

1st Malagasy Training on Climate Information for Public Health: Summary and Resulting Opportunities

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Malagasy Climate & Health
Working Group



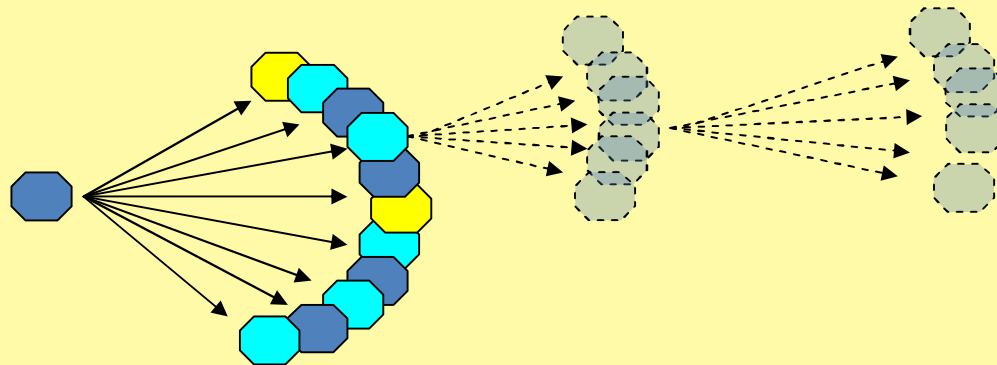
OUTLINE

- Rationale
- Completion of the workshop
- Perceived and expected benefits
- Strengths and opportunities for improvement
- Evaluation of the workshop
- Lessons learned
- Summary



RATIONALE

- IRI mission to support training on climate risk management to improve public health decision-making
- Creation of a Climate and Health Working Group (CHWG) in Madagascar, Oct 2008
- Scaling up and tailoring the IRI Summer Institute (SI)



From a training in English of the head of Malaria Surveillance, Malaria Control, Ministry of Health (MoH), SI 09 alumna

To a training in French held in Madagascar with the CHWG, supported by the World Meteorological Organization (WMO), with participation of other International Organizations (IO)

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COMPLETION OF THE WORKSHOP: Design

- Based on the curricula of the SI *but* using local language tailored to local expectations and data
- Developed through a multi-organization partnership
 - **IRI**: development of 65% of the material, revision of the schedule, facilitation of the training
 - **CHWG**: development of 35% of the material, design of the schedule, logistics, organization, coordination, chair
 - Two CHWG coordinators from MoH and Ministry of Meteorology (MoM)
 - Two main organizers from MoH and Pasteur Institute (PI), collaboration with diseases focal points
 - **Head quarters of the WMO**: vision and financial support
 - **WHO Malagasy office**: support during the training

COMPLETION OF THE WORKSHOP:

Profile of the participants

- 16 participants
- From the communities of :
 - **Climate** (5, MoM): Climate variability, weather forecast, hydrology
 - **Human health** (10, MoH and Pasteur Institute): Malaria, Rift Valley Fever (RVF) and Plague Surveillance, Environmental Health, Crises Management, Communication
 - **Veterinarian health** (1, National Vet Services): Surveillance of RVF and Plague
- Involved in:
 - **Decision-making (14/16)**
 - Research (1)
 - Communication (1)
- At the national level



COMPLETION OF THE WORKSHOP: Technical Aspects (1)

- One-week training to begin with, aiming to:
 - Provide fundamental concepts on climate and health
 - Identify the benefits that may arise from greater climate & health collaboration
 - Identify the means and needs to achieve it
- An additional one-week workshop may be delivered depending on the results and impacts of this first workshop



COMPLETION OF THE WORKSHOP:

Technical Aspects (2)

Typical day

Daily summary of the previous day by a reporter participant (15min)

Lecture and/or exercise using the IRI Data Library

Open group discussion, incl. Q&A
Additional presentation by a participant

Lunch break

Lecture and/or exercise using the IRI Data Library

Open group discussion, incl. Q&A
Additional presentation by a participant

Designation of the chair and the reporter for the next day (among participants)

- The Climate & Health Project in Madagascar; Met Services ; Climate variability and change in Madagascar
- Introduction to and practice with the Data Library and the Map Rooms; Remote sensing, Time series analysis, Cluster analysis
- Climate and vector-borne diseases ; Malaria mapping; Climate suitability for Malaria and Plague transmission
- Climate-sensitive diseases covered:
 - Malaria, Plague, RVF* and Arboviruses* (Dengue, Chikungunya)
 - Emergencies, extreme events*: floods, cyclones, fires

**These issues were covered through group discussions*

COMPLETION OF THE WORKSHOP: Technical Aspects (3)

Typical day

Daily summary of the previous day by a reporter participant (15min)

