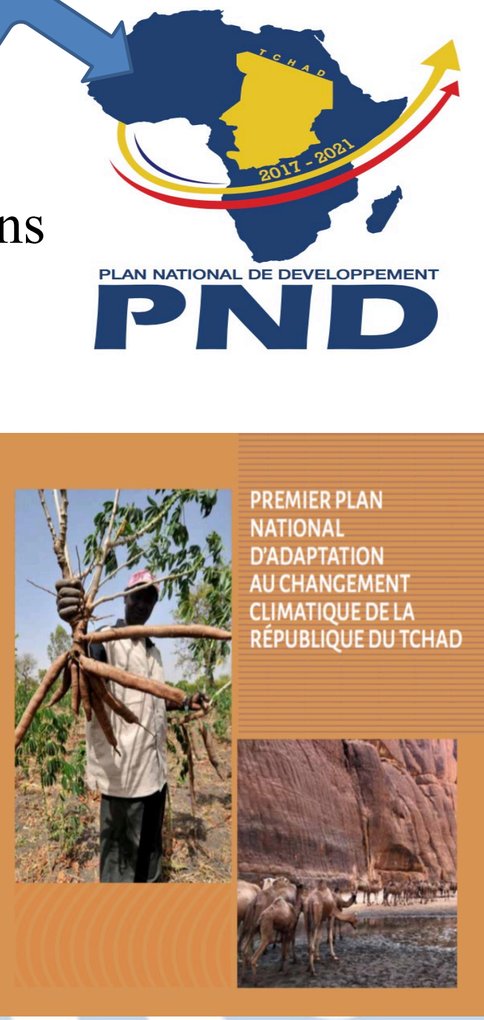
Ressources halieutiques et aquaculture

Les principaux défis pour une restauration réussie des terres

Pour atteindre cette cible de **709 330,05 Km²**, le Tchad aura entre 5 et 25 ans soit de 2020 à 2040 pour atteindre la neutralité de la dégradation des terres.

Application des technologies GDT promues par les différents projets

- le paillage à l'aide de débris végétaux ou des résidus de récolte,
- l'utilisation des légumineuses (mucuna, pois d'angole, etc.) ou des déjections animales,
- le parcage du bétail, la fumure par fosse, l
- es compostages, la jachère améliorée,
- la fertilisation organo-minérale,
- les rotations et associations culturales intégrant les légumineuses,
- le non arrachage des pieds de soja après récolte,
- l'aménagement des bas-fonds,
- l'agroforesterie à base des légumineuses, etc.,
- le reboisement et l'enrichissement des reliques,
- les pratiques des pare feux, les digues de pierres,
- les cordons pierreux, le labour perpendiculairement à la pente



Quelques bonnes pratiques dans le car du Projet PARSAT

Le bilan des réalisations de la 1ere CDN révèle que les financements de l'adaptation engagés durant la période 2016-2020 sont insuffisants par rapport aux besoins. La CDN révisée a aussi considéré un nombre plus important de secteurs et mesures prioritaires.

Compte tenu du manque d'études et de données quantifiées pour déterminer les impacts socio- économiques des changements climatiques sur les différents secteurs au Tchad, il était difficile d'estimer le coût des interventions d'adaptation.

Le montant minimum correspond est estimé suivant une approche “top-down” qui estime les besoins d’adaptation à un pourcentage du PIB. Celle-ci se base sur des simulations globales des besoins en adaptation développées par le PNUE (approche *top down* tirée de l’*Adaptation Gap Report*), ainsi que plusieurs rapports et études qui ont évalué que les couts d’adaptation pourraient être équivalent à une **perte annuelle entre 1.5 et 3% du PIB en Afrique à l’horizon de 2030. Le Tchad étant l’un des pays les plus vulnérables au monde, l’estimation de 3% du PIB a été choisie.**

Selon cette approche, les besoins en financement pour répondre au niveau élevé de risques climatiques attendus au Tchad pourraient s’élever à plus de 375 millions d’USD dès 2021 (soit sur la base d’estimation de 3% du Produit intérieur brut) pour atteindre le coût annuel de 645 millions d’USD à l’horizon 2030. **En se basant sur ces simulations annuelles, les besoins en financement pour la période 2021-2030 pourraient s’élever à plus de 5, 002 milliards d’USD.**

Merci de votre aimable attention!

UNION DES COMORES
Unité - Solidarité - Développement

Ministère de l'Agriculture, de la Pêche de l'Environnement, du Tourisme et de l'Artisanat

جمهورية القمر المتحدة
الوحدة - التضامن - التنمية

وزارة الزراعة والصيد والبيئة والسياحةوالحرفاليدوية

Session A : Dégradation des terres, désertification et sécheresse aux Comores

Semaine mondiale de l'adaptation au climat (Botswana)

Présenté par : Mr FAISSOIL Mhadji
Point focal national IPCC,
chargé de suivi des IGES et du NAP

Mardi 23 août 2022

I. Situation nationale de la DDT, de la désertification et la sècheresse

Les 5 systèmes d'utilisations des terres

Un système axé sur les cultures vivrières

36% des terres cultivées dont 30% à Anjouan/Grande Comores et près de 50% à Mohéli.

Dégradation des structures accompagnée d'une perte de fertilité des sols/des revirements + glissements de terrain (Entre 35-60% des terres agricoles)

Un système axé sur les cultures de rente (la vanille, le girofle et l'ylang-ylang)

Caractérisée par une perte plus importante de la couche arable du sol accentuée par les fortes pentes et l'intensité des pluies.

Dégradation plus ou moins modéré qui tend à s'accentuer dans le temps

Un système axé sur les cultures maraîchères

Système peu développé en terme d'occupation du sol et couvre 9% de la superficie des terres agricoles en Grande Comore, 5% à Mohéli, et moins de 1% à Anjouan

Acidification du sol (75% des périmètres maraîchers en Grande Comores, et 55% à Anjouan), à cause de la faible maîtrise des dosages d'engrais chimiques

Un système forestier (cultures sous-bois)

20% de la superficie en Grande Comores, 29% à Anjouan et 5% à Mohéli

Réduction de la couverture végétale qui s'accompagne d'une perte d'habitats et de la biodiversité, et d'une intensification de l'érosion des sols (75% des superficies à Anjouan)

Un système qui concerne l'exploitation des terres marginales

Tiens compte de la morphologie du sol des iles et du potentiel productif très faible.

Facteurs physiques et climatiques :

- ✓ *Diminution des précipitations*
- ✓ *Faible perméabilité du sol (Anjouan- Mohéli due au relief accidenté et au taux d'argile élevée)*
- ✓ *Les T°C : minimale 14-23°C et maxi 28-35°C avec une augmentation de 1°C/an et 0,9°C/décennie*
- ✓ *Relief montagneux et accidenté accentue l'érosion*

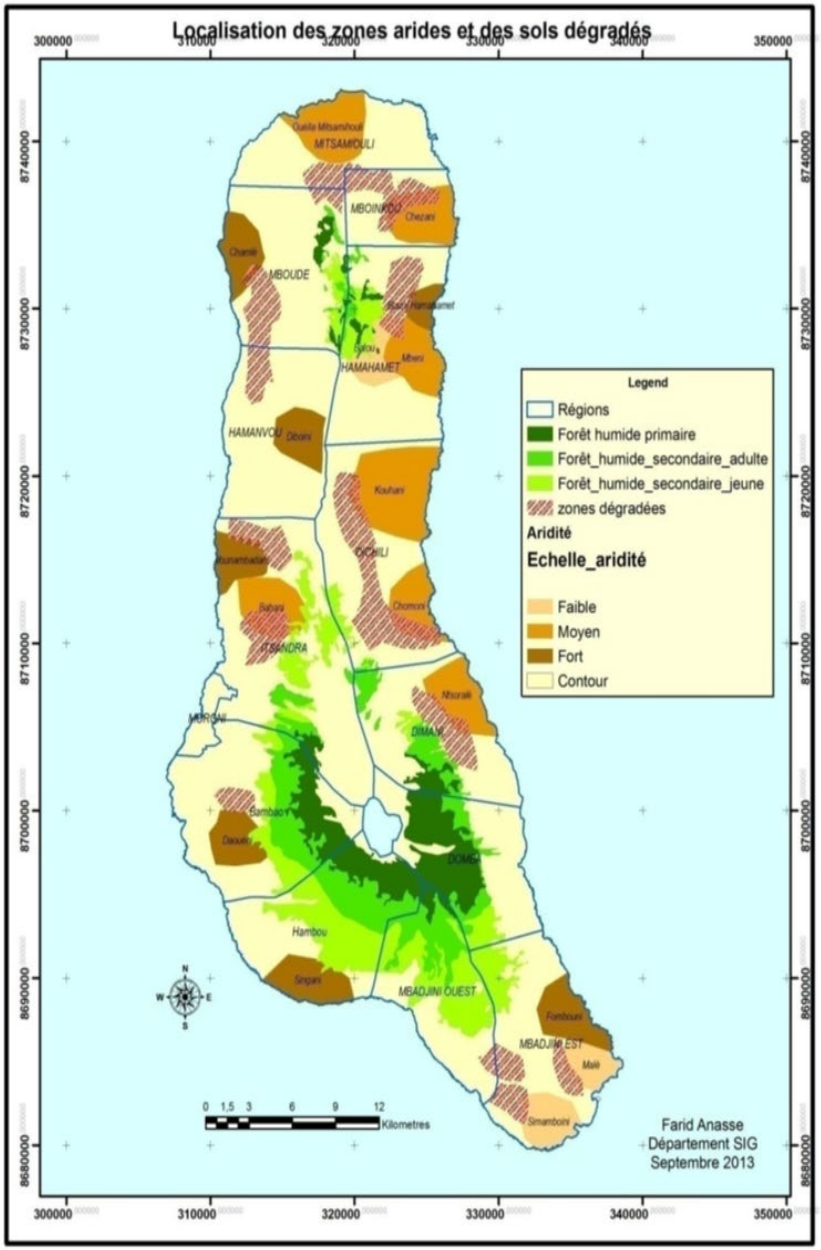
Facteurs socio-économiques :

