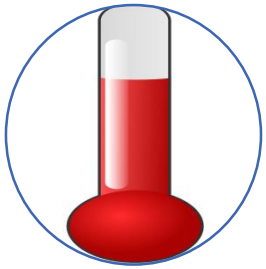
Side Event UNFCCC

Building community resilience in the health and agriculture sectors in Madagascar

Marie Louise RAKOTONDRAFARA
Director Général,
National Meteorology Department - Madagascar

Climate context



- **Temperature increase**:
  - ✓rise manifests itself especially by increased daily minimum temperatures**;** Tmean +1-3°C (2100)
  - ✓ increase of the frequency of the extreme temperature: e.g. on the western side, ->2050 T(36°C)= 30 days; -> 2100 T(36*C) = 100 days

- **Rainfall:**
  - ✓ **reduction**: 30 à 60 % annual rainfall
  - ✓ **Shorter Rainy season** : reduced of 65 days in last 45 years, increased drought frequency
  - ✓ **Distorted timing of seasons**:
  - ✓ **Increased rainfall intensity**: especially in the western side *(e.g. janvier 2011 Tuléar: rainfall>2 x normal; 06 Jan 2011: 134 mm of rain in 24h ~ 1,5 January rainfall)*

Increased tropical cyclone intensity with a slight track shift to the north

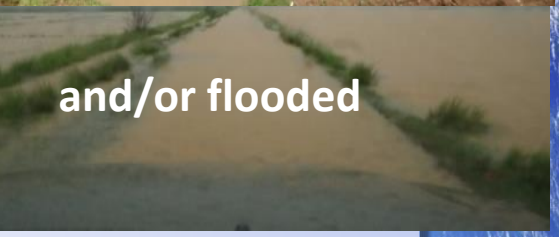
Impacts on the sectors

Erosion:
Loss of 200-400 tonnes of arable land / ha / year World average: 11 t / ha / year

Sources: EPM, 2000-FAO et Department of Biology, ETSU)

