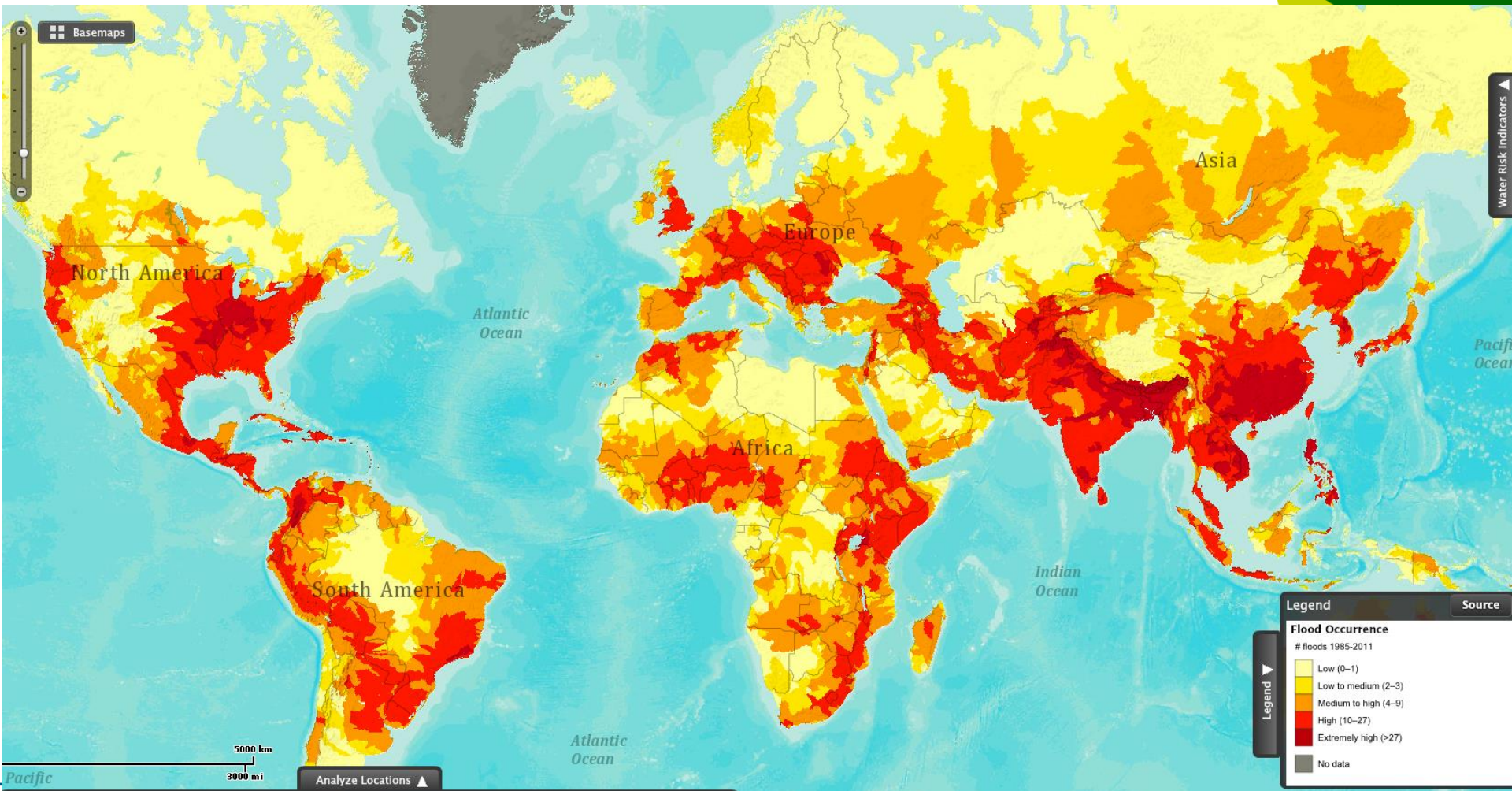# Flash Flood Forcasting App

Last Mile: saving lives and reduce damage

dr. ir. Hanneke Schuurmans
UNDPLastMile
15 March 2016

Flood Risk Reduction: global leading service

www.wri.org

Yesterday in Accra - Ghana

Source: WhatsApp group

June last year

200 casualties

Every year during rainy season....