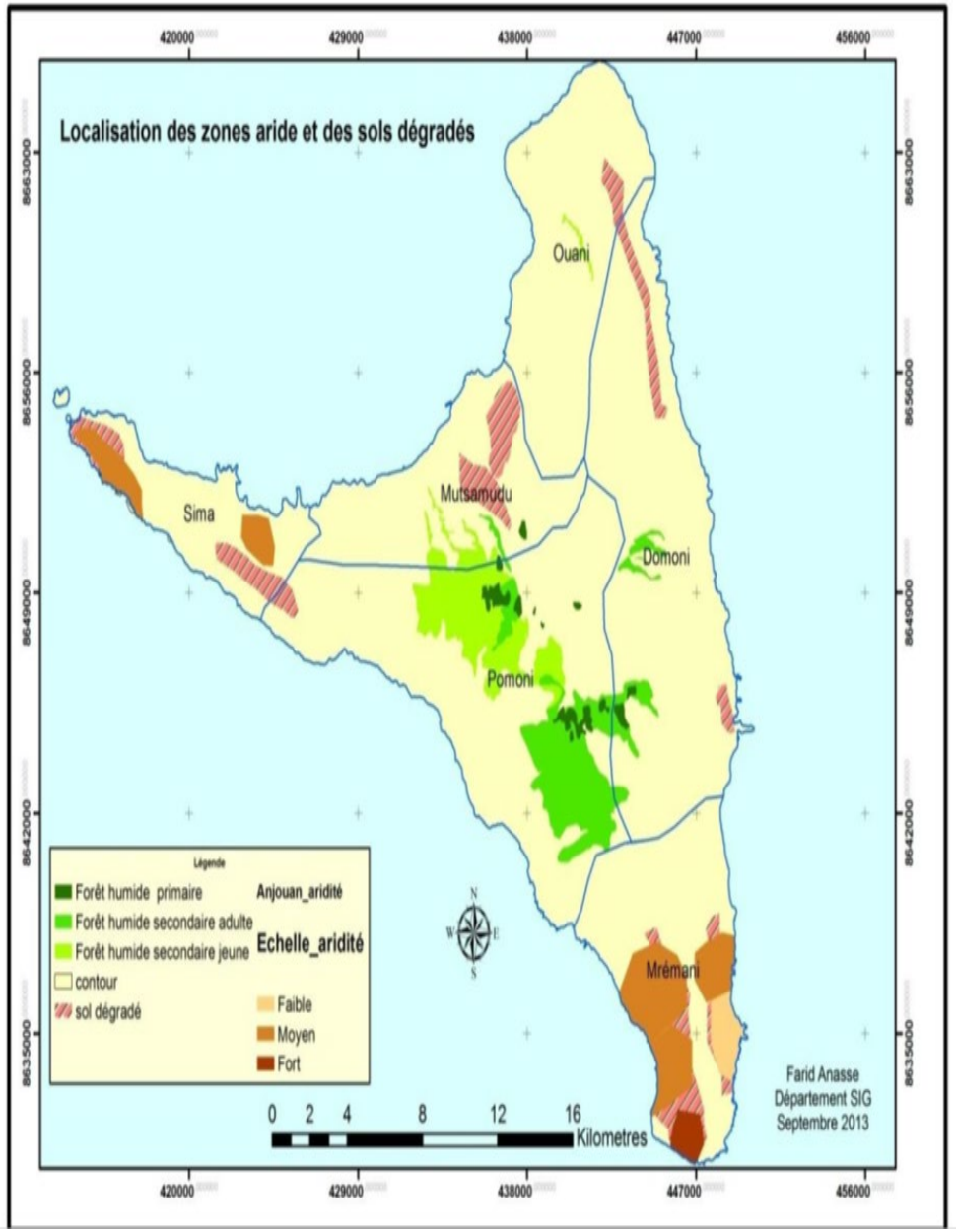
- ✓ *La forte pression foncière résultant de la pression démographique sur la foret*
- ✓ *Besoins croissant en biomasse ligneuse et les pratiques agricoles inadaptées*
- ✓ *Urbanisation poussée*
- ✓ *Insuffisance d'innovations techniques*

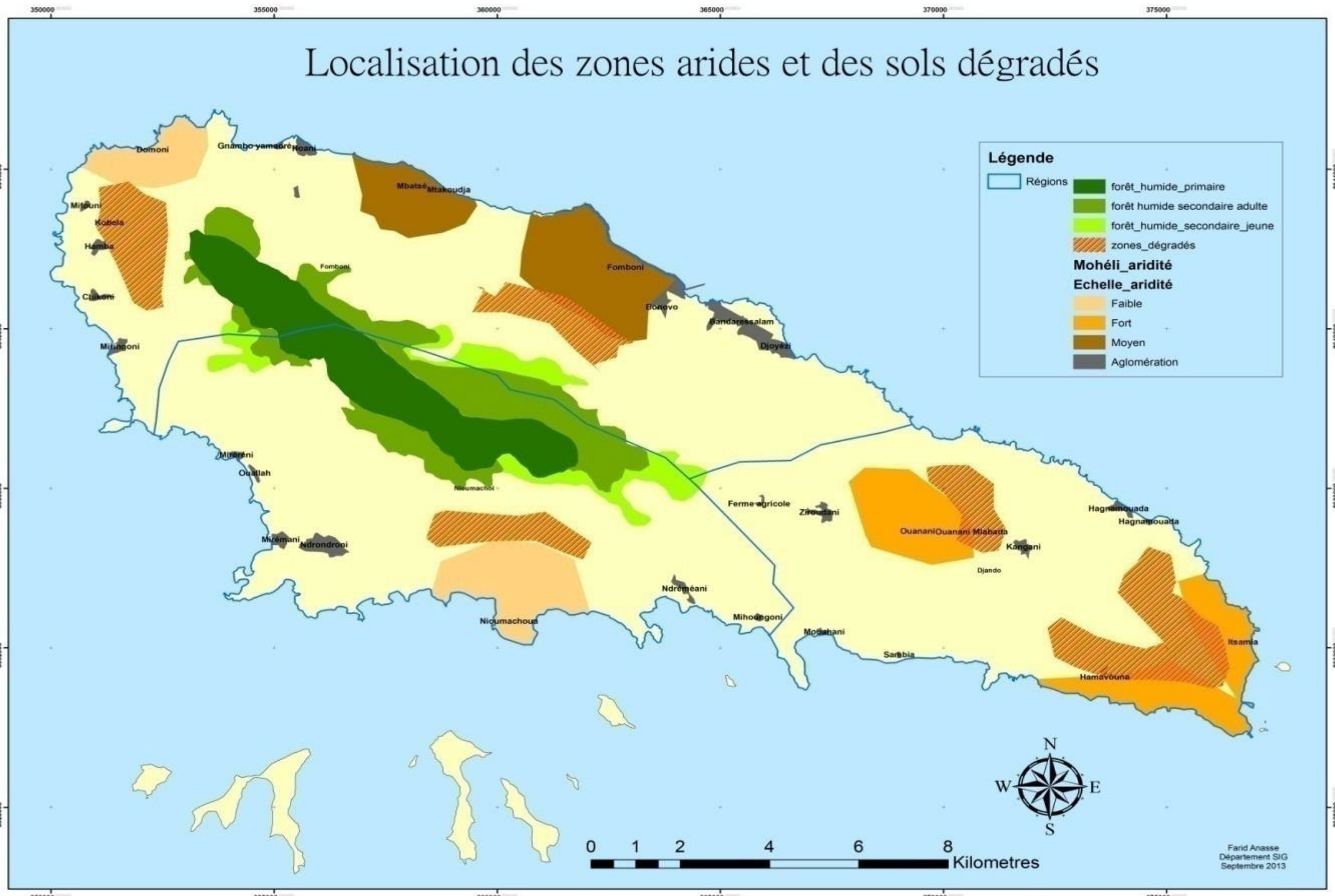
Facteurs politiques, juridiques

- ✓ *Faiblisse d'une législation foncière*
- ✓ *Absence d'un plan d'aménagement*
- ✓ *Faible capacité institutionnelle des services de l'Etat*

Cartographie des zones dégradées







Localisation des zones arides et des sols dégradés
Légende
Régions
forêt_humide_primaire
forêt humide secondaire adulte
forêt_humide_secondaire_jeune
zones_dégradés
Mohéli_aridité
Echelle_aridité
Faible
Fort
Moyen
Aglomération
Domoni
Mbatsé
Mtakoudja
Fomboni
Bonovo
Djoyézi
Miringoni
Ouallah
Ndrondroni
Nioumachoua
Ndrémeani
Ferme agricole
Ziroudani
Kangani
Djando
Hagnamouada
Itsamia
Hamavouna
Sambia
0 1 2 4 6 8 Kilometres
N
S
E
W
Farid Anasse
Département SIG
Septembre 2013

II. Les progrès réalisés par le gouvernement

Cadre de Gouvernance renforcé

- Ratifier la Convention de lutte contre la désertification
- Actualiser la Loi cadre sur l'Environnement incluant la DDT, ZC,CC
- Élaborer la politique et plans d'action liés à la LCD (politique forestière et son plan d'action)
- Elaborer la stratégie de croissance accélérée au développement durable
- Adopter un plan d'action national d'adaptation aux CC
- PCE
- Elaborer la stratégie agricole
- Elaborer la stratégie d'expansion du système national des Aires Protégés
- Processus NDT / réaliser une étude sur la DT
- Signature du Manifeste d'Itsandra qui a engagé le pays sur la voie d'une économie verte respectueuse de l'environnement
- Réorganiser / Elargie les missions du MAPETA

https://youtu.be/2VJ7yh-bDAo

Sur le plan économique

- ❑ Allègement des conditions /procédures d'octroi de titres fonciers en vue d'encourager les investissements relatifs aux aménagements antiérosifs sur les terrains agricoles
- ❑ Promotion des foyers améliorés visant à diminuer la consommation du bois énergie et donc à réduire la pression sur le déboisement et la dégradation des terres

