LMI
DISASTER
RESPONSE
EXERCISE &
EXCHANGE

PROBLEM-SOLVING SESSION SUMMARY

Co-Sponsored by:
Cambodia Royal Gendarmerie and U.S. Army Pacific

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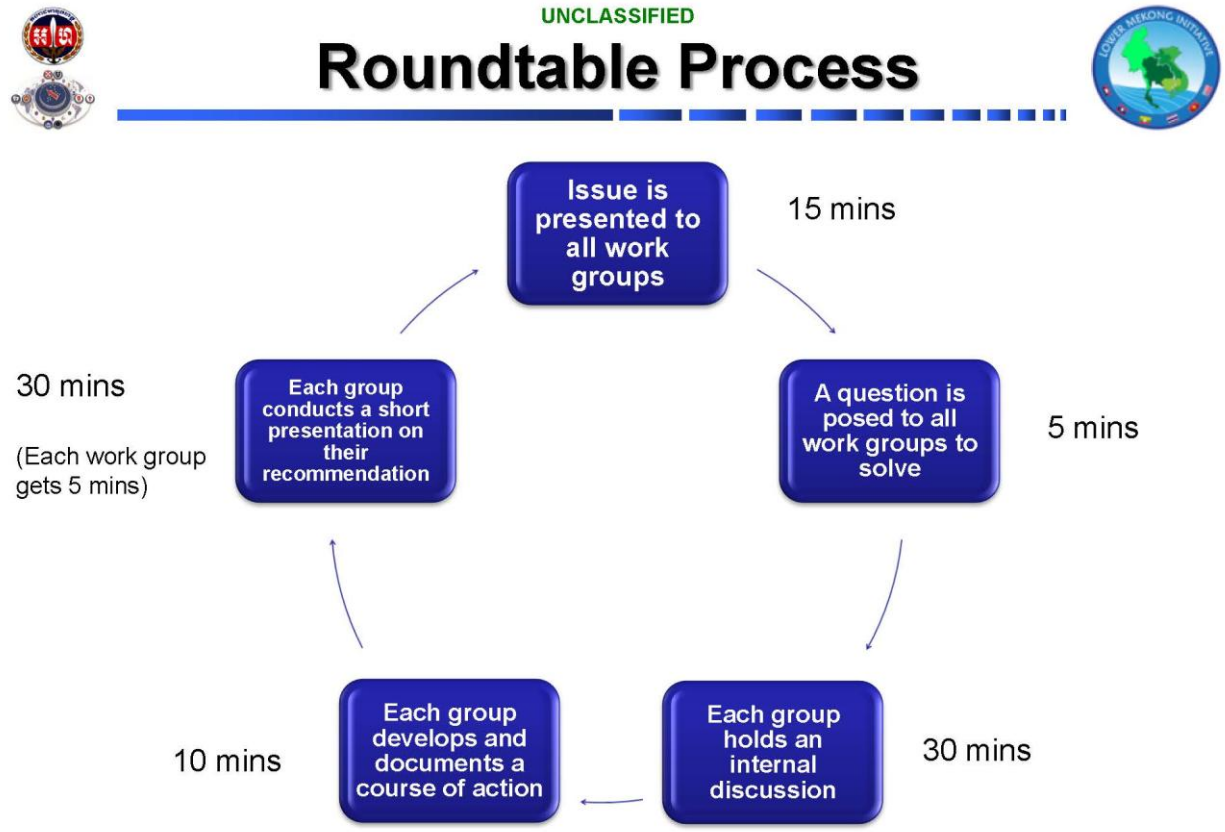
PROBLEM-SOLVING SESSION OVERVIEW

During the LMI DREE, three problem-solving sessions were delivered. These sessions involved discussions and communal collaboration to resolve frequent issues that are experienced in disaster response settings. The scenario presentations challenged work groups to come up with a solution that is agreeable to their members. The results were then briefed and compared with how the actual issue was resolved in the field by a Subject Matter Expert.

The process on how the problem-solving sessions worked can be visualized in the graphic below.



The three main scenarios that were presented during the DREE are as follows:

1) **Hydrology & Hydraulics** – In this session, a flooding issue was presented by the Mekong River Commission (MRC). The Mekong River Commission explained a common issue they have experienced in previous disasters, and then posed a question at the end of their presentation for the work groups to resolve. The work groups then discussed the question and came up with an answer. The answer was then briefed to the audience and compared with other work groups. Lastly, the MRC shared how they overcame the issue during the disaster.

2) **Civil-Military Integration** – During this session, the U.S. Office of Foreign Disaster Assistance (OFDA) presented a common friction point experienced between civilian and military stakeholders during disaster response and recovery situations. The presentation concluded with two scenarios

for the work groups to resolve. One scenario was on Cyclone Nargis (2008), and the other scenario was on conflict in the Republic of Georgia. The work groups discussed the issue and then derived a solution. The solution was then presented and compared with other groups, as well as how OFDA was able to resolve the issue in the field.

3) **Foreign Humanitarian Assistance** – The final session was delivered by UN-OCHA (United Nations Office for the Coordination of Humanitarian Affairs). In this session, the presentation explored a complex disaster scenario surrounding foreign humanitarian assistance during large-scale flooding. Upon conclusion of the presentation, UN-OCHA posed multiple questions to the work groups to evaluate. Each of the work groups evaluated the scenario and came up with a solution. The results were shared with all participants and compared with how UN-OCHA was able to resolve the situation in the field.