Lecture and/or exercise using the IRI Data Library

Open group discussion, incl. Q&A
Additional presentation by a participant

Lunch break

Lecture and/or exercise using the IRI Data Library

Open group discussion, incl. Q&A
Additional presentation by a participant

Designation of the chair and the reporter for the next day (among participants)

- Talks spontaneously given by the participants:
 - **Declaration of Libreville** on Health and Climate in Africa (Aug 08) & and its implementation plan in Madagascar (MoH)
 - WHO study on : Technical Support to the **Surveillance System for Malaria** Epidemics in Madagascar (Aug 04)
 - Research opportunities on Plague and Climate (PI)
 - Satellite images for **weather forecast** (Met)
- Entire session dedicated to preparing the next steps on climate & health collaboration

**These issues were covered through group discussions*

COMPLETION OF THE WORKSHOP: Reactions of the participants (1)

- Impressive commitment and participation !
 - Intense daily Q&A sessions between the health (MDs and Vets) and climate communities
 - E.g., where the location of primary health care centers or sentinel sites and of met stations match, definition of ENSO and its impact on health
 - Respective interest in better understanding the opportunities that may be offered by each community
 - E.g., gathering and mapping information about the communities of rats would strengthen the surveillance/early warning system for plague
 - Commitment to improve public health decision-making in Madagascar
 - E.g., *'It is important to define clear actions to be taken to improve the public health in our country'*

COMPLETION OF THE WORKSHOP: Reactions of the participants (2)

- Will to determine the remaining operational needs of the health and climate local communities, as well as those of the CHWG itself
 - E.g., work plan, memorandum of understanding (MoU) for data sharing
 - *‘Now that we have a clearer understanding of the links between health and climate, it will be important, beside the training, to develop concrete applications and collaborations for our country’*
- Recurrent positive feedback on the training and the material developed by the IRI

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PERCEIVED & EXPECTED BENEFITS: By the Participants

- Better understanding of
 - The relationship between health and climate
 - The tools to comprehend this relation
- Greater operational perspectives for field public health decision making

But: need to

- ***Improve the availability of the climate and health data***
- ***Deepen the analysis (e.g., correlation) using local data***
- ***Set the frame for data and information sharing within the CHWG and with other relevant partners***

è **Practical means to turn these expected benefits into operational action will be discussed in specific sub-committees within the CHWG**

è **Should be addressed during the 2nd Malagasy workshop on Climate Information for Public Health**

è **Are included in the 'Road Map' of the initiatives of the Malagasy CHWG**

- Based on the expectations of the participants recorded throughout the entire workshop
- Short and longer terms

PERCEIVED & EXPECTED BENEFITS: 'Road Map' of the initiatives of the Malagasy CHWG

Examples of goals

- **Met sector:**
 - Validation of the satellite estimates of min and max temperature using met stations data
 - Describing the existing Met stations and what would be required to re-open those which have been shut down
- **Health sector:**
 - Gathering existing information on rats for plague or livestock disease for RVF
 - Assessing where the location of primary health care centers or sentinel sites, and met stations match
 - Gathering existing scattered data in order to obtain longer time-series
 - Strengthening the plague surveillance system in order to have systematic data that allow them to have better time series to be used to improve their eco -epidemiological analysis

See additional slides

PERCEIVED & EXPECTED BENEFITS: By the Facilitators (1)

- New collaboration opportunities for:
 - **Research:**
 - Plague and Climate with **Pasteur Institute**, including updating the [Madagascar Atlas for Plague](#) and the one for [Malaria](#) using climate data;
 - Identification of climate and temperature trends in Madagascar (more frequent extreme rainfall events, positive temperature trend); description of the Madagascar monsoon and heat waves and of their impact on health; exploration of the links between the cyclones/floods and the epidemics; assessing the impact of ENSO in Madagascar; validation of the remote sensing temperature data with in-situ met stations temperature data
 - **Training and education at the national and regional level:**
 - 2nd Malagasy workshop;
 - Potential partnership with WHO AFRO
 - **Capacity building** through improved public health decision-making within the frame of the [Declaration of Libreville](#)

PERCEIVED & EXPECTED BENEFITS:

By the Facilitators (2)


- New ideas of tools to be used within the **Data Library** and/or for the **Climate Risk Knowledge (CRK)**
 - Depending on the working plan of the CHWG
 - To upload: weekly incidence data on malaria from 2006, 1957-2001 monthly plague, and incidence data of RVF (human and/or animal)
 - To upgrade the Malaria and Climate Maproom
 - Cyclones and floods, demographic, socio-economic data
 - In parallel with the Pasteur Inst. Atlas for Malaria
 - To create a Plague and Climate Maproom
 - In parallel with the Pasteur Inst. Atlas for Plague
 - To create a Data Library space (login + password) for the members of the CHWG