Royal
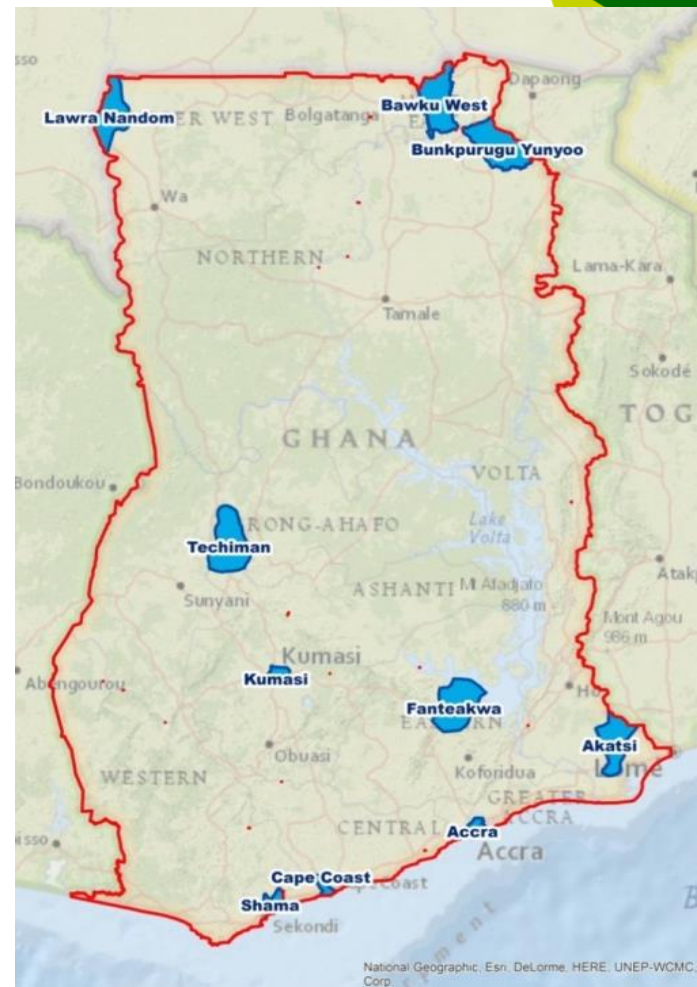HaskoningDHV

CREW project

- Community Resilience throughout early warning
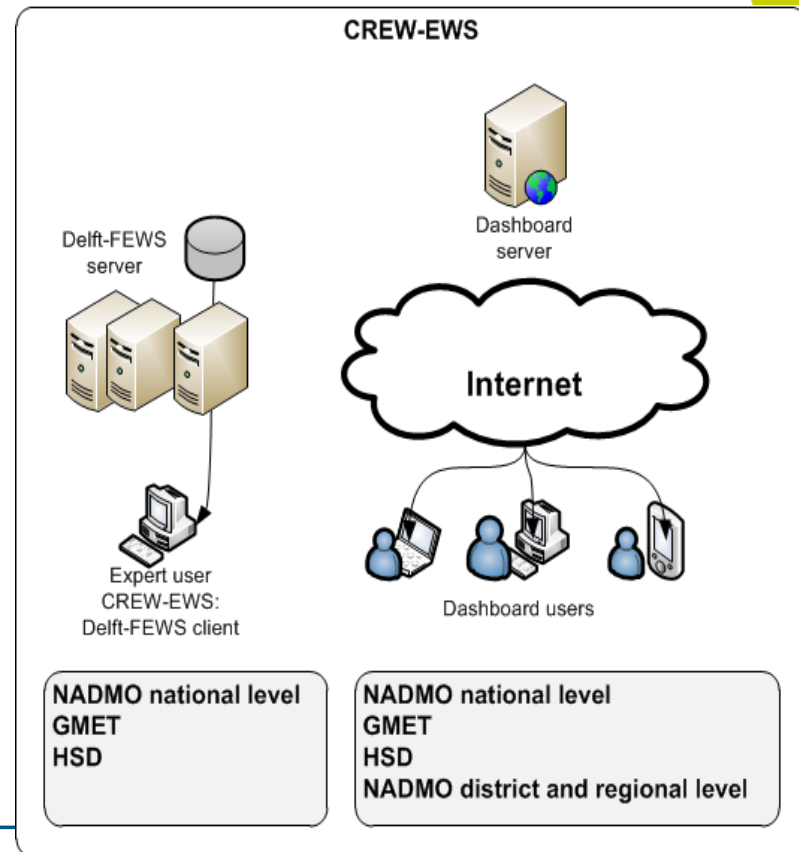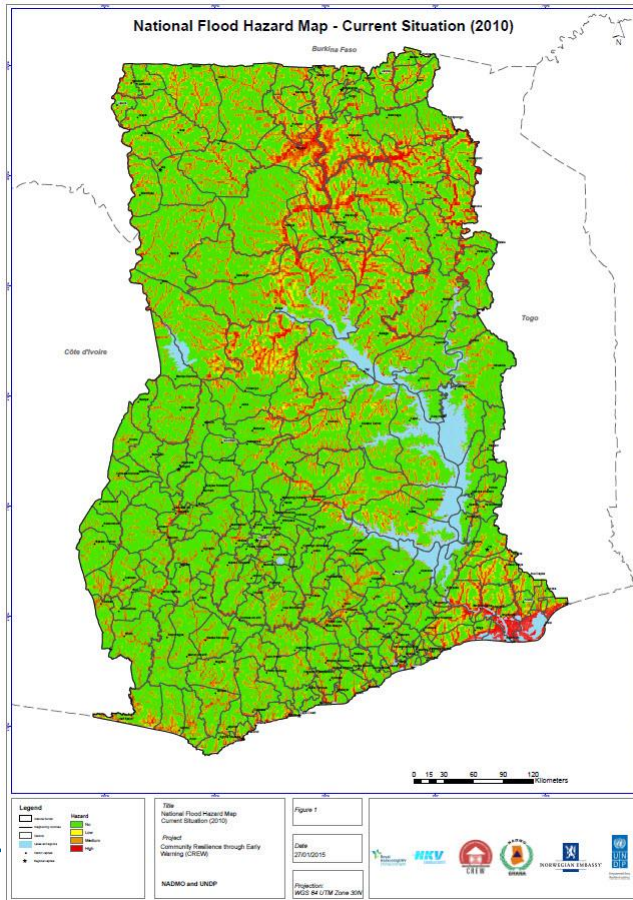