Sur *plan agricole /environnemental*

- Mise en œuvre des projets nationaux de Gestion Durable des terres (ACCE, RGBIV, PREFER, CRCCA , RNAP, ER2C et la BM et autres partenaires régionaux)
- Poursuite des programmes d'intensifications et de diversification agricole, de la diffusion des techniques de DRS et d'embocagement par les CRDE.
- Classification de l'ile de Mohéli en réserve de biosphère UNESCO

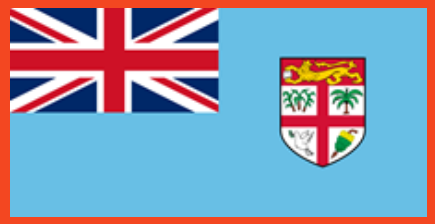
Opportunités :

- ➢ La CPAP a été un succès en termes de promesses de dons dont une grande partie des financements annoncés restent encore mobilisable et pourrait être orienté vers le secteur de l'agriculture et la LCD
- ➢ Une Volonté politique
- ➢ Une forte sensibilisation de la société civile et du secteur privée

Faiblesses:

- ✓ Capacité institutionnelle de l'Union / des iles en matière de gestion de l'Environnement , GDT est limitée.
- ✓ Ressources propres des investissements du pays sont limitées
- ✓ Moyen de mise en œuvre des politiques, lois, stratégies, textes règlementaires, plan n'intègrent pas assez suffisamment les aspects de mobilisation des ressources
- ✓ Dérapages budgétaires en cas de non respect des mesures budgétaires exigés par les partenaires qui diminuent sensiblement les possibilités de mobilisation de fond a court , long terme

Merci de votre aimable attention



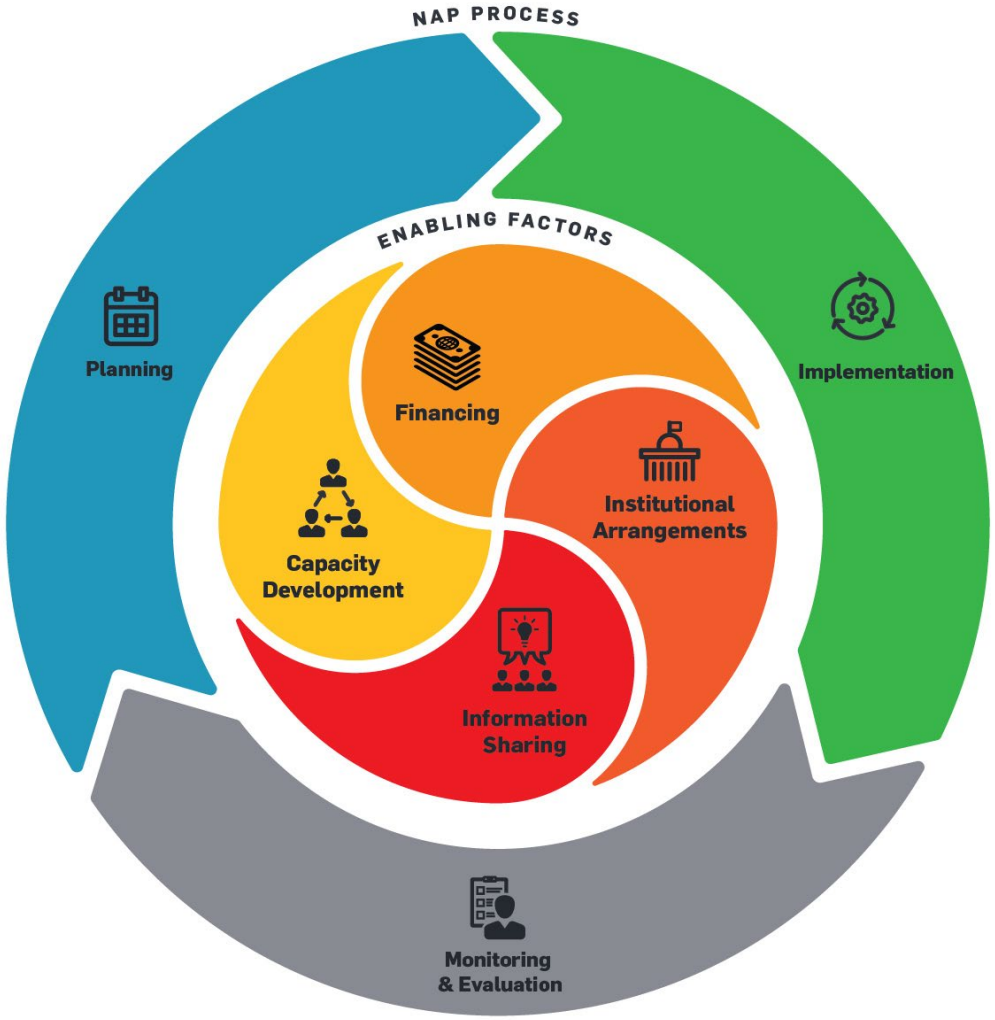
National Adaptation Plan

A pathway towards climate resilience

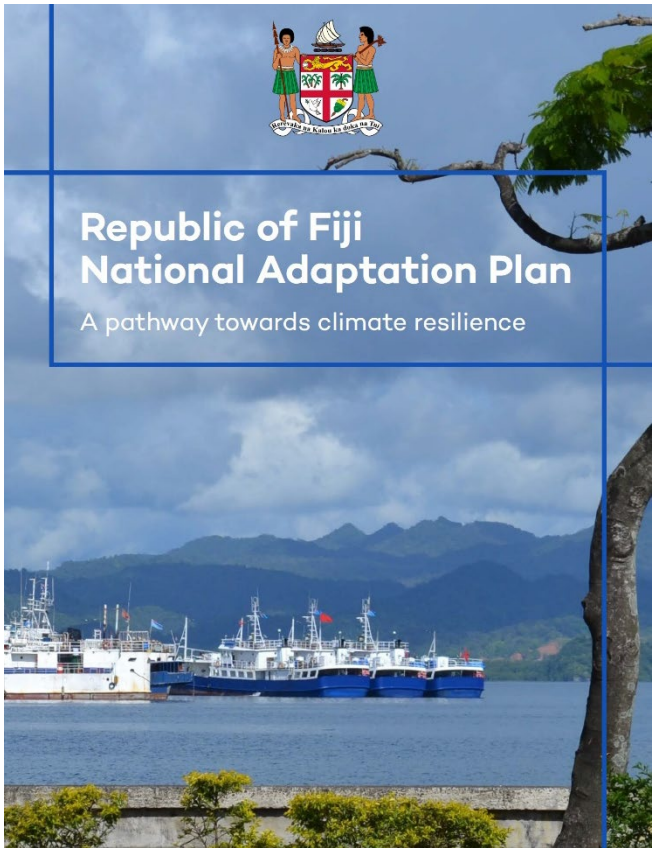
2022 NAP EXPO – BOTSWANA
Sea level rise, coastal erosion and storm surges

Kushaal Raj
Head of Climate Change and International Cooperation
Ministry of Economy
Fiji

The NAP Process



NAP Overview



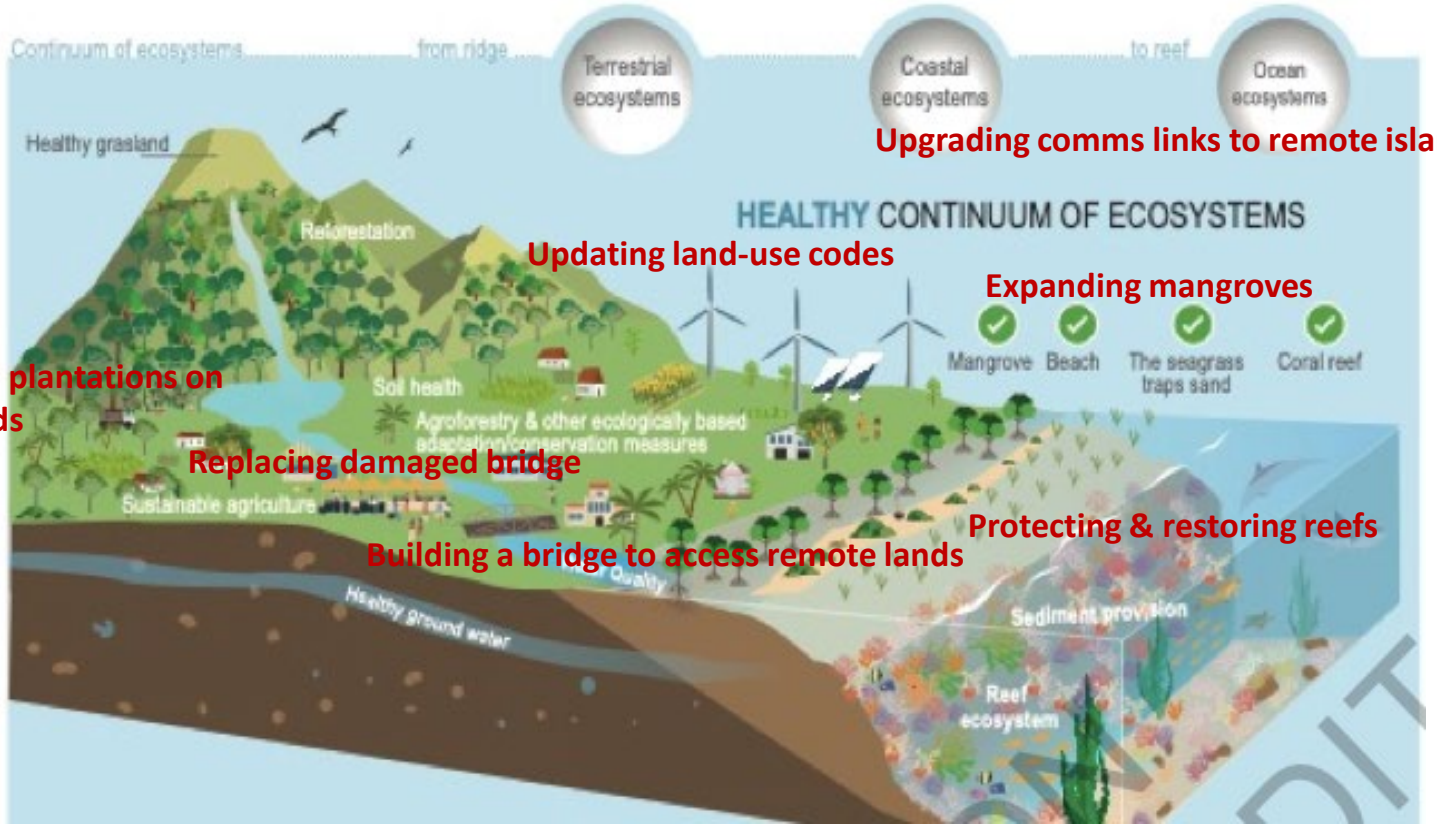
- Overarching process addressing climate change vulnerability.
- Build adaptive capacity and resilience, and integrate environmental and climate risk, into development planning processes.
- Inter-ministerial sectoral approach.
- 160 prioritised adaptation measures.
- 5 components addressing adaptation barriers.
- 5 components addressing important sectors to the economy and society.
- 5 year life cycle