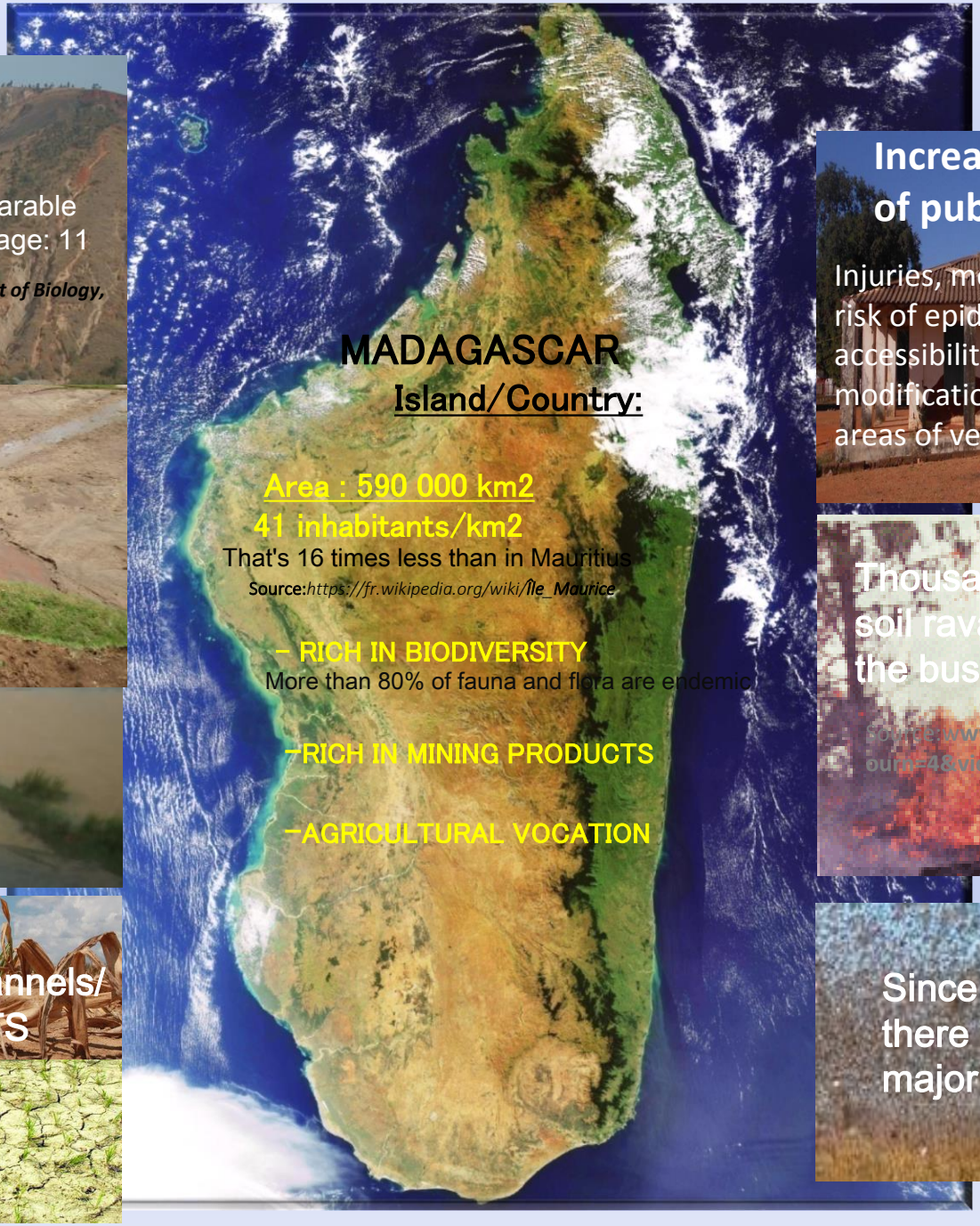
Bas- fonds:

silted



and/or flooded

Dried irrigation channels/ DRIED PLANTS



MADAGASCAR

Island/Country:

Area : 590 000 km2

41 inhabitants/km2

That's 16 times less than in Mauritius

Source:*https://fr.wikipedia.org/wiki/Île_Maurice*

- RICH IN BIODIVERSITY

More than 80% of fauna and flora are endemic

-RICH IN MINING PRODUCTS

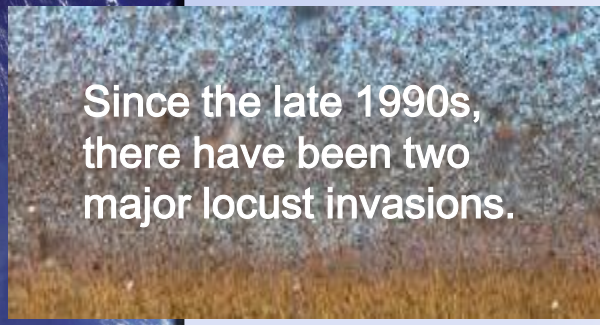
-AGRICULTURAL VOCATION

Increase degradation of public health

Injuries, mental stress, increased risk of epidemic, reduced accessibility to health services and modification of the transmission areas of vector-borne diseases.

