



Amazon Communities Adapting to Climate Change: **EARLY WARNING SYSTEM IN THE MAP REGION**

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The AMAZON: Dimensions and Global Significance



**6% OF THE TERRESTRIAL SURFACE
OF THE PLANET**
approx. 7.5 Million km²



**LARGEST TROPICAL FOREST AND
MEGADIVERSE REGION IN THE WORLD**
40.000 Plant Species identified



**20% OF THE FRESH WATER DISCHARGED
INTO THE OCEAN COMES FROM THE AMAZON**
220.000 m³ per second



40 MILLION PEOPLE
420 Indigenous peoples,
86 languages, 650 dialects and
71 references to isolated indigenous
peoples

GEF AMAZON PROJECT: Water Resources and Climate Change



BOLIVIA BRAZIL
COLOMBIA ECUADOR GUYANA
PERU SURINAME
VENEZUELA



MAIN PROJECT OUTPUTS

- **SHARED VISION - TDA - STRATEGIC ACTION PROGRAM**
- Targeted research studies
- **Feasibility studies and innovative solutions on IWRM and Climate Change adaptation.**
- 8,700 Public opinion surveys
- **Legal and institutional inventory**
- **Hydro-climate Vulnerability Atlas**
- **Integrated Information System**
- Technical and political dialogue and regional cooperation.

1.5 M PEOPLE BENEFITED DIRECTLY OR INDIRECTLY



GEF AMAZON PROJECT

A successful regional cooperation initiative among the eight basin countries, which developed a regional Strategic Action Program for an integrated transboundary water resources management, biodiversity and habitat protection, ecosystem conservation and adaptation of vulnerable communities to climate change, while strengthening the institutional framework, regional dialogue and policy coordination in the Amazon basin.

Main Project Results:

- Strategic Action Program approved by the 8 Amazon basin countries.
- Shared Vision for IWRM in the Amazon basin, based on national processes and 8,700 opinion surveys.
- Agreed Transboundary Diagnostic Analysis, defining priority problems of the Amazon Basin and analyzing their causes and impacts.
- Regional Hydroclimatic Vulnerability Atlas (1:1,000,000).
- Scientific knowledge on aquatic ecosystems, groundwater, river sedimentation and hydro-climatic vulnerability, informing decision makers and public policies.
- Empowerment of local governments and communities to reduce vulnerability to the impacts of climate change, benefiting 450,000 people.
- Integrated Information System on water resources management.
- Integration of the concepts of vulnerability and adaptation to climate change in the practices and policies of water resources management.