- NADMO: National Disaster Management Organization

- Target: **Floods AND Droughts**

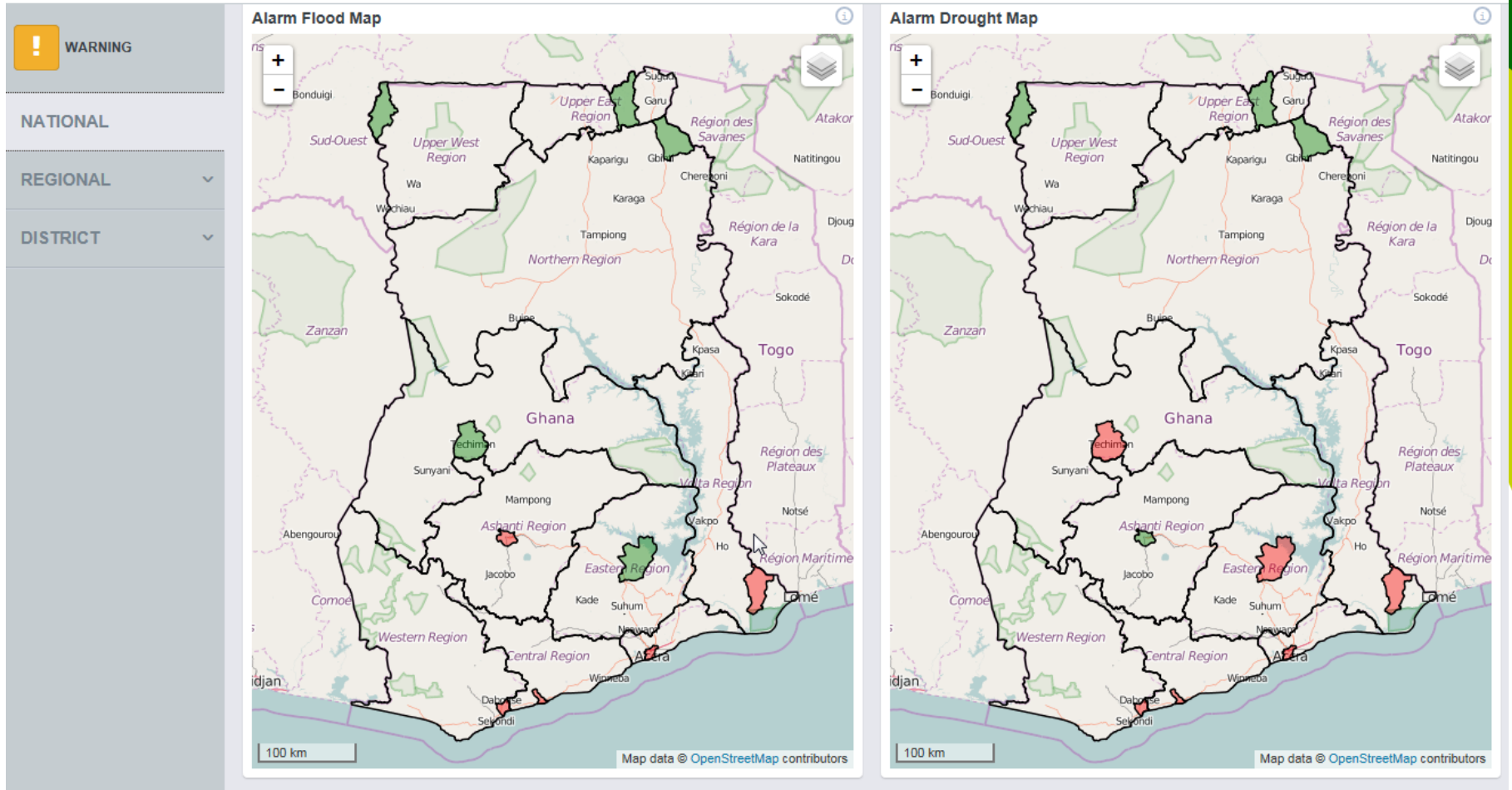- Main goal: **become proactive instead of reactive**