Thousands of hectares of soil ravaged annually by the bushfires

Source:www.osf.mg/quotidien.php?journ=4&view=2008&curPage=5

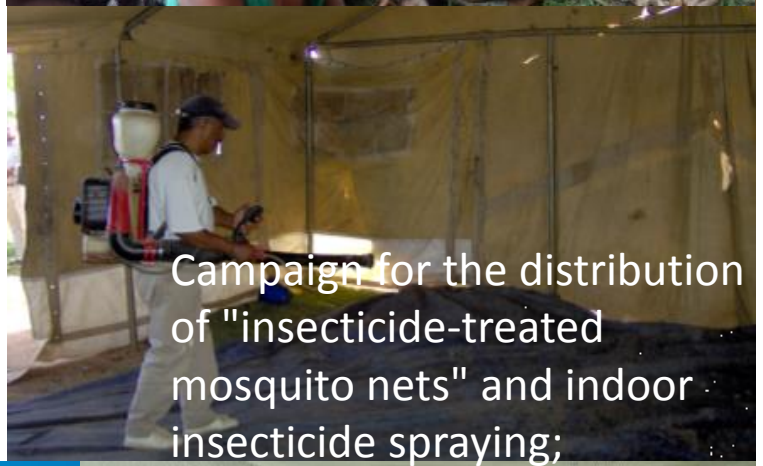


Since the late 1990s, there have been two major locust invasions.

Health sector: initiatives for effective climate risk management

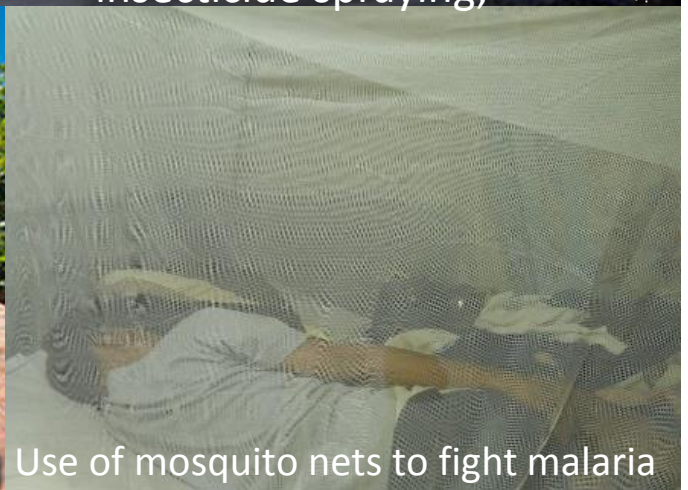
- Reinforcement of preventive activities by
  - ➢Promoting WASH everywhere
  - ➢Climate-health bulletin ;
  - ➢University Training "Sanitary Engineering Sanitation" considering the Health-Environment link;
- Preparedness by pre-positioning of epidemic stocks at local levels before climatic hazards and natural disasters;
- Mitigation : installation of mobile toilets;
- Prospect : Communication relay training on CC.


Awareness on WASH


Campaign for the distribution of "insecticide-treated mosquito nets" and indoor insecticide spraying;


installation of mobile toilets


Promoting WASH everywhere


Use of mosquito nets to fight malaria

Health sector: Using climate information to inform decisions

Décembre 2018– Janvier-Février 2019

Bulletin climat-santé_n°2

REPOBLIKAN'I MADAGASIKARA

MINISTERE DES TRANSPORTS ET DE LA METEOROLOGIE

Sommaire :

- Sommaire et éditorial (Page1)
- Situation climatologique probable en Décembre-2018-Janvier-Février 2019 et les districts et régions à risque (page 2)
- Situation sanitaire probable de Décembre 2018 à février 2019 et références (Page 3)
- Cartographie des zones à craindre (Page 4)
- Mesures de prévention à prendre et contact (Page 5)

Editorial

Les activités en climat santé sont menées par le groupe de travail climat santé (GTCS) dirigé conjointement par les co-coordonnateurs issus de la Direction Générale de la Météorologie et du Ministère de la Santé Publique. Parmi les interventions clés figurent la production de bulletin trimestriel climat santé. Le but est de promouvoir l'utilisation de paramètres climatiques et météorologiques dans le secteur santé afin d'améliorer la surveillance et la gestion des maladies épidémiques liées à la variation climatique, entre autres: le paludisme, la peste, la diarrhée et les infections respiratoires aigües (IRA). L'objectif principal est l'amélioration de la détection précoce et de la réponse rapide à une éventuelle épidémie. Pour ce trimestre, les données sanitaires et climatiques disponibles de 2010 à 2015 ont été utilisées comme référence afin de pouvoir fournir aux responsables et aux décideurs un outil plus ou moins pratique et utile dans leurs actions futures.