AMAZON PROJECT
REGIONAL ACTION IN THE AREA OF WATER RESOURCES



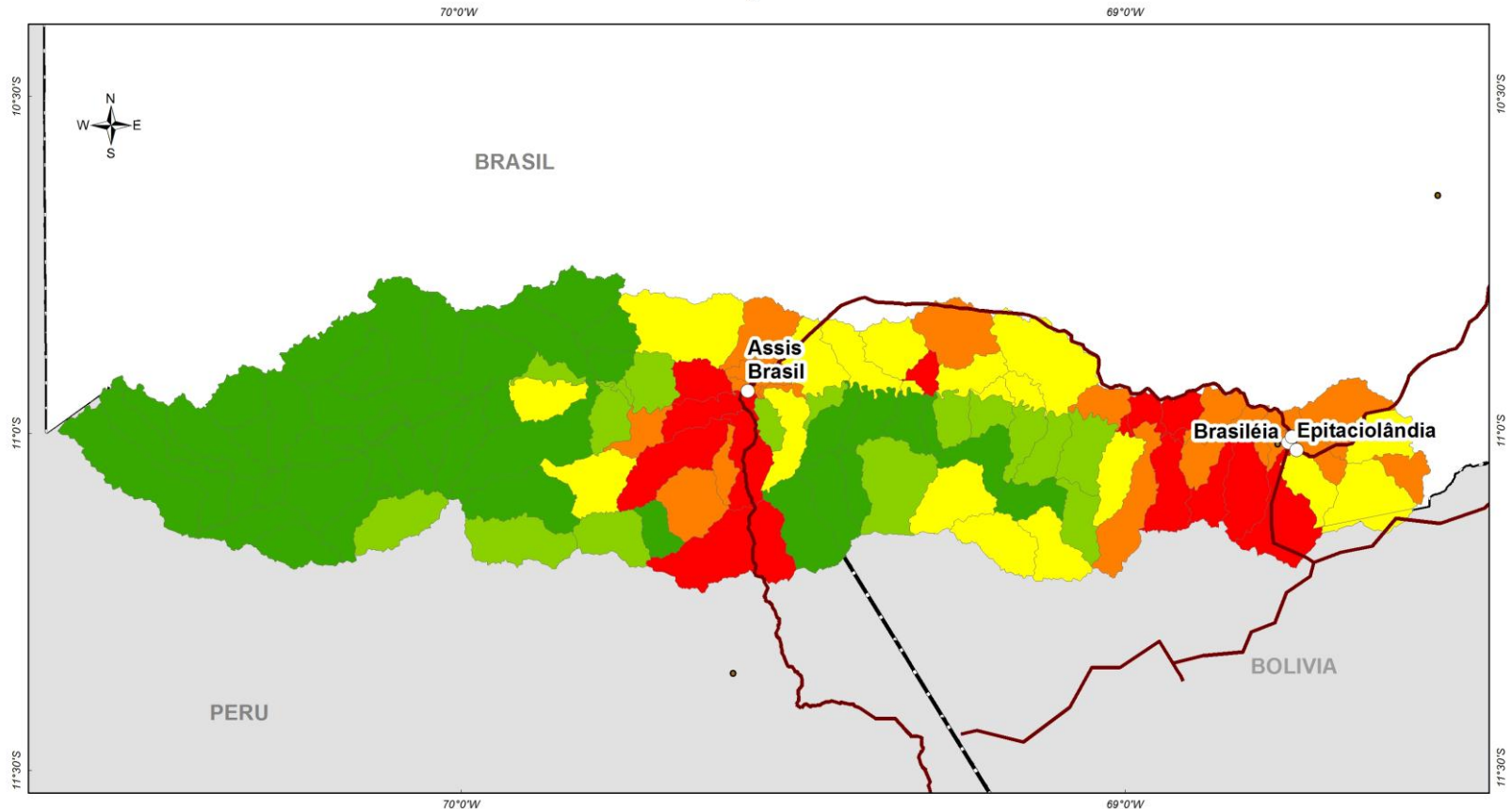
ADAPTING TO CLIMATE CHANGE IN THE TRANSBOUNDARY MAP REGION

- MAP tri-national region (Madre de Dios-Peru, Acre - Brazil and Pando-Bolivia)
- Acre River transboundary basin: 36,000 km²
- More than 900,000 inhabitants
- Extreme hydro-climatic events: huge floods and prolonged droughts, affecting the local communities, economies, and ecosystems
- Tri-national team of experts.

INTEGRATED DATA BASES AND ECOLOGICAL RISK MAPPING

UPPER RIO ACRE BASIN

Índice de Risco Ecológico para Sub-Bacia do Alto Acre Integrado



LEGENDA

Índice de Risco Ecológico

- | | | |
|------------|-------|-----------|
| Baixissimo | Médio | Altissimo |
| Baixo | Alto | |

- Estradas
- Cidades



0 7,5 15 30 Km

Datum: SIRGAS 2000
Sistemas de Coordenadas: Geográficas
Fecha elaboración: 24/06/2013
Fuente: SENASAG, 2012



TRI-NATIONAL EXPEDITION

TRANSBOUNDARY ACRE RIVER BASIN (187 km)



ENVIRONMENTAL RISK MAPPING
FIELD VERIFICATION

INTERVIEWS WITH LOCAL COMMUNITIES

I INTERNATIONAL MEETING ON EARLY WARNING SYSTEM IN THE MAP REGION

Cobija, Bolivia (2013)