- Consortium partner: HKV

Royal HaskoningDHV

Main deliverables: risk maps, EWS

- Hazard x vulnerability = risk
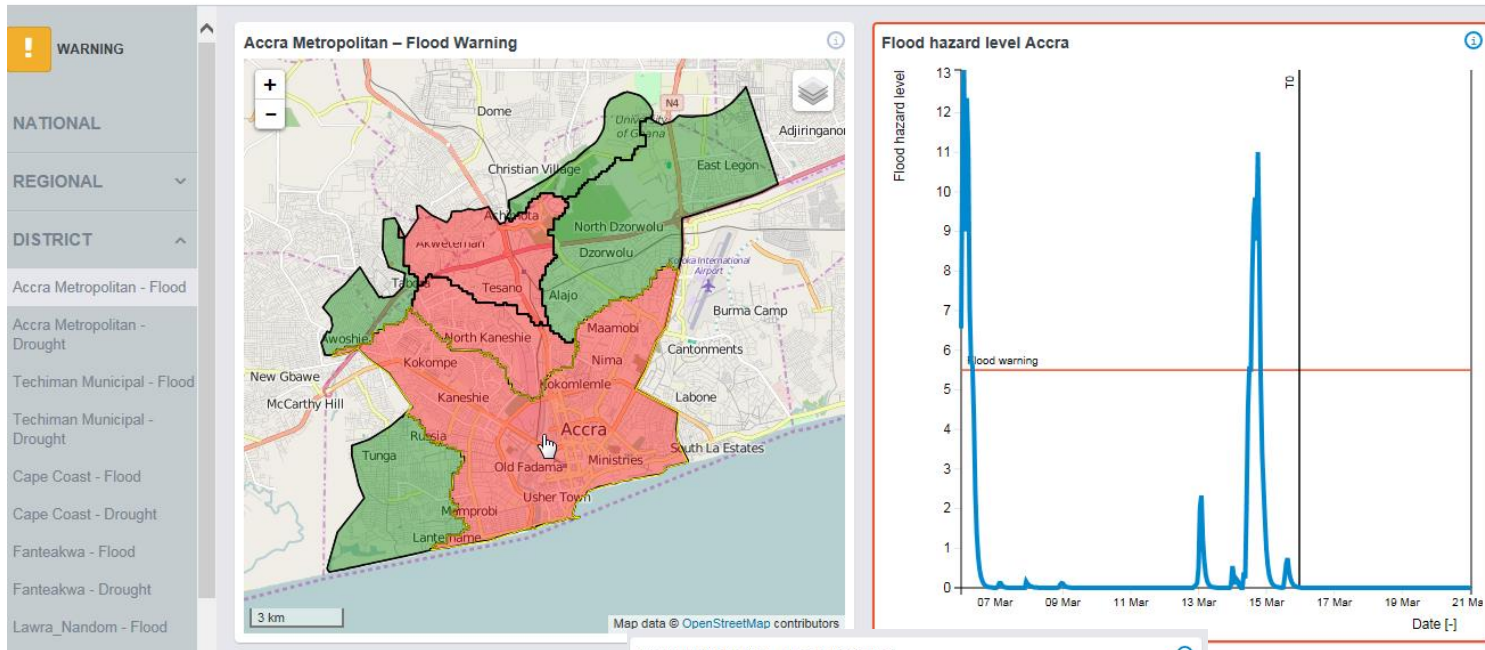- National maps + regional maps (same method, more detailed data)

Dashboard service - internet

Dashboard service - internet

Actual warning level