WORK GROUP ASSIGNMENTS

- Blue Group -

BLUE

Ms. Caroline McCausland (Action Aid)

CW3 Jonathan Cook (US)
Ms. Rene Van Slate (US)
LTC Sea Monorith (Cambodia)
Mr. Kyaw Nyun OO (Myanmar)
LTC Patthana Bouttichak (Laos)
Ms. Jansima Saengsuriya (Thailand)
Mr. Nguyen Minh (Vietnam)
Mr. Chantola Nat (WFP)
Ms. Thereat Touch (ECHO)
COL So Chhayly (Cambodia)
LTC Vandy Phanna (Cambodia)
MAJ Seng Vuthy (Cambodia)
MAJ Uk Chandara (Cambodia)
CAPT Sen Ratha (Cambodia)
MSGT Tim Sras (Cambodia)
Mr. Sin Samnang (Cambodia)

- Green Group -

GREEN

Mr. Brad Arsenault (USAID)

CW2 Papa Kone (US)
LTC Dennis Palalay (US)
Mr. Keolaka Soisaya (Lao)
Ms. Nwet Yin Aye (Myanmar)
Mr. Amphayvanh Oudomdeth (Lao)
Mr. Rattipat Pangwatcharakorn (Thailand)
LTC Carl Beury (US)
Mr. Piseth Pel (Plan International)
COL Kries Youphkun (Cambodia)
COL Srey Sitha (Cambodia)
LTC Kong Chanthan (Cambodia)
MAJ Lak Kuon (Cambodia)
CAPT Kong Chanrithy (Cambodia)
MSGT Oem Meng (Cambodia)
Mr. Ear Piseth (Cambodia)
COL Sear Tony (Cambodia)

- Red Group -

RED

Mr. Phal Vandy (Save the Children)

LTC John Tulifua (US)	Mr. Hak Socheat (Cambodia)
Mr. Ben Roohi (US)	COL Ros Sareth (Cambodia)
LTC Evan Ting (US)	LTC Kim Phany (Cambodia)
COL Khin Zaw (Myanmar)	Mr. Janggam Adhityawarma (AHA)
LTC Thongvanh Sengvonchit (Laos)	MAJ Svay Sokha (Cambodia)
CAPT Kunvadee Khanungphian (Thailand)	CAPT Keo Than (Cambodia)
Ms. Phoung Nguyen (Vietnam)	MSGT Nem Sotharith (Cambodia)
Mr. Vutha Chhem (WVI)	Mr. Chay Pheap (Cambodia)

- Yellow (Gold) Group -

YELLOW
Dr. Lam Hung Son (Mekong River Commission)
MSG Paul Eivins (US)
COL Taun Ton (US)
Mr. Tuong Pham (Vietnam)
LTC Min Naing Soe (Myanmar)
Mr. Vannakhone Chanthavilay (Laos)
Mr. Burachat Buasuwan (Thailand)
Mr. Khun Bunna (PLAN International)
Mr. Andrew Pendleton (UN-OCHA)
COL Sao Ponleu (Cambodia)
COL Huy Vuthea (Cambodia)
LTC Duch Samphors (Cambodia)
MAJ Eang Peareak (Cambodia)
CAPT Im Neanh (Cambodia)
MSGT Dim Sambo (Cambodia)
Mr. Mey Virak (Cambodia)
Mr. Mao Hak (Cambodia)

-White Group-

WHITE
Ms. Rene Van Slate (USAID-OFDA)
LTC Thomas Brown (US)
SGT Manual Lopez (US)
LTC Kristin Means (US)
Mr. Aung Khine (Myanmar)
Mr. Oudomsack Philavong (Laos)
COL Dhiraphan Pongesepaibool (Thailand)
Mr. Cao Hien (Vietnam)
Mr. Nicolass Bakker (MRC)
Ms. Valentina Bacchin (OXFAM)
COL Chea Sophoan (Cambodia)
LTC Sam Sovathanea (Cambodia)
MAJ Och Bunthan (Cambodia)
MAJ Sok Sam Oeun (Cambodia)
CAPT Om Kirin (Cambodia)
MSGT Phan Chantha (Cambodia)
Mr. Mao Sao Horn (Cambodia)

Flood Management & Mitigation Programme (FMMP)

Regional Flood Management & Mitigation Centre (RFMMC)

with

The MRC core function:

Forecasting, warning and emergency response

Presentation by Flood Management and Mitigation Programme (FMMP)

Dr. Lam Hung Son and Ir. Nicolaas Bakker

Phnom Penh, June 2013

The Mekong River Basin

Characteristics:

Area:	795,000 km² (21)
Length of mainstream:	4,800 km (12)
Average discharge:	15,000 m³/s (8)

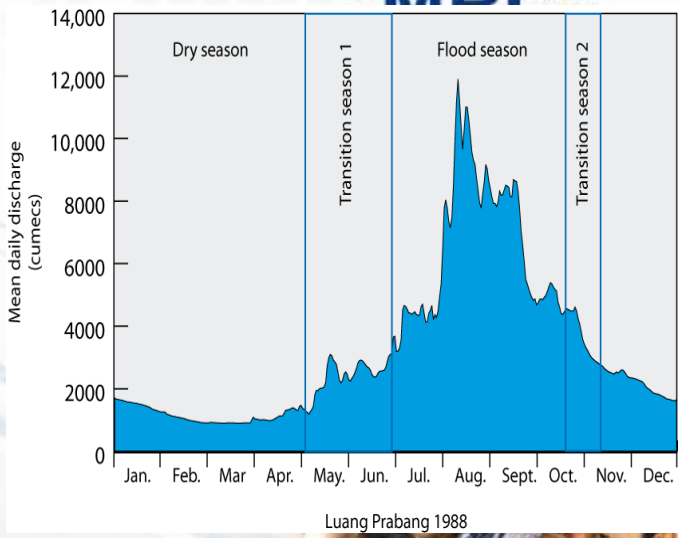
Contributors of water:

Upper Mekong (18%)

- China – 16%
- Myanmar – 2%

Lower Mekong (82%)