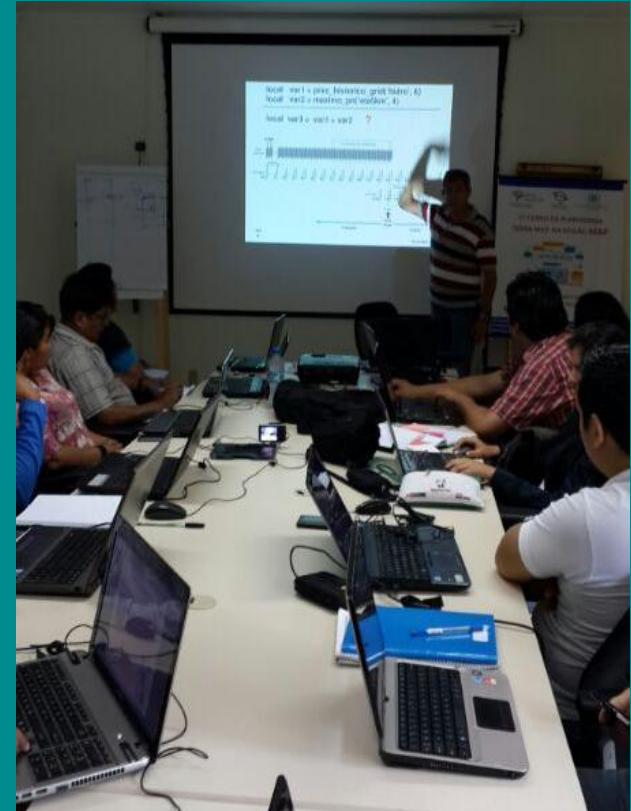
TERRA MA2 TECHNOLOGICAL PLATFORM - TRAINING COURSES

PARTICIPANTS:

Madre de Dios - Peru:
08 participants (ANA,
ALA, GOREMAD,
UNAM, IIAP-PM, COER)

Pando - Bolivia: 08
participants (COED,
GADP, SENAMHI)

Acre - Brazil:
03 participants
(SEMA, IPAM, Civil
Defense)



TERRA MA2 INSTALLATION

DELIVERING THE EQUIPMENT - BOLIVIA, BRAZIL, PERU



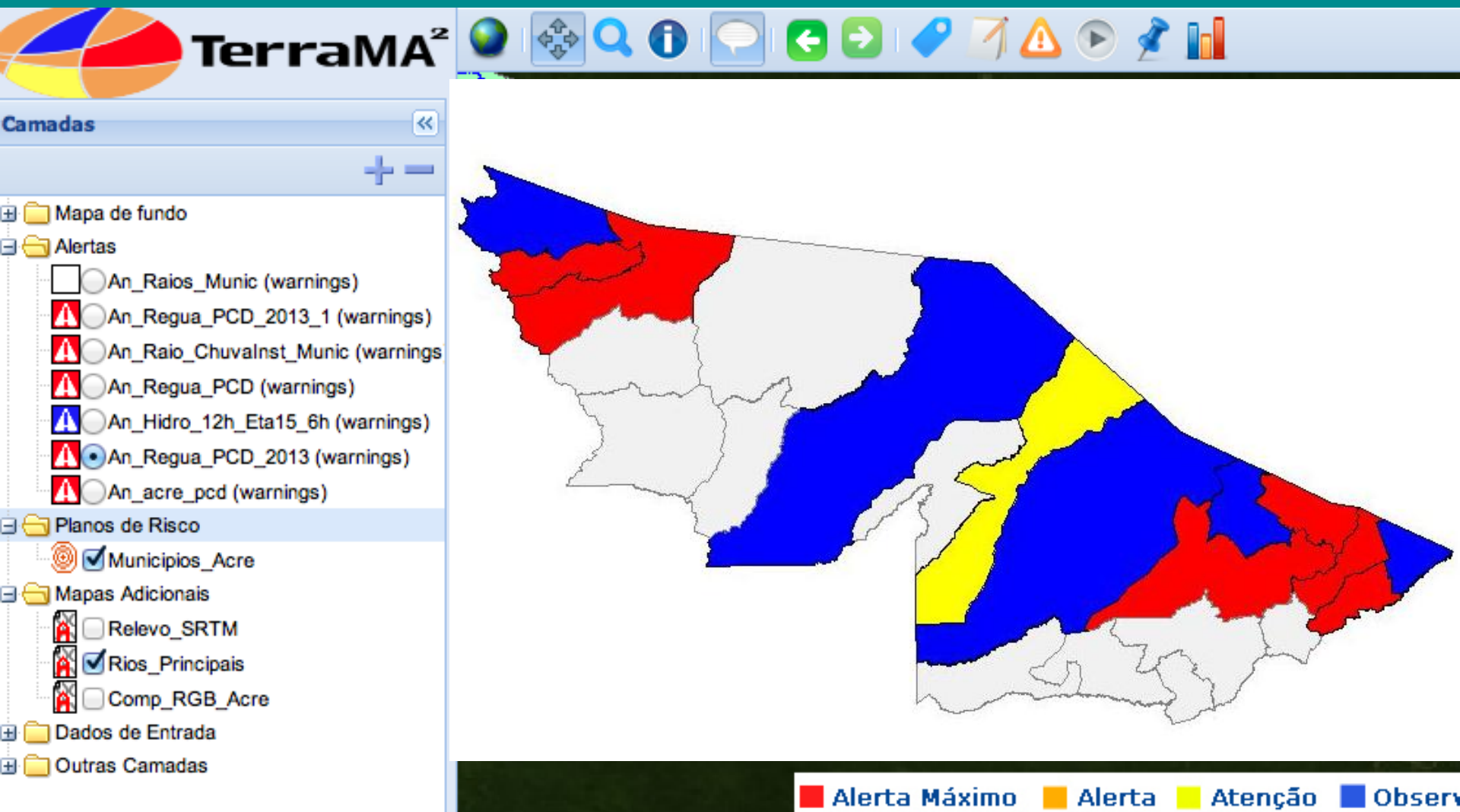
PERU, Puerto Maldonado:
Autoridad Administrativa
del Agua Madre de Dios