System Focus Areas

Requirements for paradigmatic change

System component	Description	Outcome
Climate Info. Services & Management	Improves capacity to generate, manage, disseminate, and use climate change information.	Supports stakeholders to anticipate environmental and climate events before they occur.
Horizontal integration	Mainstreams climate change issues into national-level development planning` processes.	Increased robustness of planning processes and help to prevent maladaptive outcomes.
Vertical Integration	Integrates climate change issues into sub-national development planning processes which then inform national processes.	Reduces vulnerability by tackling environmental and climate risks where they are experienced.
Climate Change Awareness & Knowledge	Enhances understanding by increasing the flow of relevant information to relevant adaptation stakeholders.	Empowers stakeholders to engage in decision-making and understand relevant potential adaptation measures
Resource Mobilisation	Enhances the accumulation and coordination of resources to support the transition to a climate-resilient economy.	Improves the amount of resources available and the way available resources are utilised.

Adaptation Measures in Fiji



Next Steps

1. NAP Steering Committee Meeting – 20 July

2. Pool of Users established in Fiji's Adaptation Registry

3. Rollout with Fijian Taskforce on the Relocation and Displacement

4. NAP Review – NAP Costing Methodology as an output

5. NAP Investment Plan

6. Coastal Mapping

7. Climate Impact Assessment Framework for all new infrastructure development – CCA

MINISTERE DE L'ENVIRONNEMENT,
DE L'ASSAINISSEMENT ET
DU DEVELOPPEMENT DURABLE

-*-*-*-*-*-*-*-*-

AGENCE DE L'ENVIRONNEMENT ET DU DÉVELOPPEMENT DURABLE (AEDD)

RÉPUBLIQUE DU MALI

-*-*-*-*-*-*-*-*-

Un Peuple – Un But – Une Foi

LAND DEGRADATION, DESERTIFICATION AND DROUGHT IN MALI

Botswana Global Climate Adaptation Week

GABORONE, 23 AUGUST 2022

AMIDOU GOÏTA

HEAD OF DEPARTMENT

FINANCIAL RESOURCES MOBILISATION, GEF OFP

Agence de l'Environnement et du Développement Durable (AEDD)
Bamako, Mali
(00223) 71 76 85 31
amidougoita@gmail,com

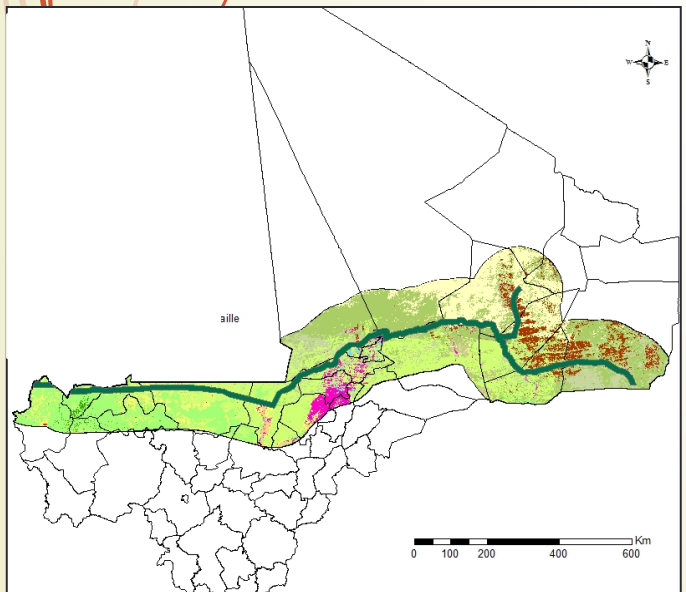
SOMMAIRE

Contexte Dégradation des sols, désertification et sécheresse au Mali

3

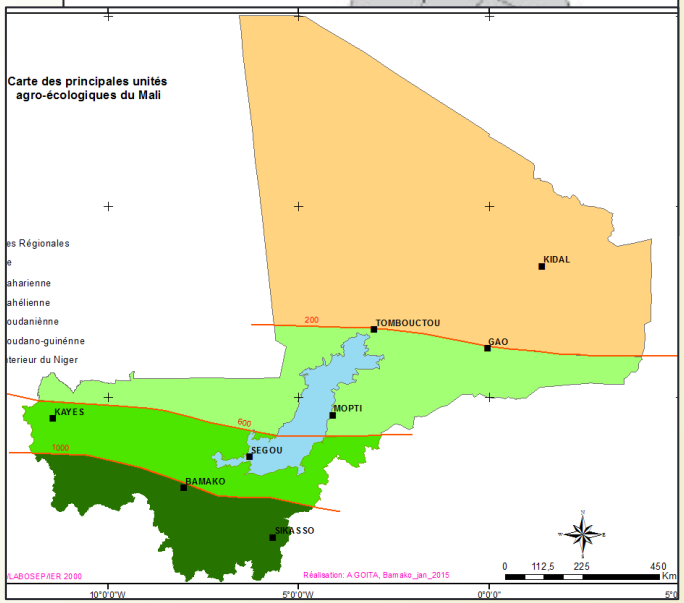
Superficie: 1 241 238 km²
Population:**9,8** millions en **1998** à **+20** Million **2021**millions d'habitants dont 50,4% de femmes et 49,6% d'hommes (RGPH -2009)
Taux accroissement naturel de **3,6%**, **30,3** millions en **2035** (DNP-2017), **jeunes: 53% Pop totale**,

Moyens de subsistance:
Agriculture, élevage, pêche



125 000 ha de Formation végétale

2,5 M ha de Infertilité+ Erosion



Au Mali, selon des études, la dégradation des terres coûte +20% du PIB/an, soit plus de 680 milliards FCFA

Causes Dégradation des sols, désertification et sécheresse au Mali

Causes directes

- **climat :**

Les deux tiers du pays sont arides et semi arides dominés par les problèmes de désertification. Les risques naturels se sont accrus avec l'intensification des changements climatiques : sécheresses à répétition, inondations, vents forts, feux de brousse, déstabilisation du régime des pluies. Cette situation est d'autant plus grave que les scénarios climatiques à l'horizon 2100 prévoient en moyenne une augmentation des températures 3°C et une diminution des pluies de 22% sur l'ensemble du pays.

Le scénario climatique: Pessimiste RCP 8.5 à moyen terme 2050

Ce modele prevoit :

+3°CTemperature (annual mean);

-7%Precipitation (annual mean);

-12 % Humidité des sols (moyenne annuelle);

+15 % Débit d'eau (moyenne annuelle);

-8 % Ruissellement de l'eau (moyenne annuelle).

Causes Dégradation des sols, désertification et sécheresse au Mali (suite)

5

- Activités humaines (anthropique):

Céréales et coton

1er rang UEMOA
2ème CEDEAO

498 438 stères en 2014

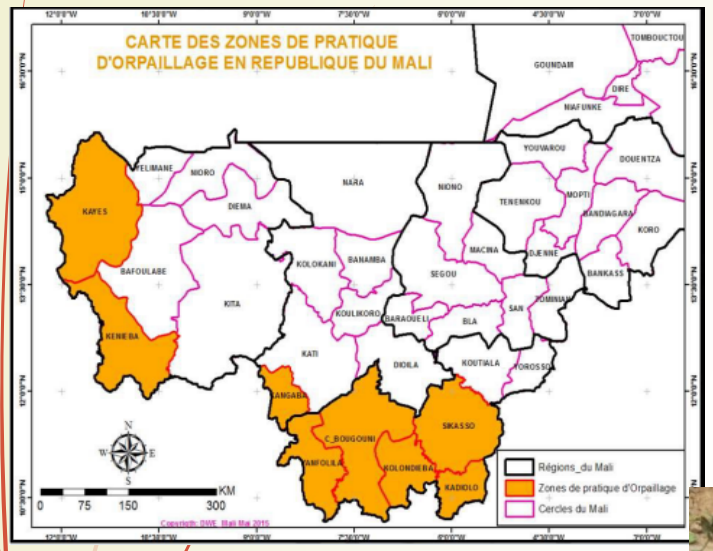
334 454 Qm en 2017

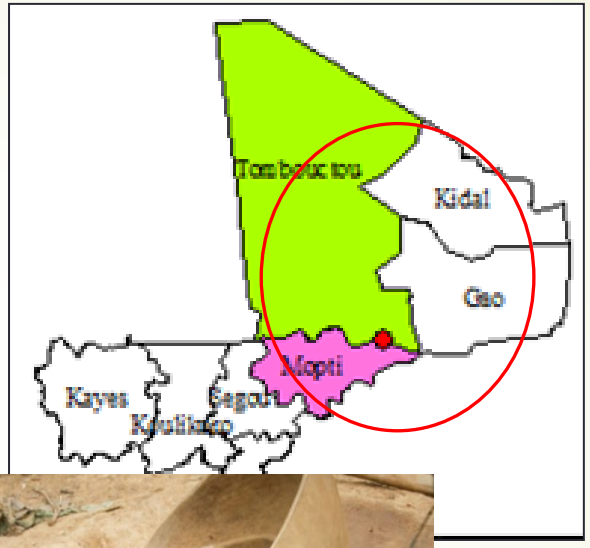
5 155 393 ha en 2017

Causes Dégradation des sols, désertification et sécheresse au Mali (suite)

6

- Activités humaines (anthropique): l'orpaillage





Mercure utilisé
33 tonnes/an

Conséquences Dégradation des sols, désertification et sécheresse au Mali

7

L'économie du Mali en générale repose essentiellement sur l'exploitation des ressources naturelles. La croissance démographique et les contraintes climatiques ont entraîné une surexploitation et une dégradation de ces ressources.