- Cambodia – 18%
- Lao PDR– 35%
- Thailand – 18%
- Viet Nam – 11%

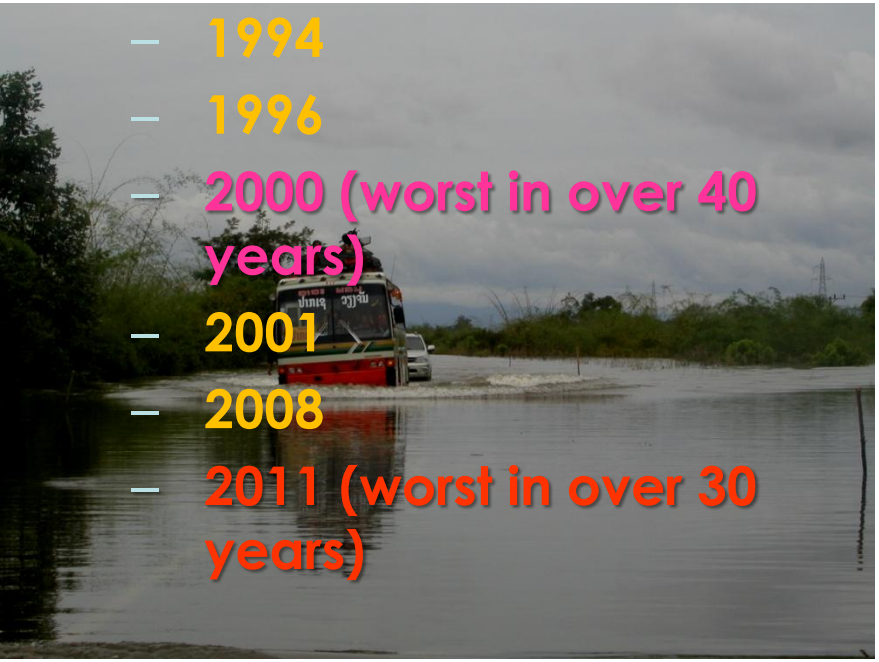


Seasonal variability

Floods in Lower Mekong Basin

Severe flood events in lower Mekong:

- 1966 (worst in over 100 years)
- 1994
- 1996
- 2000 (worst in over 40 years)
- 2001
- 2008
- 2011 (worst in over 30 years)



… over 800 people, mostly children, lost their lives

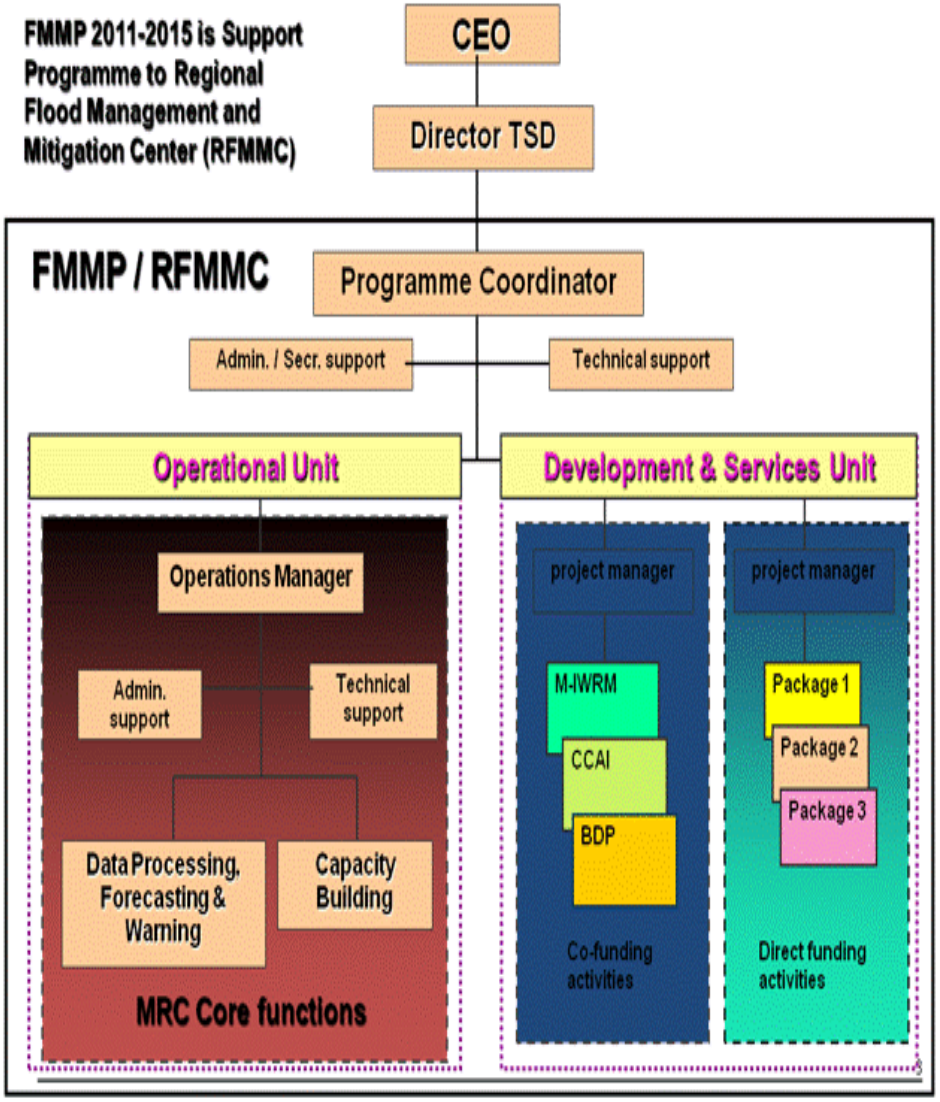
… over US$ 400 million in damage was inflicted

Main challenge:

As flood forecasting, and flood management and mitigation are one of the core functions of the MRC the main challenge is:

- To develop customized flood forecasting systems that incorporate state-of-the-art climate data, information and modelling.
  - These systems incorporate climate change projections based on which climate change adaptation measures can be designed, planned and build.

MRC-FMMP/RFMMC ROLES



- The ***provision of technical products and services*** to assist Member Countries with flood management, flood forecasts a key product;
- ***Addressing differences and facilitating the resolution*** of water and related issues, specifically trans-boundary flooding issues; and
- ***Capacity building and technology transfer*** to the MRC Member Countries.