Risk map

Graph of specific sub-area

Risk assessment and early warning

EWS

Risk maps

| detection | → | forecasting | → | warning | → | response |

Feedback - validation

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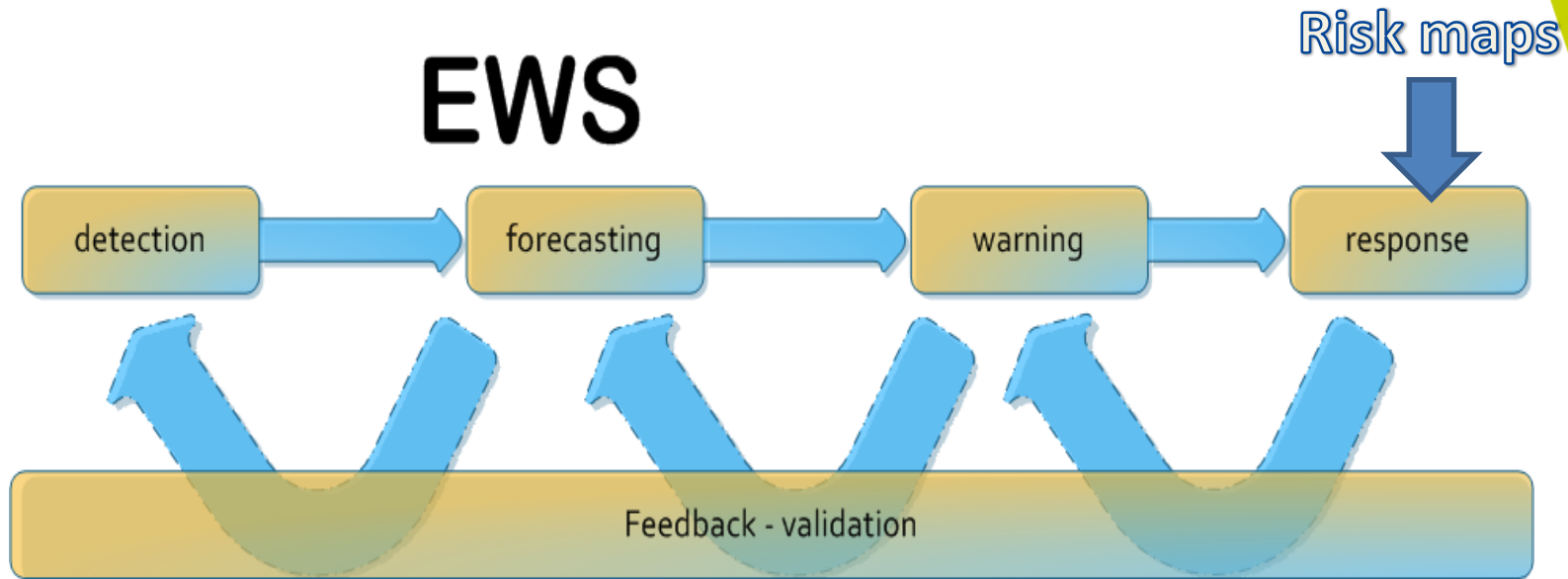
Capacity building