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STRENGTHS & OPPORTUNITIES FOR IMPROVEMENT

Strengths

- Tailored to local needs and language, using local data and instances relevant to the participants
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- Involvement of the participants and vision of the short and long-term opportunities which may arise from such training (*cf.* work plan)
 - Use of research outputs mostly oriented toward application
 - Leadership of the CHWG during the completion of the training vs. *facilitating* role of the IRI
 - One week training with a delay before the potential 2nd one
 - Fresh minds & food for thought in between
 - Time to develop new education material
 - Multi-institution effort with participation of the Malagasy Pasteur Institute and WHO; contact with the local bureau of the President Malaria Initiative (PMI)

Opportunities for improvement

- Absence of sub-committees within the CHWG prior to the training which impacted on
 - The availability of the data used for the training
 - The type of exercises proposed
- 
- IRI developed most of the materials used for this training, derived from the SI
- 
- The training could have been even more tailored to Madagascar
 - Lack of MoU regarding the use of the data between the IRI and the Malagasy CHWG
 - One practical session could not be fully completed due to technical problems
 - Design of climate suitability for plague
 - Local IT issue at the time of the exercise (no network)

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EVALUATION OF THE WORKSHOP

- Evaluation of the completion training by the CHWG
 - Final report pending
 - To be distributed by the CHWG
- Evaluation of the impact of the training
 - Critical to assess its usefulness
 - E.g., 'Have people learned? Are they able to apply what they have learned in their workplaces? Does that learning contribute to the capacity of trainees' workplace organizations?'
 - Need for a methodological frame, including a baseline

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LESSONS LEARNED

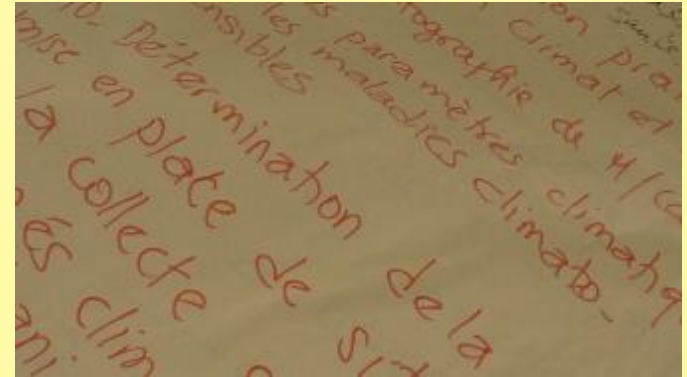
- Tailoring the material from the SI is time and resource consuming
- Need for additional material/tools that would allow the countries' CHWG to develop their own training and truly build their capacity
- Tailored capacity building is a long lasting two-step process:
 - Training of key 'seeds': at the SI in NYC? In the countries?
 - Providing tools/material that would allow those 'seeds' to train other trainers and autonomous users
 - Cannot be reached without committed local leaders
 - Evaluation of the impact is critical
- How to involve the education component of IRI?
- Necessary contact between local and IRI IT prior to the training for the portable Data Library

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SUMMARY

- Overall successful workshop
- Opportunities for:
 - Research
 - Capacity building
 - Further education
 - At the national and regional levels
- Need to be completed by a 2nd training, with clear objectives and timeline for the in between period
- Highlighted the challenge of building capacity
- Material available from: Y:\remic\CRK\Madagascar\Madagascar.Oct09





Thank you for your
attention

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Discussion

Additional slides from the training course
(in French)

ATTENTES DES PARTICIPANTS

Formation sur l'utilisation des informations climatiques et
météorologique dans le cadre de la santé
Antananarivo- Madagascar 05-10/09/2009

1. Application au cas de Madagascar de l'atelier
2. Savoir utiliser les informations climatiques et météorologiques pour améliorer la lutte contre les 3 maladies(RFV, Peste, Paludisme)
3. Pouvoir créer une base de données communes aux secteurs santé vétérinaire, santé humaine et météorologique.
4. Déterminer les besoins de chaque entité pour l'autre entité (interaction)
5. Suivi et surveillance des maladies suite à la connaissance des facteurs climatologiques favorisants

6. Avoir une idée de la couverture des données climatologiques par rapport aux stations existantes
7. Définir des axes de recherches sur le climat santé
8. Séance de travail pour la capitalisation et la pérennisation des acquis de cette formation
9. Manipulation du SIG en climat et santé

10. Etablir la cartographie de Madagascar sur les paramètres climatiques et les maladies climato sensibles
11. Détermination de la mise en place de sites pour la collecte commune des données CS humaine et animale
12. Revoir les faciès épidémiologiques du paludisme
13. Collecte commune des données (sites?, ressources?, réseau de communication pour diffusion des données

14. Validation des données satellites de température avec les données des stations meteo locales
15. Déterminer un processus pour transmettre et mettre à jour les données locales (climat-santé)
16. Donner des noms d'utilisateurs au CHWG de Madagascar pour qu'ils puissent charger leurs données.