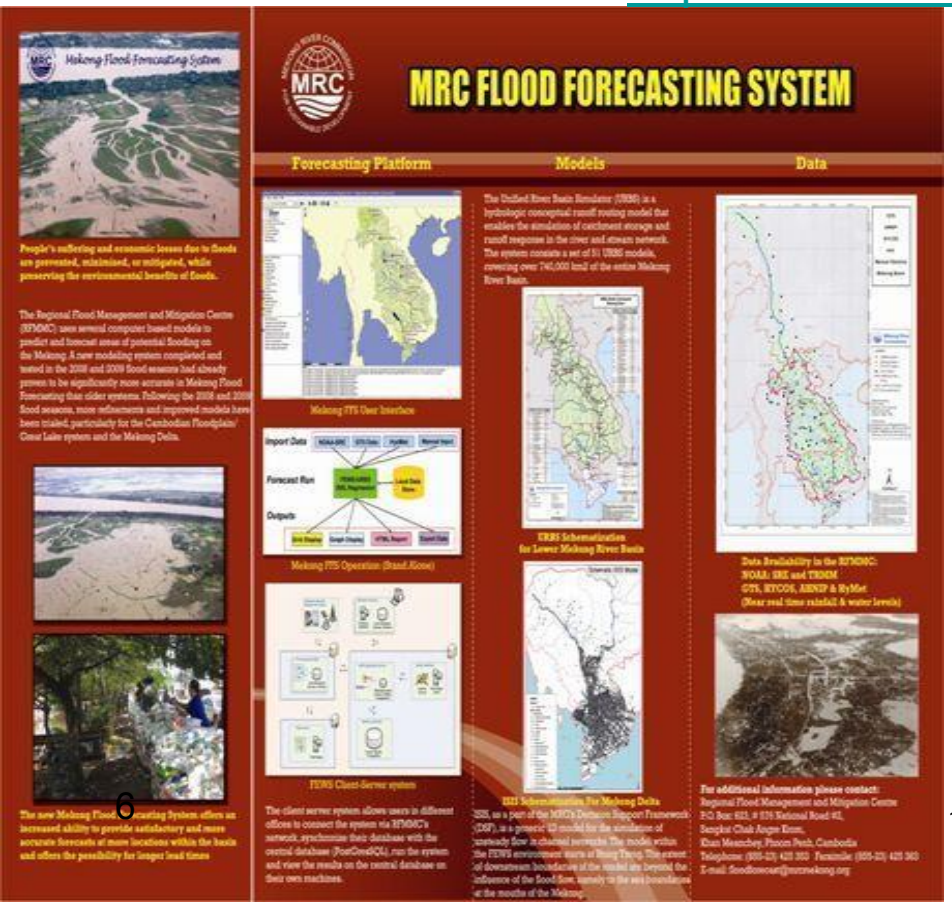
MRC-FMMP/RFMMC CORE FUNCTIONS

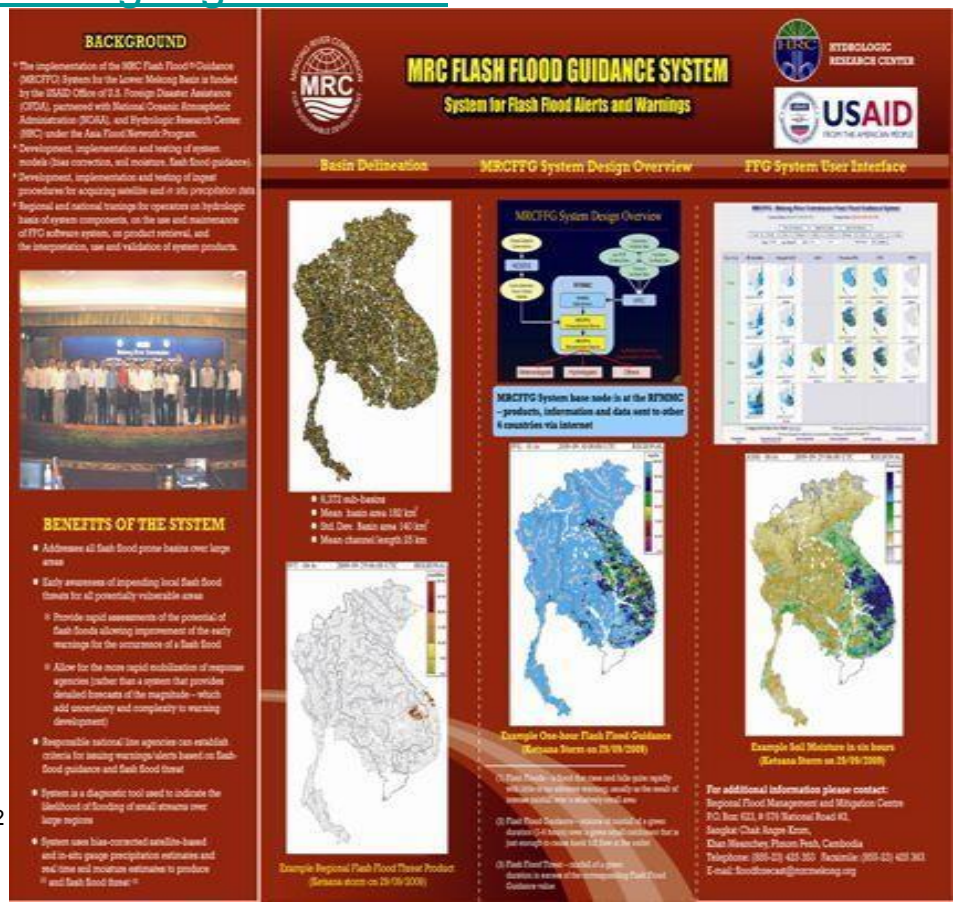
The Operational Unit (OU) of MRC's RFMMC in Phnom Penh, Cambodia issues to MRC Member Countries and Dialogue Partners:

1. **Daily (once/twice) flood forecasting and warning during flood season, daily monitoring WL in dry season, for Mekong mainstream.**

2. **Flash Flood Guidance (3 hourly updates) and Flash Flood Alerts during critical weather situations.**

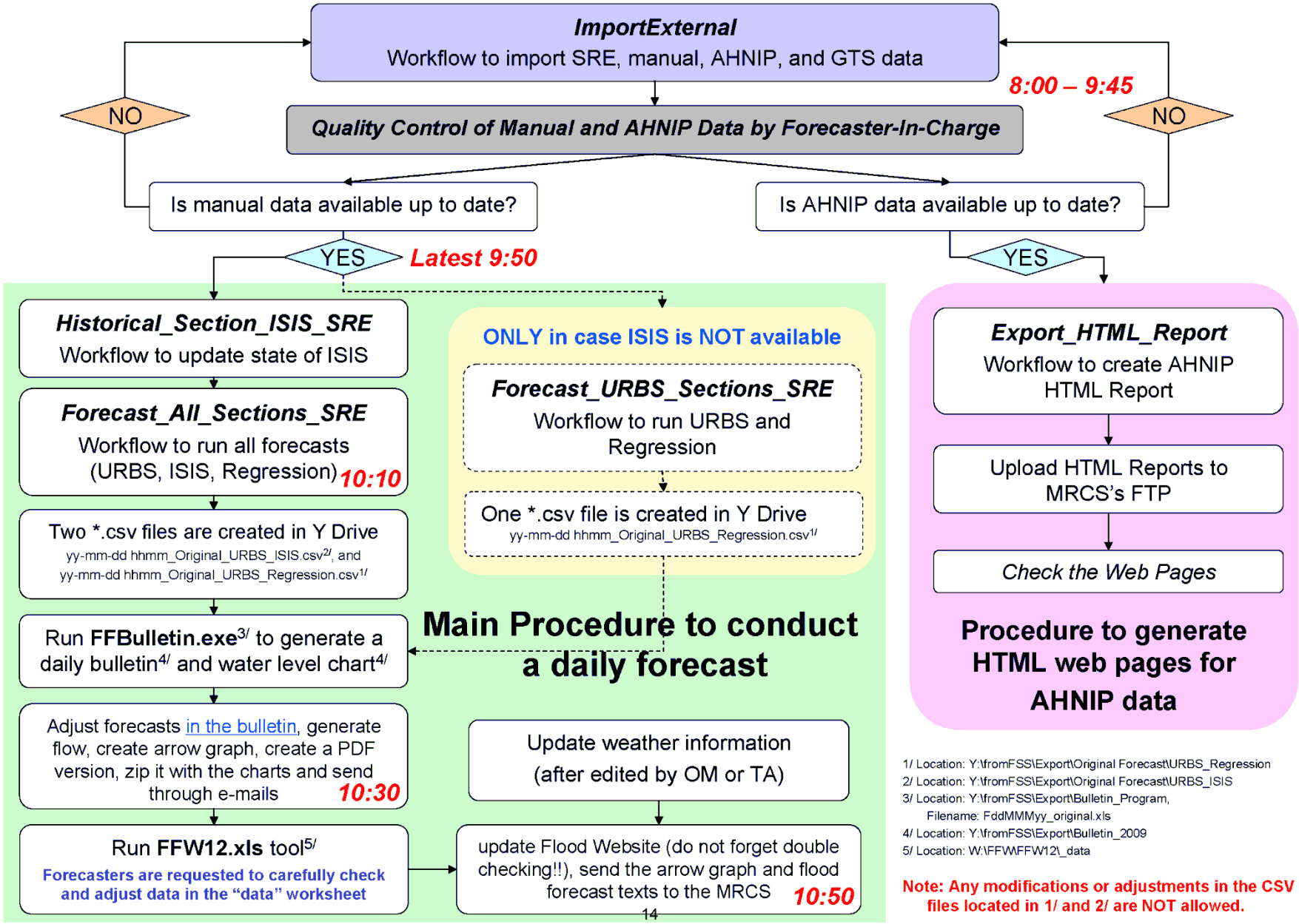
http://www.mrcmekong.org/index.htm





1. Flood Forecasting (short, medium and long term)

Mekong-FFS Operational Procedure