L'agriculture qui est la plus touchée représente 45% du PNB et occupe environ 80% de la population active.

Perte de biodiversité;
Baisse de productivité;
Utilisation des engrais minéraux;
416 938 t (75,5% en 2018) contre **4,3 %** Engrais organique,
Famine ;
Exode et l'immigration,

SOLUTIONS

8

Niveau national

- **Constitution du Mali**
- **Politiques et stratégies:** PNPE, PNCC, PNF, P-NDT, PNA, CDN , etc.,
- **Programmes /projets Niveau local: PGDT, PGRNCC, etc,**

BONNES PRATIQUES GDT

MERCI

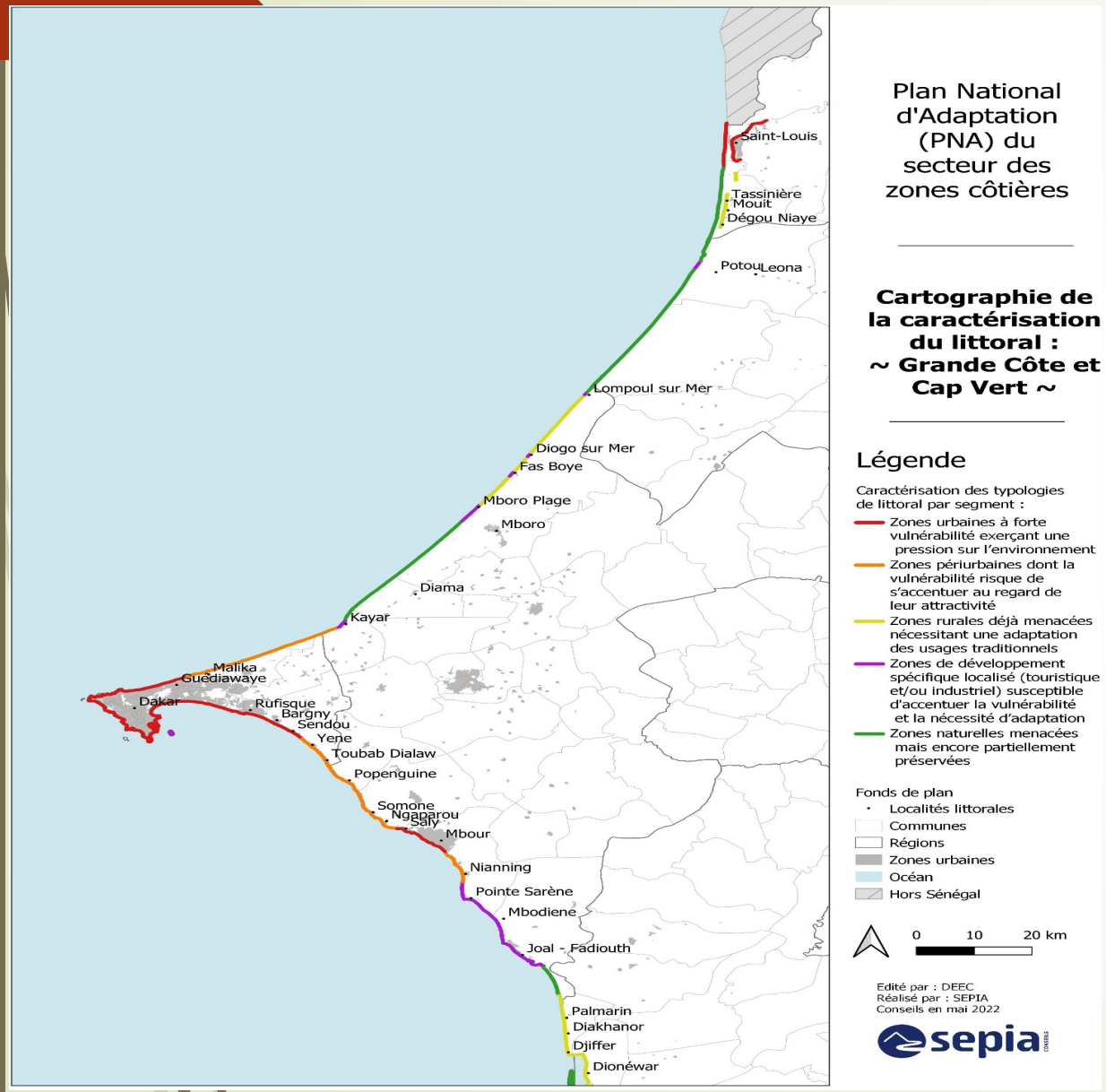
DE VOTRE ATTENTION

NAP EXPO 2022: ZONE COTIERE DU SENEGAL:DEFIS ET BESOINS

ZONE COTIERE

- The Senegalese coast extends over 718 km and is made up of three types of coast (rocky coasts, estuaries with mangroves and sandy coasts;
- It also concentrates a large part of the country's socio-economic activities: fishing, tourism, agriculture, livestock, mining and energy resources exploitation, industries.
- These activities accounted for 68% of the national gross domestic product, established in volumes of 1,491 billion FCFA in 2015;
- Coastal population: 7.8 million (52% of the total population)
- Coastal urban population: 4.7 million (61% of the coastal population)
- The Senegalese coast is subject to various risks: erosion (with an average annual recession rate of 0.5 to 2 m), marine submersion during strong storms, river flooding in the estuaries

NAPEXPO 2022: PNA ZONE COTIERE DU SENEGAL:DEFIS ET BESOINS



Plan National d'Adaptation (PNA) du secteur des zones côtières

Cartographie de la caractérisation du littoral : ~ Grande Côte et Cap Vert ~

Légende

Caractérisation des typologies de littoral par segment :

- Zones urbaines à forte vulnérabilité exerçant une pression sur l'environnement
- Zones périurbaines dont la vulnérabilité risque de s'accentuer au regard de leur attractivité
- Zones rurales déjà menacées nécessitant une adaptation des usages traditionnels
- Zones de développement spécifique localisé (touristique et/ou industriel) susceptible d'accentuer la vulnérabilité et la nécessité d'adaptation
- Zones naturelles menacées mais encore partiellement préservées

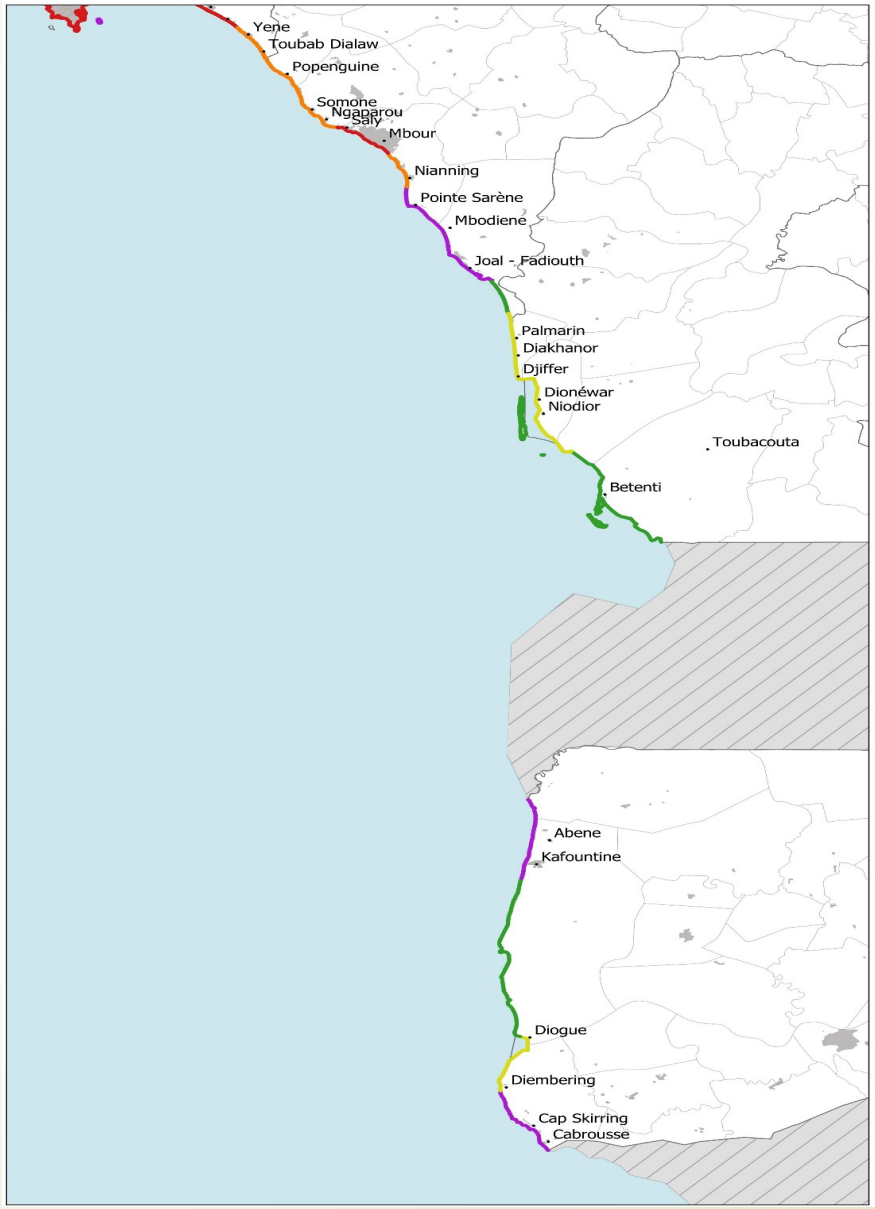
Fonds de plan

- Localités littorales
- Communes
- Régions
- Zones urbaines
- Océan
- Hors Sénégal

0 10 20 km

Edité par : DEEC
Réalisé par : SEPIA
Conseils en mai 2022

sepia



Plan National d'Adaptation (PNA) du secteur des zones côtières

Cartographie de la caractérisation du littoral : ~ Petite Côte et Casamance ~

Légende

Caractérisation des typologies de littoral par segment :

- Zones urbaines à forte vulnérabilité exerçant une pression sur l'environnement
- Zones périurbaines dont la vulnérabilité risque de s'accentuer au regard de leur attractivité
- Zones rurales déjà menacées nécessitant une adaptation des usages traditionnels
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Fonds de plan

- Localités littorales
- Communes
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- Zones urbaines
- Océan
- Hors Sénégal

0 10 20 km

Edité par : DEEC
Réalisé par : SEPIA
Conseils en mai 2022

sepia

CHALLENGES

DATA AVAILABILITY

- Modeling: There is no simulation of the area with different scenarios that allow us to measure its degree of vulnerability
- Lack of marine weather data (swells, wind, currents)
- Lack of morpho-sedimentary data in some areas (south and central west zone)
- Weak capacity of national actors on sedimentary modeling
- Insufficient tools for collecting and measuring some parameters (wind, swell, currents, sea level)

INSTITUTIONAL

- Legislation marked by normative insufficiencies in the face of pressures of all kinds (real estate development, fishing and leisure activities, tourism, etc.)