BOLIVIA, Pando:
Departmental Emergency
Operations Center (COED)

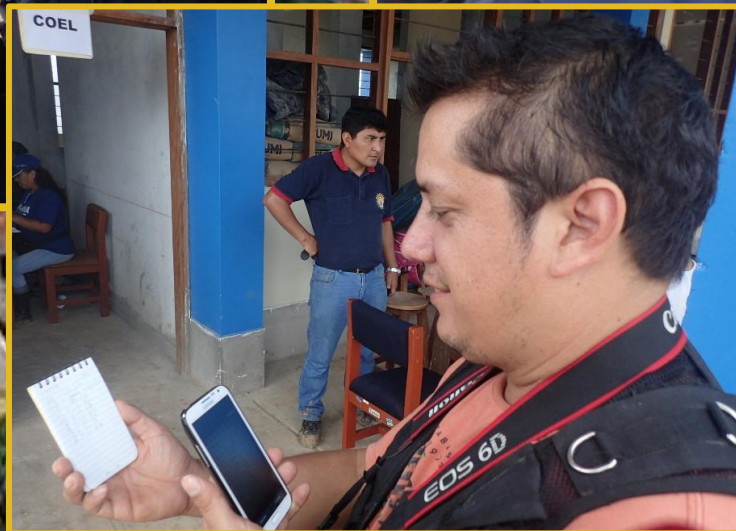
BRAZIL, Epitaciolândia:
Military Fire Department of Acre - CBMAC

EARLY WARNING SYSTEM AND RADIO COMMUNICATION SYSTEM IMPLEMENTED - BOLIVIA, BRAZIL, PERU



ACRE RIVER HISTORIC FLOOD FEBRUARY 2015

RADIO COMMUNICATION SYSTEM OPERATING



REPLICATING THE EXPERIENCE

- **Early Warning System replicated in Peru:**
Systems for Warning and Hydrological Monitoring installed at the national level, using the TerraMA2 technological platform.
- **State Governments in Brazil** requested the up-scaling of the MAP EWS in the Brazilian Amazon.
- **Priority SAP strategic action** for the countries.

GEF AMAZON SAP IMPLEMENTATION PROJECT:

BUILDING COMMUNITY RESILIENCE AND ECOSYSTEM PROTECTION TO ADDRESS CLIMATE CHANGE

Gracias
Dank U
Thank you
Obrigada!