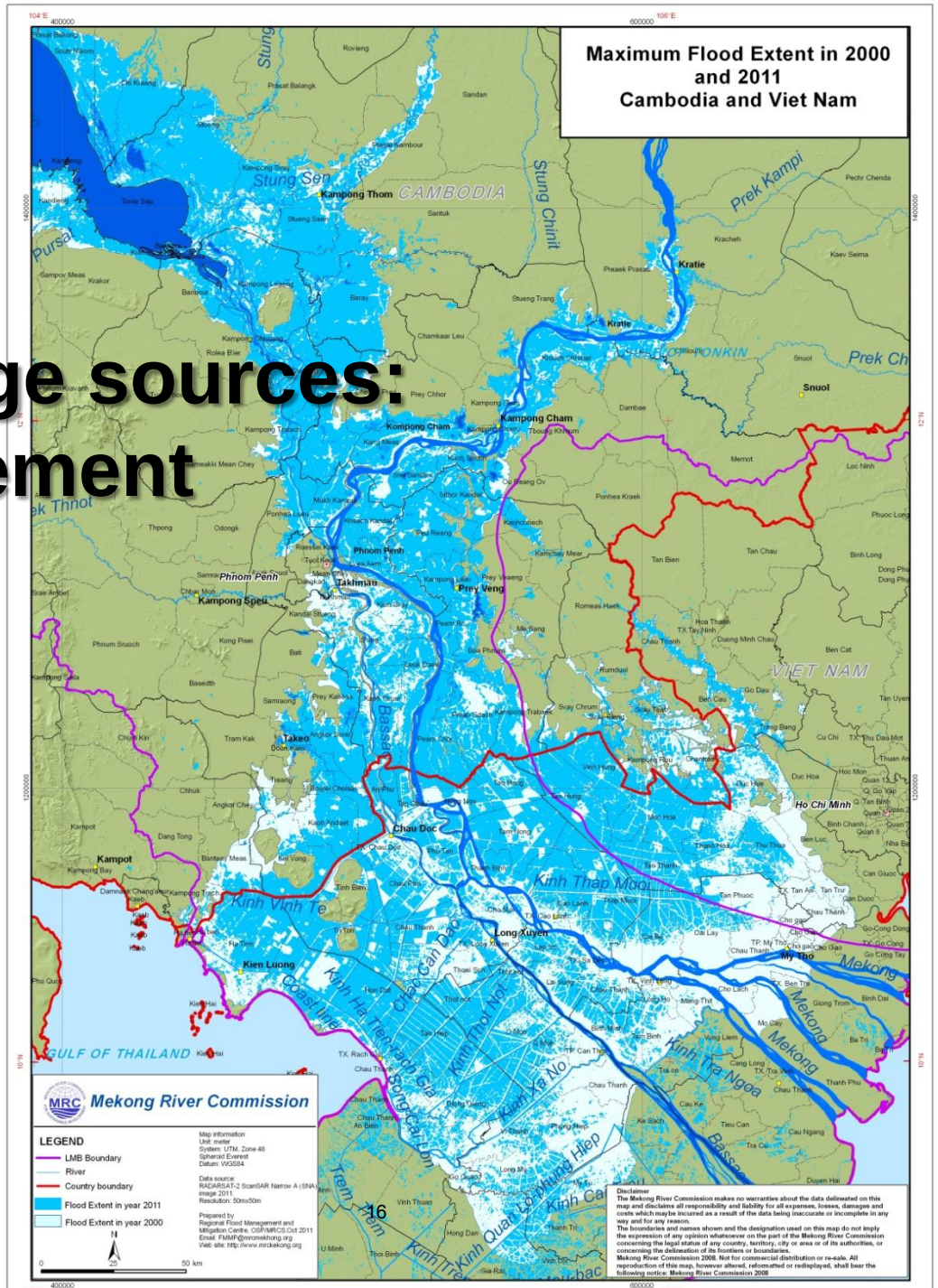
1/ Location: Y:\fromFSS\Export\Original Forecast\URBS_Regression
2/ Location: Y:\fromFSS\Export\Original Forecast\URBS_ISIS
3/ Location: Y:\fromFSS\Export\Bulletin_Program,
Filename: FddMMMyy_original.xls
4/ Location: Y:\fromFSS\Export\Bulletin_2009
5/ Location: W:\FFW\FFW12_data

Note: Any modifications or adjustments in the CSV files located in 1/ and 2/ are NOT allowed.