CHALLENGES

- The lack of consideration of climate change in the actions underway on the coast
- The galloping urbanization and the high concentration of the population on the coast which contribute to the imbalance of the natural hydrosedimentary functions and weaken the coasts
- The extraction of sand on different segments of the coastline
- Deforestation noted on certain parts of the coastline

NEEDS

Strengthen the knowledge of researchers, in order to refine the impact studies of climate change. Indeed, in order to improve the analysis of future impacts of sea level rise and produce more robust projections, it is necessary to have bathymetric data.

- Monitoring of certain parameters (swell, wind, temperature): Climate change will also have impacts on: upwelling and therefore potentially on fisheries resources; swells and winds and therefore potentially increase erosion and degrade marine and coastal ecosystems; ocean water temperature and therefore potentially on marine biodiversity and spatial distribution of fisheries resources
- Data on ocean acidification, which is expected to increase with a potential impact on biodiversity and coastal ecosystems, particularly shellfish. However, the current knowledge on these different elements is still too insufficient to be able to take them into account in vulnerability analyses and subsequently in adaptation planning
- Tools for collecting and monitoring hydrosedimentary dynamics
- Capacity building of stakeholders on sediment modeling
- Financing of the options retained in the PNA

GOOD PRACTICES IN THE FORMULATION OF THE NAP

- implementation of a research consortium for the vulnerability studies. The consortium was mainly composed of national research structures to ensure a follow-up of the technical and scientific aspects of the vulnerability studies.
- The creation of a monitoring committee to ensure better ownership of the results of the studies by all stakeholders
- we have made young researchers work on the issue of climate change, which aims to increase the capacity at the national level of expertise on climate change level of expertise on climate change
- During the process, different levels of exchange were ensured between the different categories of actors: scientists, representatives of administrations involved in the coastal zone, local authorities, civil society, etc.
- Feedback workshops were organized in each region to share with local stakeholders all the deliverables, collect observations, identify adaptation options and prioritize intervention areas

Global Adaptation Week 2022: NAP Expo 2022
UN4NAPs Session C: Friday, 26th August 2022.

Challenges and best practices encountered in dealing with Floods in the formulation and implementation of South Sudan NAP.

Presented by: Wani Nelson Mogga

Dorina Keji Zachariah

Ministry of Environment and Forestry

Republic of South Sudan

Overview of the NAP Process

- The Government of South Sudan launched its NAP process in 2017 and actual work on the NAP began late 2019.
- Consultations were conducted from March to August 2020 at both national and subnational levels, NGOs, Development Partners, the private sector and Civil Society Organizations.
- Initial document was prepared from January to August 2020.
- Completed an initial NAP for submission to the UNFCCC by the end of 2020
- The NAP process was supported by UNDP with funding from NAP-GSP to formulate an initial NAP based on guidance from the UNFCCC and the LEG.

Priority Sectors

- Disaster risk reduction
- Agriculture, livestock & fisheries
- Water resources
- Energy
- Ecosystem, environment and biodiversity conservation
- Health

Challenges

- There is a limited access to, and integration of, national and international data available on climate change, risks and socio-economic vulnerabilities.
- Climate data itself is not available due to limited or destroyed local capacities to generate it. The climate data available is not adequate for decision making.
- It is not easy to retrieve existing data.
- Difficulties in accessing and interpreting climate data.
- Investments into national weather infrastructure is lacking
- In adequate capacities both technical and institutional

Challenges

- Weak institutional arrangement. There is limited collaboration and coordination among stakeholders and policy-makers focused on integrating disaster risk reduction (flooding) into the development planning
- Due to the nature of topography, it is difficult access to areas most affected by the floods creating some knowledge gaps (Climate security)
- Limited financial resources for NAP formulation
- Private sector involvement is still to be harnessed in order to increase investments in climate change adaptation.
- The integration of CCA/DRR into sectoral planning activities is still in its initial stages.
- COVID challenges

Best practices

- Stakeholder engagement. Consideration of the concerns and adaptation needs of all stakeholders involved at both the national and local level is needed for planning that is inclusive and sustainable.
- Ownership of the NAP process at both national and subnational levels
- Establishment of technical working groups (TWG) at both national and sub-national levels

Areas of support

- Development of implementation plan, M&E framework, resource mobilization strategy and adaptation communication strategy for the NAP
- Development of sector specific NAPs
- Establishment of Early Warning System
- Capacity building (technical and institutional)
- Preparation of the National Climate Change Policy and the Economics of Climate Change.


Thank
You!

Climate Change Impact , Land degradation, desertification and drought in Sudan

Higher Council for Environment &Natural Resources

General Directorate for Climate Change

Dr. Amna Ahmed Mohammed

Introduction

- An examination of Sudan's ecological zones and climate change effects indicates that the majority of its land is quite vulnerable to changes in temperature and precipitation.
- Changes in temperature and rainfall patterns also represent a high risk to food security in Sudan's agro-pastoral-based economy.
- Changes in temperature and rainfall are likely to lead to desertification in some states.
- Changes in temperature and rainfall are likely to lead to desertification in some regions.

Introduction … con

- The country's inherent vulnerability may best be captured by the fact that, food security in Sudan is mainly determined by rainfall, particularly in rural areas, where 70% of the total population live.
- Changes in temperature and precipitation could cause precarious shifts in the distribution of these ecological zones, in the productive capacity of rain fed agriculture, and hence in the security of the nation's food supply.

- A high degree of vulnerability to natural and climate hazards is often pointed out in rural areas, especially amongst the poorest households and those located in remote areas

Land degradation and Drought

- Sudan is dominated by hyper-arid, arid, semi-arid and dry sub-humid ecosystems that are seriously affected by land Degradation.

degradation consequences

- ✓ Reduction of agricultural, forestry, range and livestock production,
- ✓ Resulting in socioeconomic and environmental deterioration and consequent degradation of the quality of life,
- ✓ Increase poverty of the local communities ,
- ✓ And cause endemic degradation

The main Caucus of Land degradation and Drought in Sudan

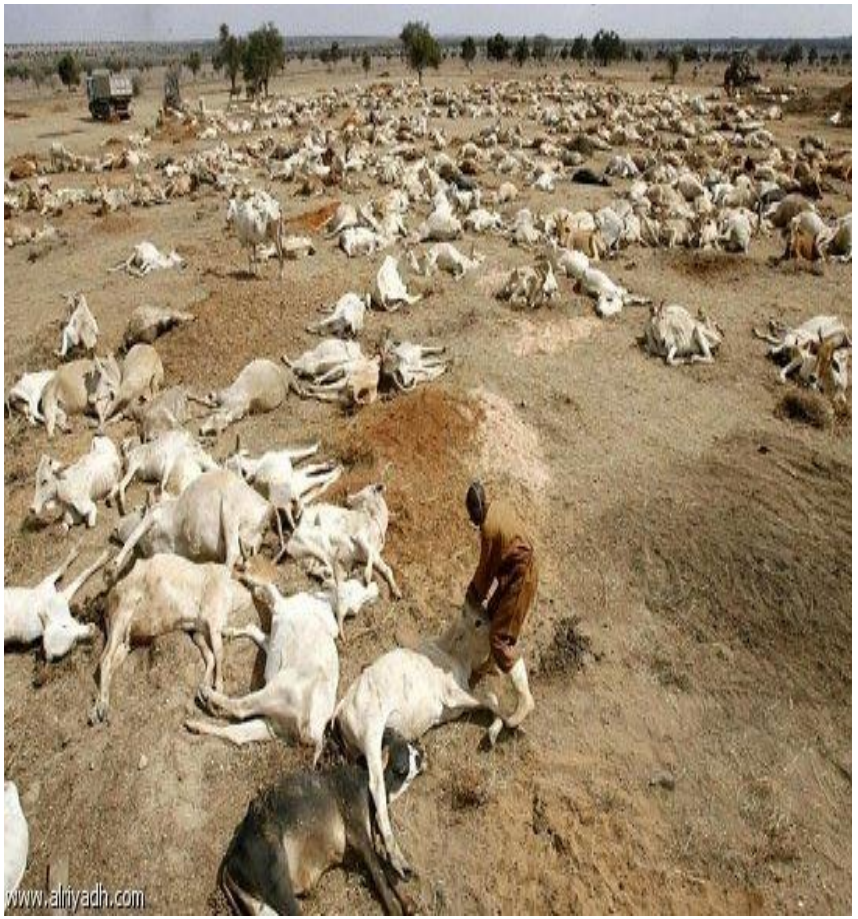
- Conflicts and wars with expanded refugee settlements,
- Inappropriate soil management,
- Deforestation,
- Shifting cultivation,
- Insecurity in land tenure,
- Variation of climatic conditions, and intrinsic characteristics of fragile soils in diverse agro-ecological zones.,
- Increasing agricultural productivity,
- Mining .
- Overgrazing

Challenges

- lack of coordination between related institutions
- Limited financial resources
- Data sharing and information
- Governs instability
- Institutional Capacity need to be strengthen
- Strengthen policy and legislation
- Mismanagement of Natural Resources
- Environmental awareness
- Introduce more technologies
- Conflicts over resources
- weak infrastructure
- food security is mainly determined by rainfall

Droughts in cultivated land

Livestock drought impacts



Ongoing Climate Change Adaptation Projects in sudan to Address the Land Degradation and Drought

- Sudan Sustainable Natural Resources Management Project funded by GEF
- Gums for Adaptation and Mitigation Project(GAMS)
- Strengthened Protected Areas system and Integrated Ecosystem Management .
- Great Green Wall.