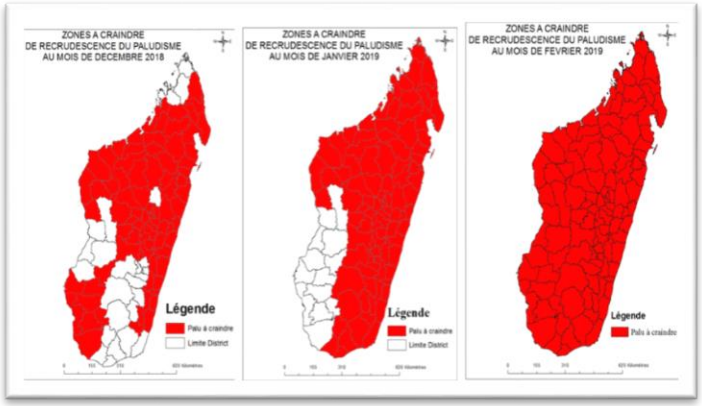
SSEnv

METEO Madagascar

Reinforcement of preventive activities by:

- Constitution climate-health Working group
- Dissemination of climate-health bulletin

Prospect : Communication relay training on CC.



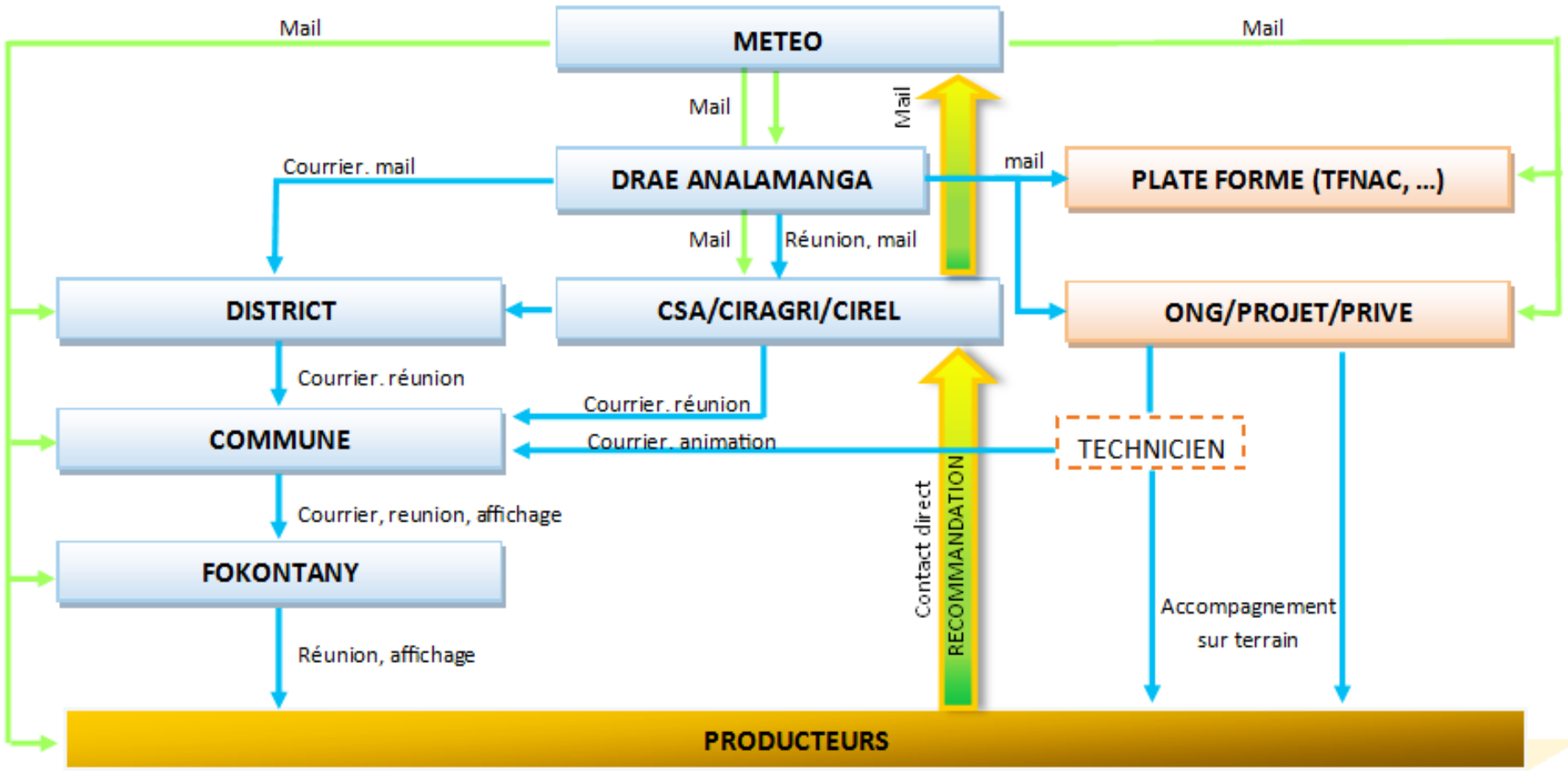
Malaria recrudescence zone from December 2018 to February 2019