- 17 Envoi des informations de DGM: Bulletin climatologique de prévision à court , moyen et long terme à tous les participants et membres du groupe de travail C&S en version électronique
18. Intégrer un entomologiste, rhodontologue dans le projet C&S.
19. Axes de recherche sur la compréhension des phénomènes à propos de la peste et facteurs climato, environnementaux...

20. Déterminer un processus pour s'assurer les données 1957-09 de peste avec des données climato (localement ou dans la data library de IRI)

4. Discussion sur les attentes exprimées

- A1. OK
- A2. à court terme, à faire des applications dans les deux mois à venir, les points focaux vont se réunir pour en discuter,
- A3. idem à A2, les partenaires impliqués dans ce volet: météo, la santé, le service vétérinaire, IRI (Data Library), distribuer les tâches parmi les membres du groupe de travail, quelles sont les conventions à faire entre les partenaires (mise à disposition des moyens, échange de données au niveau national, publication)
- A4. initiés au cours de l'atelier
- A5. l'objectif même de l'atelier et du projet, une personne (interlocuteur) devrait être choisie pour alerter les autres entités en cas de risque de menace endémique dû à une anomalie climatologique: Dr Sabas L. Rabesahala du côté santé et Mme Voahanginirina Ramiandrisoa, responsable des bulletins climatologiques du côté météo.
- A6. rayon de couverture spatiale d'une donnée météo ? En se basant au norme de l'Organisation Mondiale de la Météorologie sur le rayon de couverture des stations météo. À préciser par la météo (dépend du paramètre) . Besoin de renforcement du réseau d'observation météo.
- A7. déjà développés lors de l'atelier 2008
- A8. définir un projet par maladie à faire avant le prochain atelier y comprise la recherche.
- A9. Manipulation du SIG en climat et santé: renforcement de capacité à faire, apprendre en pratiquant, en travaillant ensemble sur des cas précis . (Thème du prochain atelier ?)
Ou par la mise en place d'un projet de recherche et étude pour motiver le groupe de travail

Discussion sur les attentes exprimées (suite)

- A10. cartographie déjà existante pour le palu, à faire par district pour les autres maladies (en utilisant le MapRoom de l'IRI)
Mettre à jour les cartographies existantes pour voir l'évolution des maladies
- A11. voir A3.
- A12. voir A10
- A13. voir A3.
- A14. les T° mini de nuit sont plus performantes, données opérationnelles tous les 8 jours.
- A15. comment récupère-t-on les données, qui vont les faire ? (la mise en format, le stockage, l'envoi à l'IRI, le partage). Par le comité restreint .
- Rémi Cousin vas en parler avec le responsable du « Data Library » de l'IRI.
- A17. OK
- A18. Intégrer un entomologiste dans le projet Climat et Santé ? Les intégrer dans le groupe de recherche, ou simplement demander leur avis en tant qu'expert non permanent ?
- A19. OK
- A20. Dr Huguette Ramiakajato, Dr Fanja Rakotomanana, Dr Norohasina Rakotoarison, et Mme Sahondra Ranivoarisoa sont désignées pour travailler sur le cas de la peste.

Evaluation of the course

Annexe 3 : FICHE EVALUATION

1/Est-ce que les cours et les présentations ont été faciles à comprendre :

- a. d'accord
- b. entièrement d'accord
- c. pas d'accord
- d. entièrement en désaccord

Si vous êtes en désaccord, quelles sont vos suggestions pour l'amélioration (obligatoire) ?

2/ Quelle était la partie que vous sentiez la plus difficile ?

3/ Est-ce que les instructions pour les exercices sont faciles à suivre ?

- a. d'accord
- b. entièrement d'accord
- c. pas d'accord
- d. entièrement en désaccord

Si vous êtes en désaccord, quelles sont vos suggestions pour l'amélioration (obligatoire) ?

4/Pensez vous que ceux que vous avez appris ici vous seront utiles pour votre travail ? Expliquez ?

5/Est-ce que les thèmes abordés durant cet atelier ont répondu à vos attentes ?

- a. d'accord
- b. entièrement d'accord
- c. pas d'accord
- d. entièrement en désaccord

Si vous êtes en désaccord, expliquez ? (obligatoire) ?

6/Quelles sont vos suggestions pour le prochain atelier ? (thèmes de cours, durée, organisation)