Technical assistance needs

- Awareness Rising and Capacity Building
- Data sharing and networking
- Establish Institutions and framework
- Assessment for current land degradation situation
- Mapping of areas affected by land degradation and drought
-


Thank you for your attention

FLOODS AND HEAT STRESS IN UGANDA

IMPACTS AND EXPERIENCE

by

Mr. Semambo Muhammad Kasagazi
Principle Climate Change Officer- Adaptation
Ministry of Water and Environment, Climate Change Department

August 2022
@NAP EXPO 2022,
Gaborone, Botswana

Overview Floods

Rainfall and floods

- Rainfall is consistently projected to increase in December, January and February, a commonly dry season. This increase will lead to an increase in floods, especially in low laying areas.
- Increase in rainfall is projected for the western shores of Lake Victoria, Mt. Elgon region, Mt. Rwenzori
- The number of days with precipitation greater than 20mm will increase in each of the two rainy seasons in Uganda.

Economic impact of floods

- Each year, floods impact nearly 50,000 people and cost over $62 million.

Areas most prone to floods

- Urban areas, low-lying areas, areas along river banks, lake shores, and swamplands.
- Kampala capital city, Eastern areas like Mbale and Butaleja and northern areas like Gulu and Maracha districts.

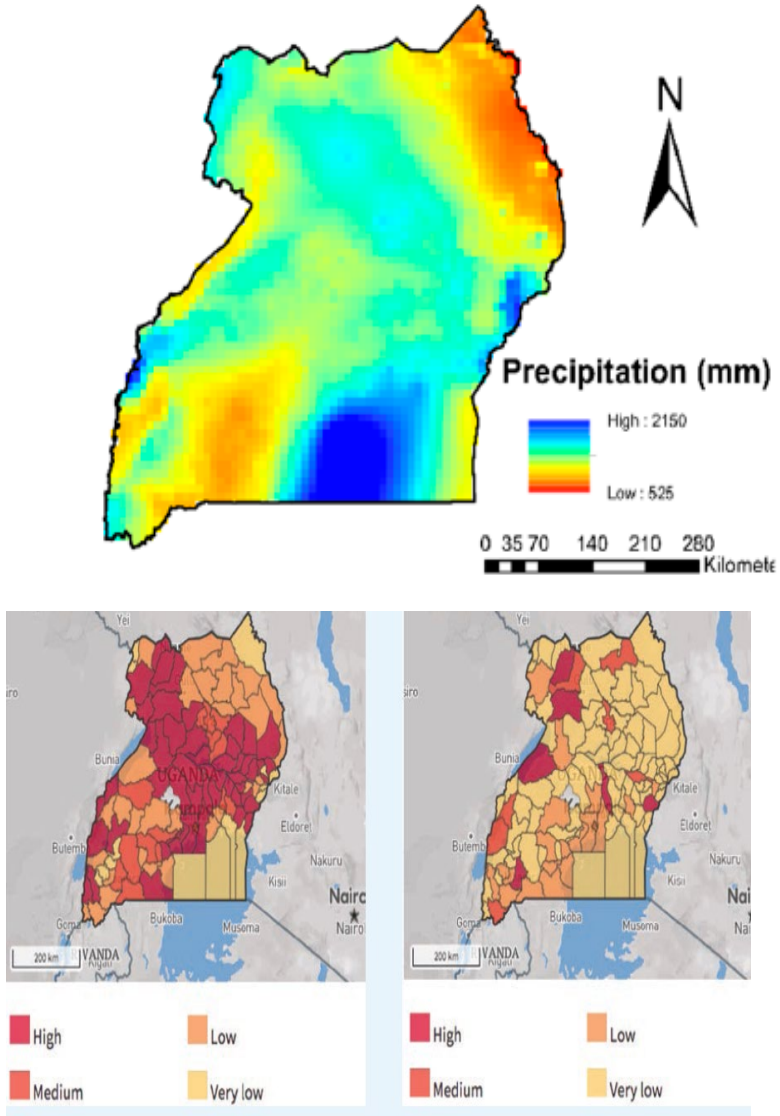


Figure 1. Mean annual precipitation (top map) and (bottom map) Uganda river flood risk (left) and urban flood risk (right)

Impacts Experienced & potential best practice

SECTOR	FLOOD IMPACT	Adaptation Options
AGRICULTURE	✓ Soil erosion and land degradation. ✓ Loss of crops and animals ✓ Overall losses of food crops due to climate change by the 2050s could reach up to US$1.5 billion (Ziyengere et al, 2016)	✓ Enhancing climate smart agriculture and agro-ecological practices ✓ Promoting post harvest handling, storage and value addition ✓ Promoting agroforestry and reforestation
HEALTH	✓ Increase a burden on the health sector ✓ Increase of Cholera and dysentery in areas of poor sanitation. ✓ Spread of Malaria due to the increase in water pools which are breeding sites for mosquitoes. ✓ Loss of Lives- Over 26 people registered dead in the recent floods in Mbale-July/Aug 2022.	✓ Strengthening adaptive mechanisms and enhancing early-warning systems and adequate preparedness for climate change-related diseases. ✓ Integration of climate risks into national health plans and emergency response ✓ Improving the resilience of health infrastructure to floods

Impacts Experienced & Potential Best Practice

SECTOR	FLOOD IMPACT	Adaptation Options
TRANSPORT	✓ .Destruction of roads and bridge, making them impassable ✓ An estimated 1,600km of urban road segments are highly vulnerable to flooding and extreme weather events.	✓ Developing an integrated planning of transport using insights from climate predictions. ✓ Promoting water catchment protection in transport infrastructure. ✓ Updating transport codes and regulations.
HUMAN SETTLEMENT AND INFRASTRUCTURE (URBAN AREAS)	✓ Floods largely affect communities residing in poor urban neighbourhoods where housing and infrastructure are poorly planned. ✓ Destruction of homesteads, Facilities like hospitals, markets, schools, toilets etc. ✓ Displacement of people to neighboring districts	✓ 2010 Physical Planning Act and the 2007 National Land Use Policy guide that development of human settlements must take into account risk and safety, local economic development and environmental protection. ✓ Promote the urban planning and development of human settlements that are resilient and robust enough to withstand floods ✓ Enforcement of compliance to building codes and standards

Impacts Experienced & potential best practice

SECTOR	FLOOD IMPACT	Adaptation Options
Water	✓ Flooding and contamination of water sources ✓ Inaccessibility of clean and safe drinking water ✓ Increased cost of cleaning and treating drinking water	✓ Protection of water sources and reinforcement of boundaries
Education	✓ Destruction of education facilities ✓ Schools become inaccessible ✓ Increased number of school dropouts	
Energy	✓ Heavy rainfall destroy electricity transmission lines and power lines leading to a reduction in electricity supply. ✓ Power disruptions result in higher energy prices.	✓ Promoting sustainable energy access in the face of uncertainties related to climate change.

HEAT STRESS IN UGANDA

Uganda's annual temperature

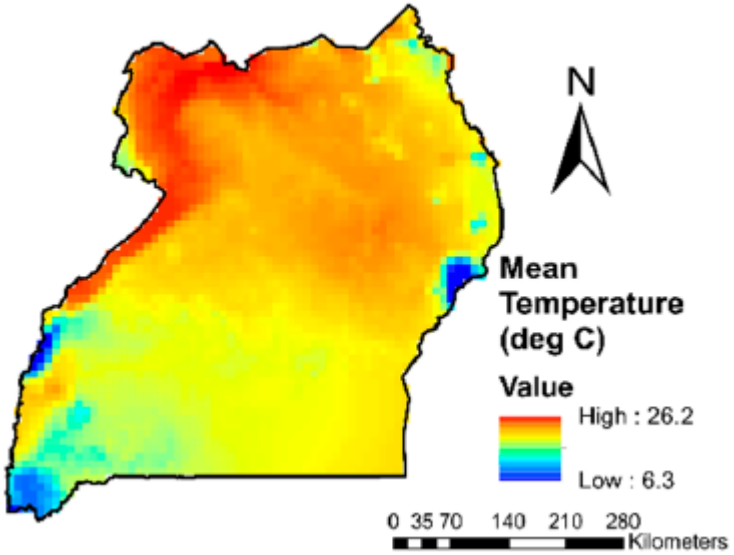
- The average annual temperature has increased by 1.3 ^{O}C since 1960 and projected to increase btn 1.0 ^{O}C and 3.1 ^{O}C by the 2060s.
- The average number of 'hot' days and 'hot' nights per year in Uganda have increased since 1960. (Mc Sweeney et al. 2010; WBG, 2020
- The most significant increase has been observed in June, July, and August.

Impact of increased temperature

- Increased temperatures will impact increased aridity and the length and severity of the dry season (December to March).
- the likelihood of increased aridity and drought stress is expected to lead to water scarcity.
- Impact greatly felt among farming communities & Urban communities in informal settlements

Areas experiencing heat stress.