Agriculture sector initiatives

Valorisation of climate information for better climate change adaptation in the agricultural sector

- Awareness and capacity building for the use of meteorological information and products,
- Constitution of user platform at community level
- Production of weather reports appropriate to the needs of farmers
- Facilitating the acquisition of simple meteorological information actionable by farmers

WEATHER INFORMATION COMMUNICATION CIRCUIT



Bulletin Meteo

Traduction simplifiée des informations meteo + recommadations techniques

NATIONAL

REGIONAL

CALENDRIER CULTURAL 2018-2019

RIZICULTURE PLUVIALE DE PLATEAUX OU COLLINES (VARY AN-TANETY)

REGIONS	CYCLE	Octobre			Novembre			Décembre			Janvier			Février			Mars			Avril			Mai			VARIETES
		D1	D2	D3	D1	D2	D3	D1	D2	D3	D1	D2	D3	D1	D2	D3	D1	D2	D3	D1	D2	D3	D1	D2	D3	
ALAOTRA MANGORO	Intermediaire																									B22, N 4
AMORON'I MANIA	Long																									F161, F171, F173, CHOMRONG
ANALAMANGA	Long																									F161
ANALAMANGA	Intermediaire																									B22,N4
ANALANJIROFO	Long																									TELORIRANA
ANALANJIROFO	Intermediaire																									B22
ANOSY(TAOLANGARO)	Intermediaire																									N4
ANOSY(Amboasary,Betroka)	Intermediaire																									N4
ATSIMO ANTSINANANA	Intermediaire																									B22
ANTSINANANA	Intermediaire																									
BETSIBOKA	Court																									
BOENY	Court																									
BONGOLAVA	Long																									
BONGOLAVA	Intermediaire																									
BONGOLAVA	Court																									
DIANA(ANTSIRANANA)	Court																									
DIANA(AMBILOBE,AMBANJA)	Court																									
HAUTE MATSIATRA	Long																									
IHOROMBE	Intermediaire																									
ITASY	Long																									
MELAKY	Court																									
SAVA	Intermediaire																									
SAVA	Court																									
VAKINAKARATRA	Long																									
SOFIA	Court																									
VATOVAVY	Intermediaire																									