- Central Training (train the trainer)

- Local training

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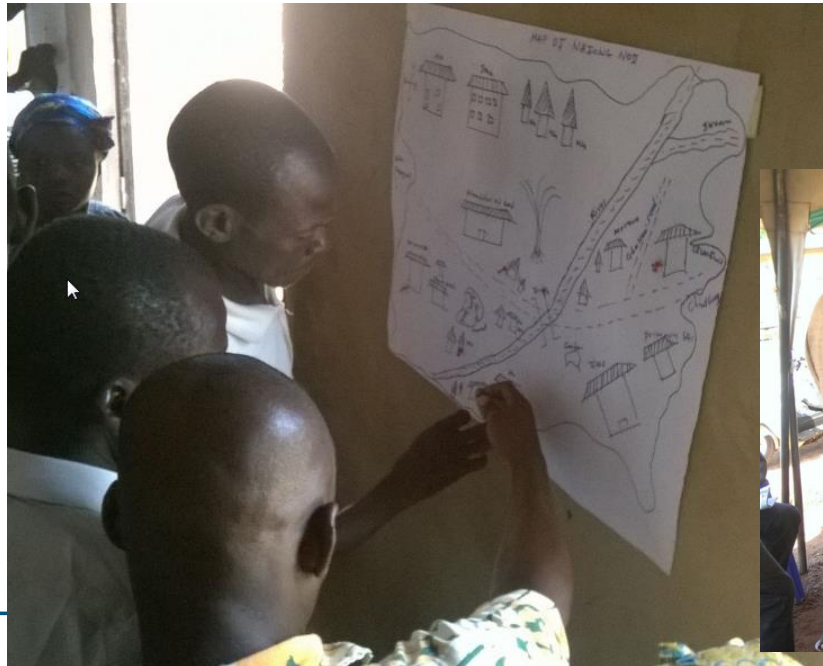
Operational rooms are set-up in each region

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Done? ….