2. Flood Management and Mitigation
(short term)

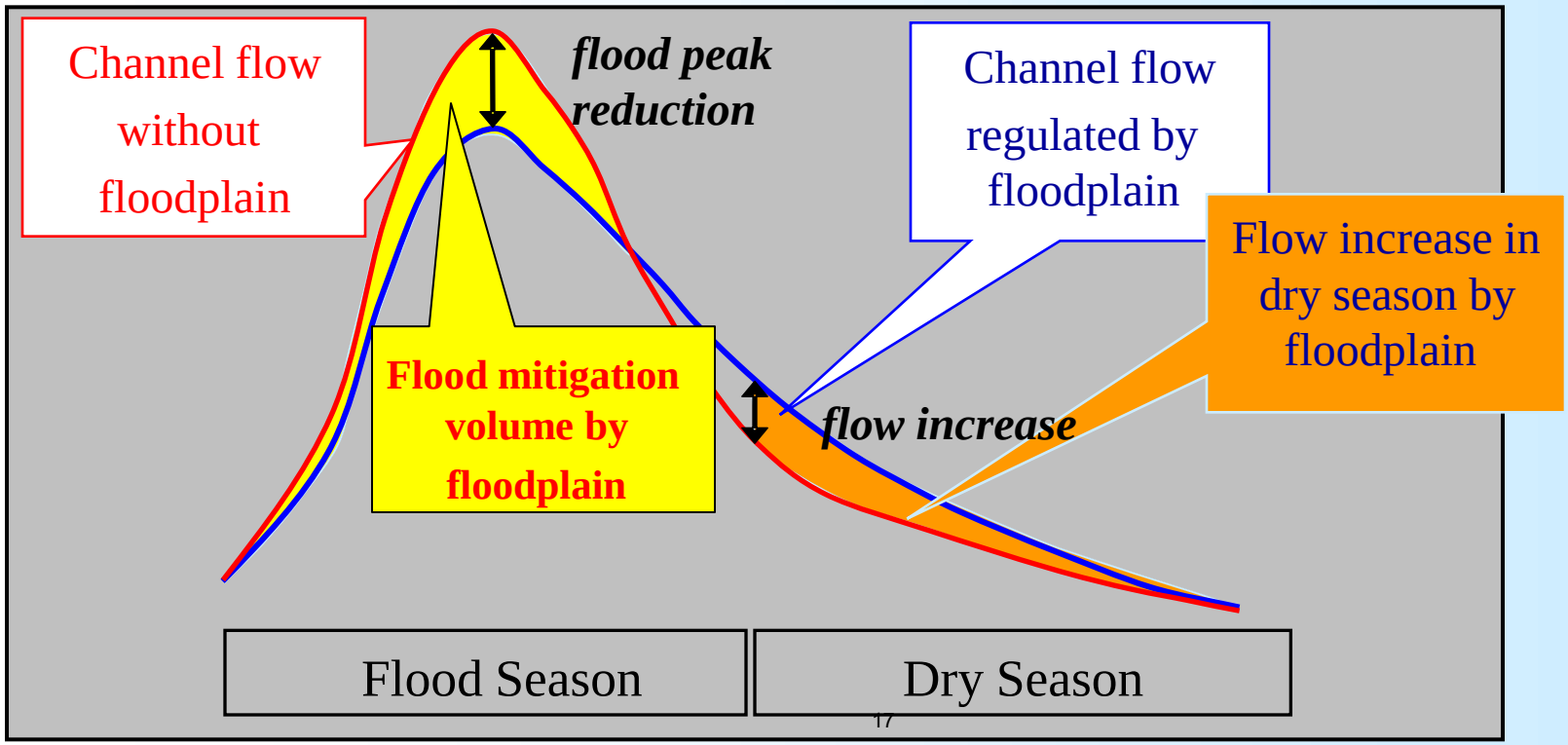
Cambodia •
For sustain

Satellite image sources: Important element

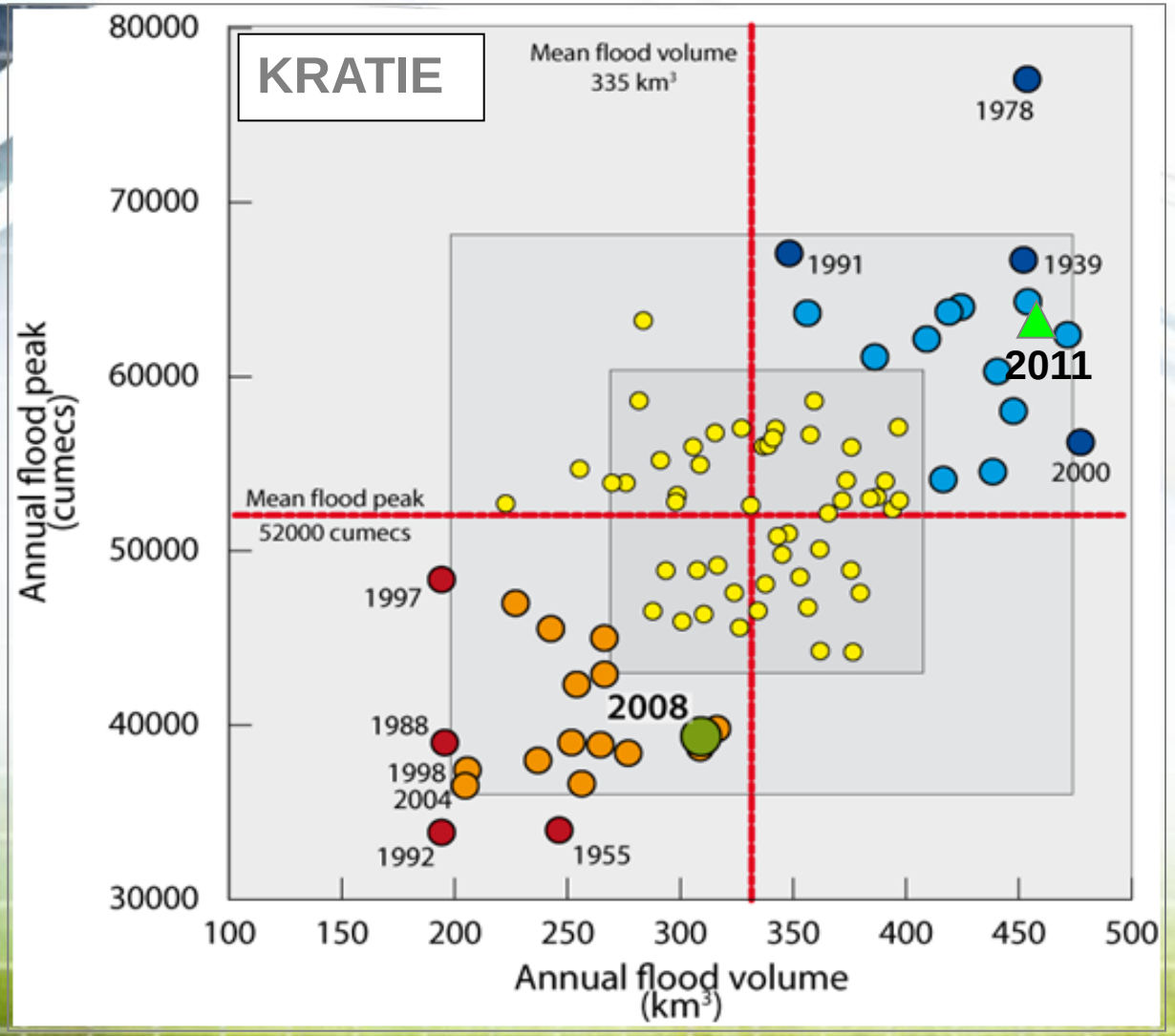


The floodplain regulates the flow

- *Flood peak reduction due to storage area in floodplain*
- *Flow increase in dry season by gradual drainage of flood waters*



YEAR 2011 FLOOD: SITUATION & CHALLENGES



Peak discharge 2011: 63,250 m3/s
(2000: 57,000 m3/s)