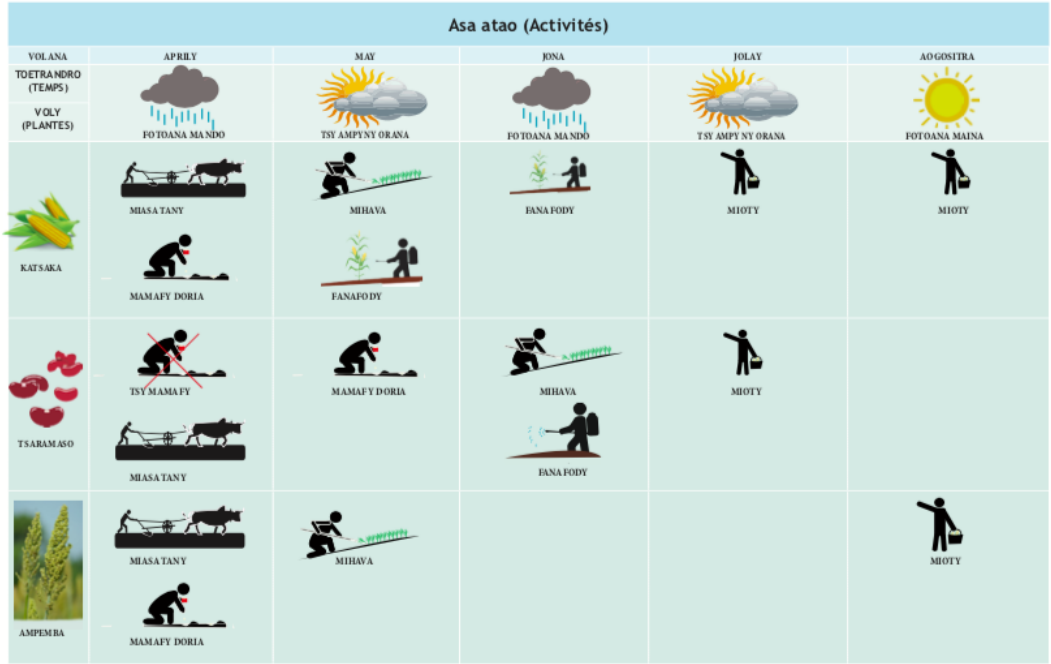
Semis
Récolte

COURT	90 - 100 jours
INTERMEDIAIRE	110 - 140 jours
LONG	140 - 160 jours

DGM / DMA
RANDRIAMA
luc.randriamu

CROP CALENDAR

« ORIKANDROM-PAMBOLEA I METEO HAGNASOA TY VOAKATSE »



FARMER CALENDAR

USING ICT FOR COMMUNICATING CLIMATE INFORMATION

- Information needs assessments in rural areas
  - > 50 % of smallholder farmers in Southern Madagascar would like to receive climate information and give feedback via mobile phones
- Make use of adapted digital approaches to complement “traditional” communication channels
  - Change in Paradigm - farmers have access to information in the moment they need it
- Adapted technology:
  - Simple mobile phones instead of internet-ready smartphones
  - Hotline based on Interactive Voice Response (IVR): No barrier for illiterate persons
- First step: Integration of seasonal crop calendars into existing “3-2-1 hotline” with currently 500,000 users per month (*planned for 2019*)

PROSPECTS

- Improve the capacity of Met Service to deliver reliable and timely weather, water and climate forecast: *actual observation network less than 1/3 minimum required*

- Foster stronger ownership among intermediate sectoral users to co-produce informations tailored to the needs of end-users at community level

- Use adapted digital approaches to reach end users

SUMMARY

Climate resilient communities necessitate:

- ***Early and effective engagement with stakeholders***
- ***More resilient systems for management of seasonal climate variability.***
- ***Tailoring climate information to risk management problems is key methodological issue***
- ***Change in paradigm: making climate information accessible to end users***


DZIEKUJE BARDZO
THANK YOU