EWS

detection → forecasting → warning → response

Feedback - validation

dissemination
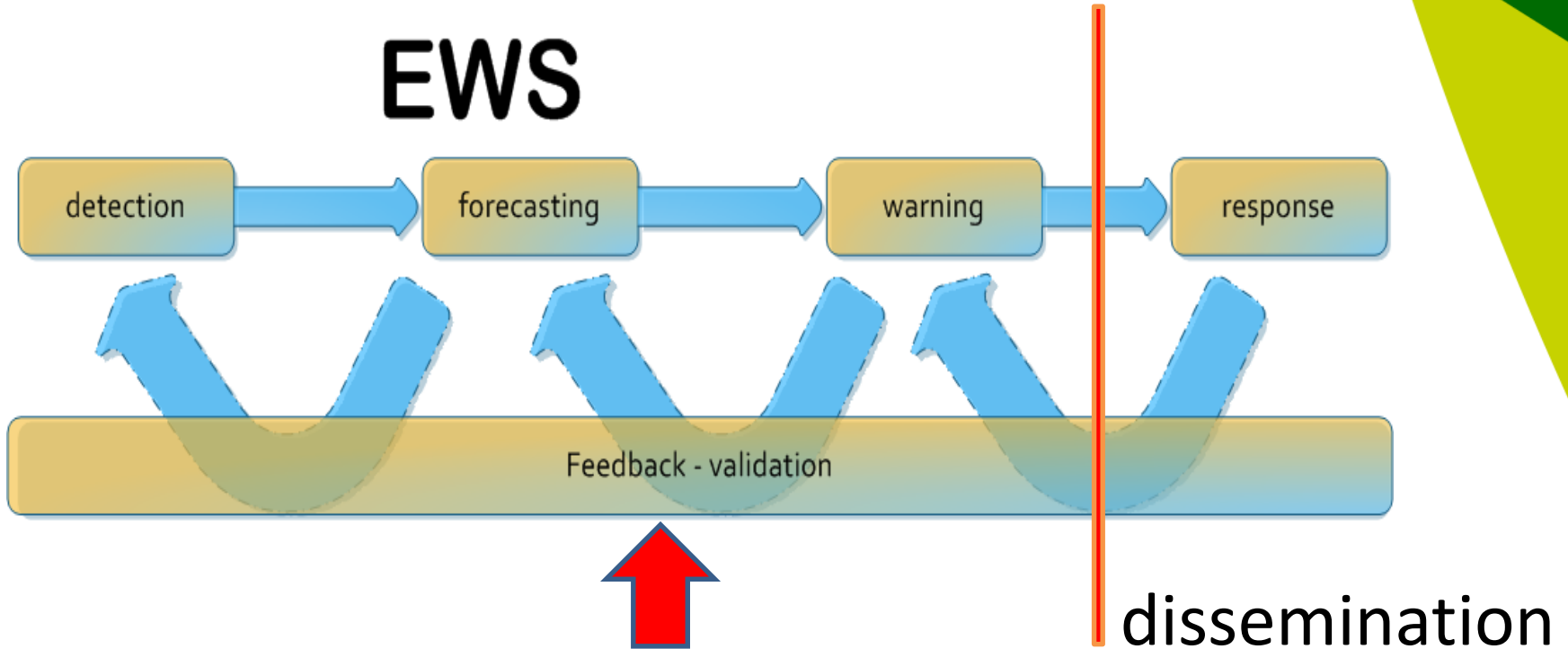
Proof of the pudding is in the eating
Control & Maintenance

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Cities need more…..

THE ROCKEFELLER FOUNDATION
100 RESILIENT CITIES
CENTENNIAL CHALLENGE

2050:75% of the world's population will live in cities.

The cost of urban disasters in 2011 alone was estimated at over $380 billion.
IT'S TIME FOR CITIES TO ACT.

Accra one of the 100 Resilient Cities

ROUND ONE CITIES
ROUND TWO CITIES

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Innovative solution for flash floods

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We are taking it a step further