- Heat risks are expected to be more significant in areas with decreased water availability e.g Cattle Corridor, Northern, North Eastern, and some Western parts of the country



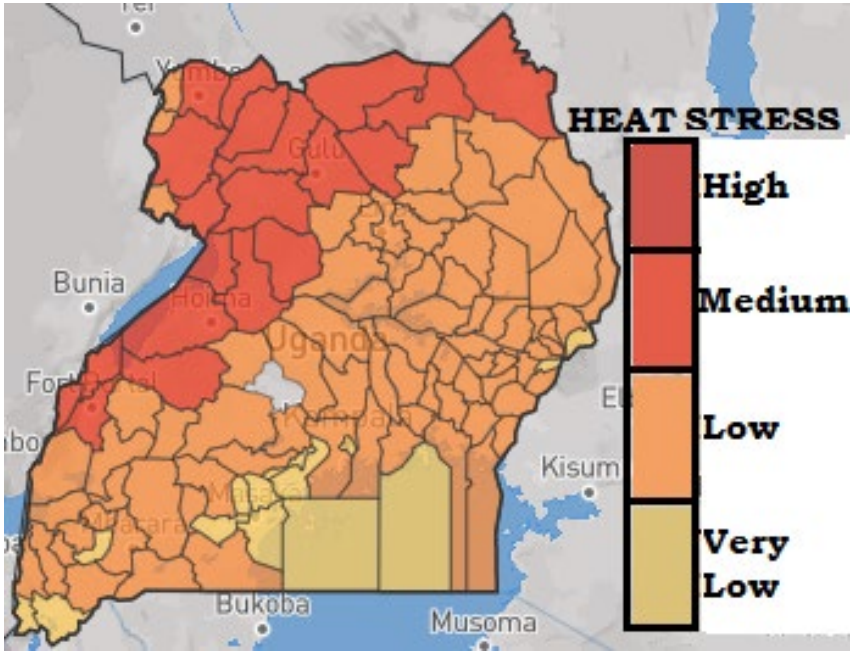
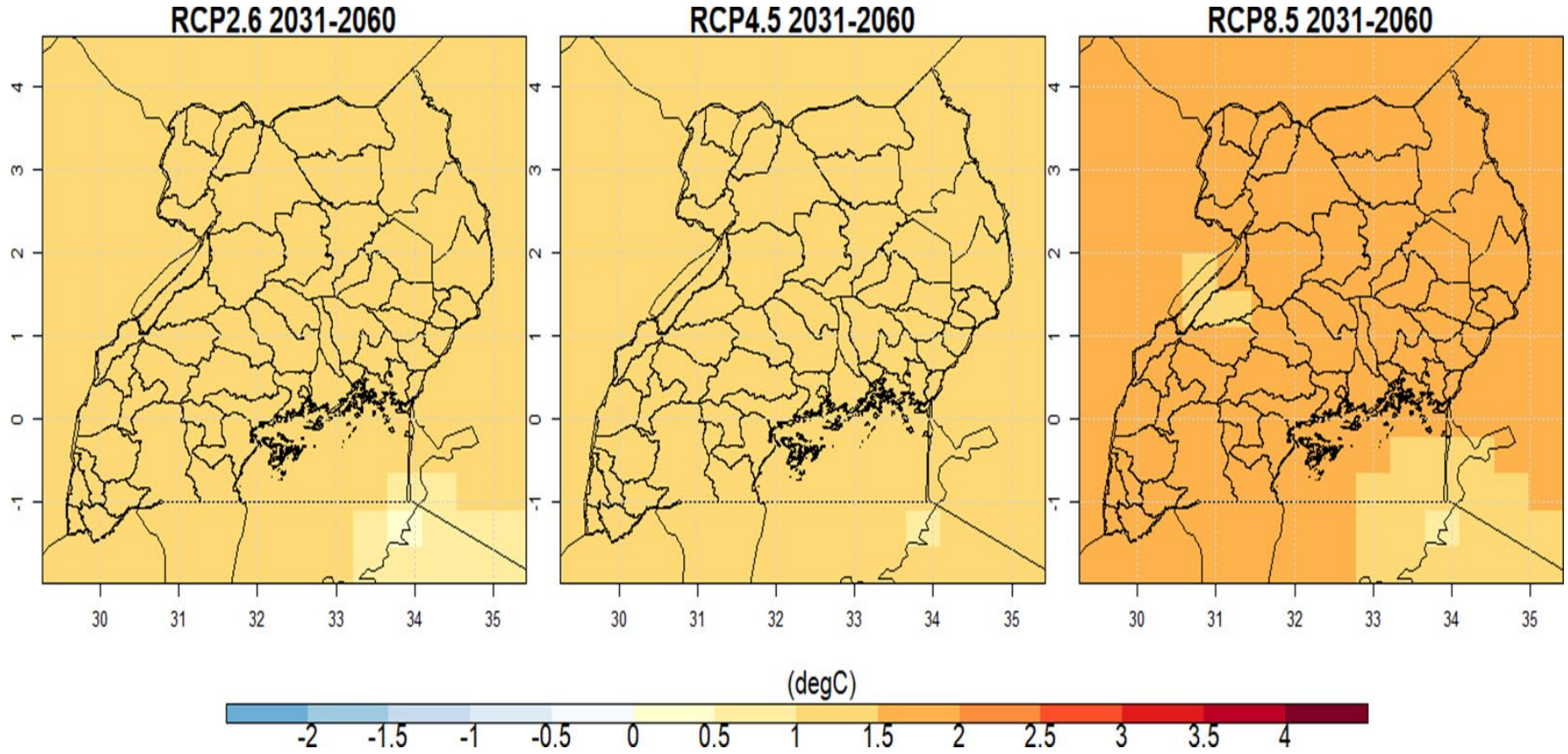


Figure 1. Mean annual temperature (top map) and (bottom map) Heat stress in Uganda.

Projected Climate Analysis- Temp



Mean annual Temperature projections at climate level (2031-2060) show projected temperature increases of:

- ✓ 1 to 1.5°C under RCP 2.6 and RCP 4.5 for most parts of the country
- ✓ 1.5 to 2.5 °C for RCP 8.5 relate to the 1981-2010 average

Impacts Experienced & potential best practice

SECTOR	HEAT STRESS IMPACT	Adaption Options
AGRICULTURE	▪ Pigs compared to other livestock experience more severe impacts to heat due to their smaller lungs and inability to sweat. ▪ Reduction in milk production for dairy cows and increased costs of transportation (use of cooling tanks) ▪ Reduction in crop yields and crop production quality ▪ Increase stress on crops and alter the growing seasons. ▪ Altering suitable areas for agriculture or the production of specific crops(WBG, 2020). ▪ Fish habitats are affected- Death of fish ▪ Rise in pests and diseases affecting animal health increased mortality and increased demand for veterinary services. ▪ Reduced water availability and In availability of feeds ▪ Reduced feed intake	▪ Promoting heat monitoring and forecasting systems ▪ Revision of policies and regulations on climate change to include all types of livestock – including pigs; ▪ Prioritization of implementation of water programs for production; ▪ Integrating the pig sector into national climate change adaptation and mitigation strategies ▪ Promoting more climate-smart agriculture practices and programs across the country ▪ Irrigating as principal for crop and animals resilience

Impacts Experienced & potential best practice

SECTOR	HEAT STRESS IMPACT	Key Adaptation Options
HEALTH	▪ Malnutrition and famine due to a reduction in food crops. ▪ Extension of Malaria in higher altitude areas. ▪ Increased complications for people living with chronic health conditions, and poor health care ▪ Persistent headaches, body/skin rashes, eczema/fungal infections, heat stroke, & death.	▪ Strengthening adaptive mechanisms and enhancing early-warning systems and adequate preparedness for climate change-related diseases.
ENERGY	▪ Estimated a biomass loss of 5 to 10% of domestic wood between 2020 and 2050 due to climate change. ▪ Decline in Hydro electric power at 26% lower by 2050 due to climate change. (Fall in water levels reduces HEP)	▪ Promoting sustainable energy access in the face of uncertainties related to climate change. ▪ Solar energy as alternative ….both grid and off grid ▪ Water catchment protection

Impacts Experienced & potential best practice

SECTOR	HEAT STRESS IMPACT	Adaptation Options
Cities, Business & Infrastructure	▪ Reduction of productivity; ▪ Redundancy/ Closure of commercial establishments. ▪ Increased costs of operating business – costs of power for operating cooling systems. ▪ Extreme thermal discomfort for urban poor in dense housing typologies and little vegetation	▪ Cooling technologies and infrastructure required in built infrastructure e.g. vertical green structures, orientation of buildings etc. ▪ Standard National and decent housing for the urban poor-Infrastracture design with energy efficiency and aeration ▪ Urban forestry and greening of open spaces.
WILD LIFE AND TOURISM	▪ Droughts, unreliable rainfall patterns and increasing temperatures coupled with heat stress make certain habitats uninhabitable. ▪ Increasing temperatures melt ice caps of the Rwenzori Mountains.	▪ Ensure the conservation of wildlife resources and plan for improved resilience of tourism resources and infrastructure to climate change.

Impacts Experienced & potential best practice

SECTOR	HEAT STRESS IMPACT	Adaptation Options
WATER	▪ The quality and quantity of water is affected ▪ Increased aridity and ▪ Drying of water sources ▪ Salinity also increase especially in dry corridors	▪ Catchment Based management of water resources ▪ Water policy, regulation and framework to be integrated with climate change

Other Potential Actions

Raising awareness of heat stress, its impacts and policy recommendations at the highest level of government

Technical needs/ assistance and linkage to the NAP formulation process.(Both Floods and Heat stress)

- Enhancing national and sub-national level capacities in heat stress modeling, monitoring, and early warning. The information generated will support the NAP process and guidance on appropriate strategies for heat stress management across sectors of the economy.
- Enhancing national and sub-national level capacities in flood modeling, monitoring, and early warning. To provide information on floods for the NAP process and appropriate strategies.

OTHER TECHNICAL NEEDS AND ASSISTANCE RELATED TO NAP FORMULATION AND IMPLEMENTATION

- National and sub-national level capacity in analyzing past climate and future climate change scenarios
- Assessing climate risk & vulnerability at appropriate levels & different sectors
- Applying the best available science in assessment, planning & implementation of adaptation
- Research & systematic observations in support of adaptation assessment, planning & implementation
- Technical assistance & advice in the process of drafting the NAP
- Developing national knowledge & information systems to support adaptation planning, implementation & reporting
- Monitoring & evaluation of adaptation outcomes and impacts
- Technical advice & support to develop projects & proposals to for various funding sources

THANK YOU FOR YOUR ATTENTION!

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