Flash Flood Forcasting App | 15 March 2016
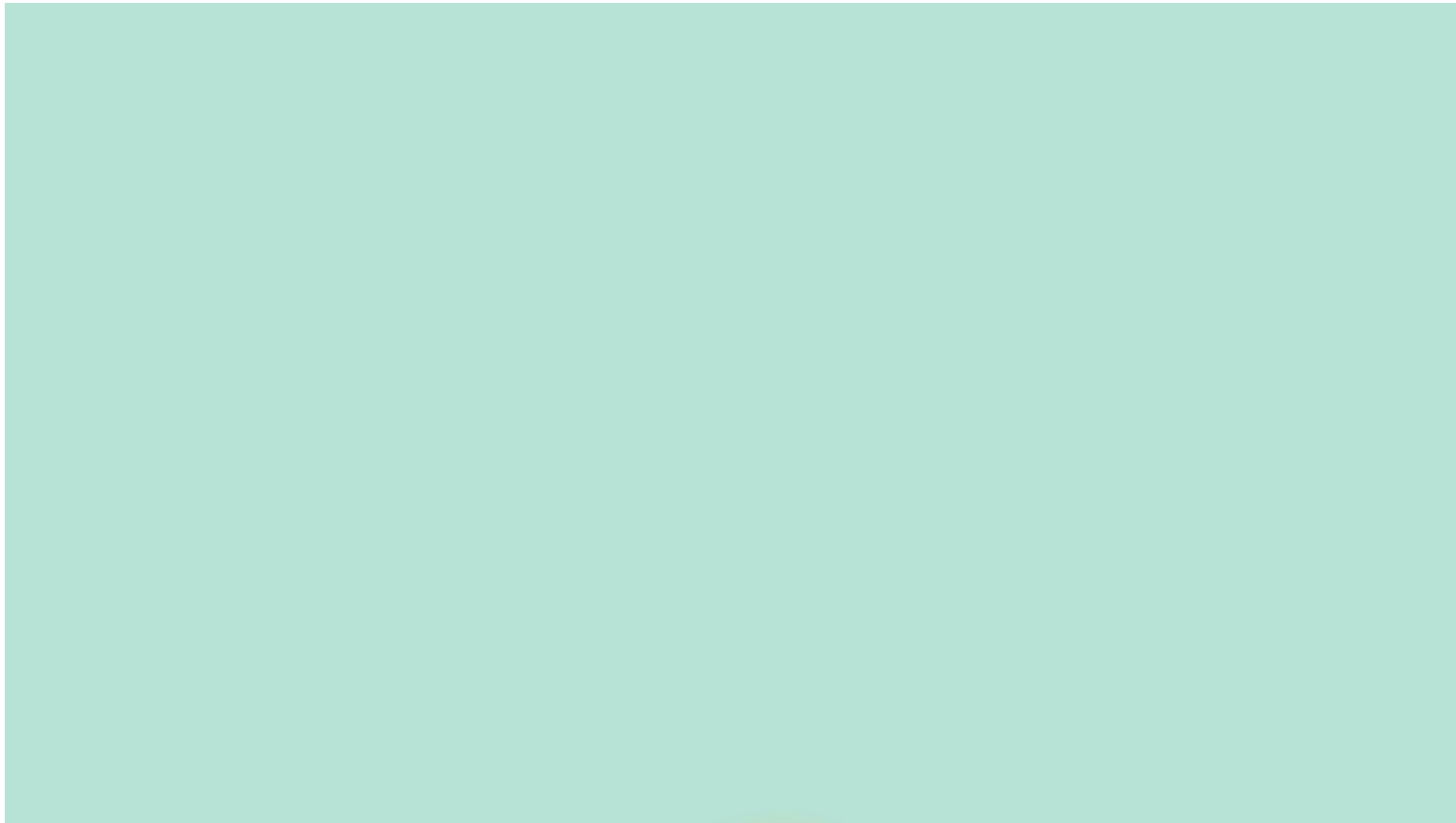
Challenges

- Technically
  - More accurate rainfall forecast
  - Accurate flood prediction
  - Directly to civilians

- **Financial sustainable**:

  - First investors: IFI's (WB, ADB, UNDP), Rockefeller, ….others

  - Local investors to keep it running:
    - Mobile phone providers
    - Service to existing succesfull services
    - Local industries
    - Corporate responsibility (big companies, save employees)
    - Radio / televisions / internet
    - Health organizations (cholera risks)

- Roles and responsibilities of local government institutes

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Opportunities

- Rainfall forecast can be used by SO many

- Hydrological Models: excellent tool for scenario analysis AND spatial planning

    - What if:

        - Even heavier rain falls

        - What are the 1/1, 1/10, 1/100 years flood extents?

        - What if the drainage system is improved

        - ....

SERIOUS GAMING – making stakeholders aware

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HaskoningDHV

More information AND ideas

- https://www.viawater.nl/projects/flash-flood-forecasting-app

- Hanneke.schuurmans@rhdhv.com
- +31 (0)6 46367260