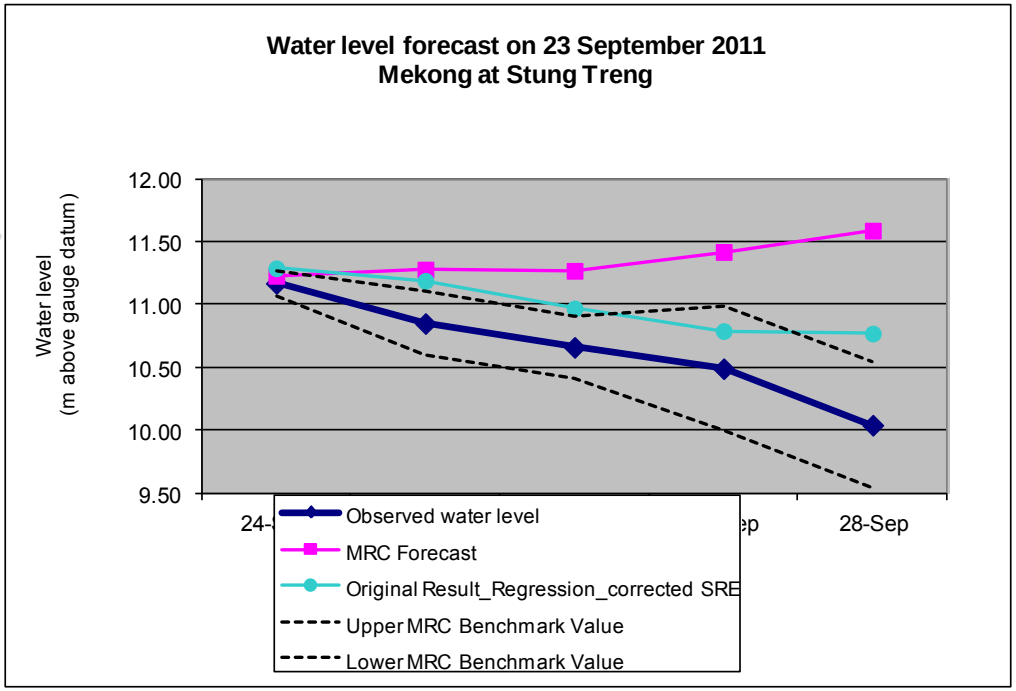
Flood volume 2011: 455 km3
(2000: 475 km3)

Recurrence interval
2011: 1:20-30 yrs
(2000: 1:30-40 yrs)

MRC FORECASTS IN THE CRITICAL FLOOD SITUATION FROM 21 TO 24 SEPTEMBER 2011 FOR 4 LOCATIONS IN CAMBODIA

The accuracy of the forecast of those stations was influenced by:

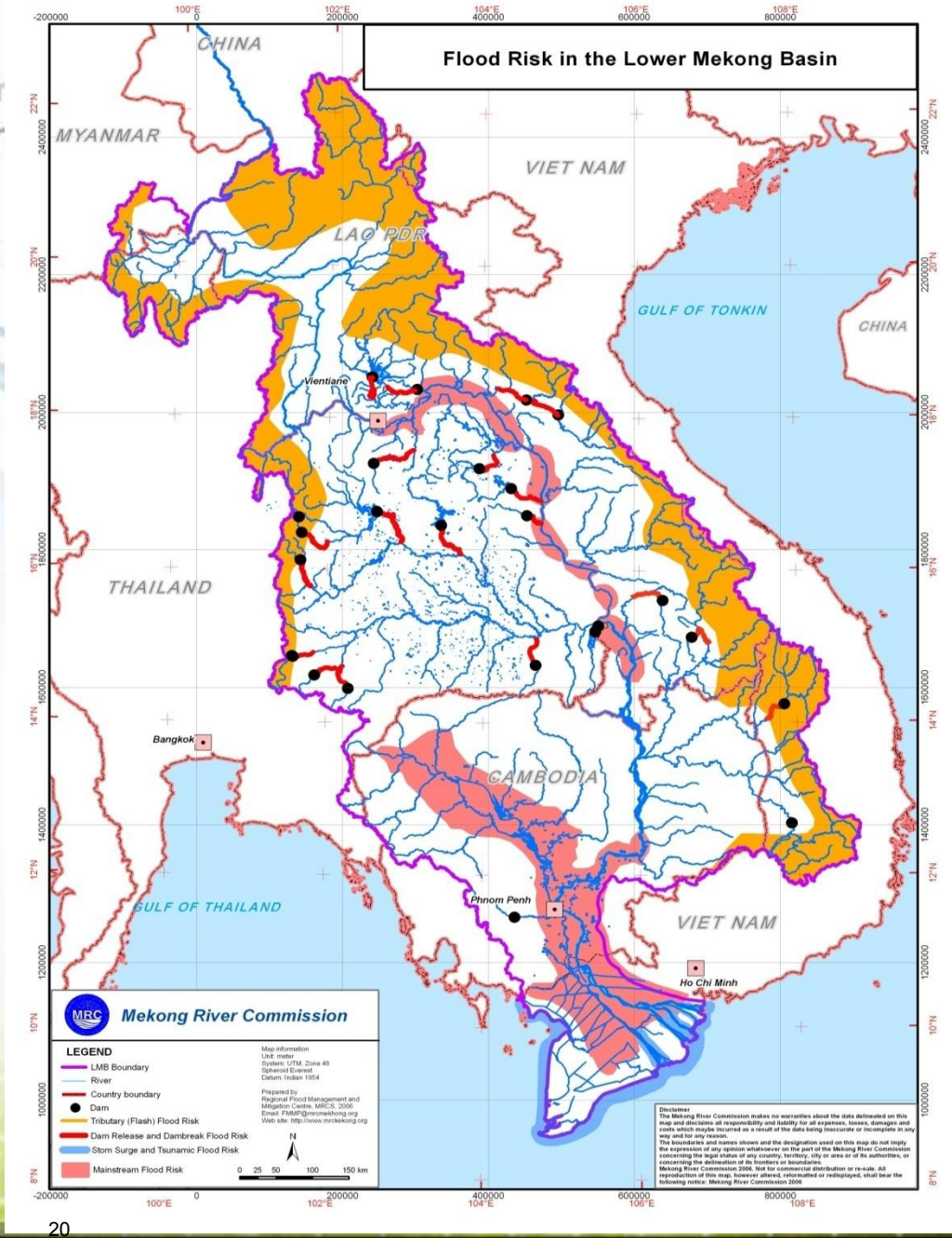
- **the high variability of the SRE & the NWP from NOAA influenced by critical weather conditions (underestimation of run-off values);**
- **internal model functionality (rating curve, model parameters);**
- **the adjustment made by the forecaster (judgment based knowledge, experience and on available information).**

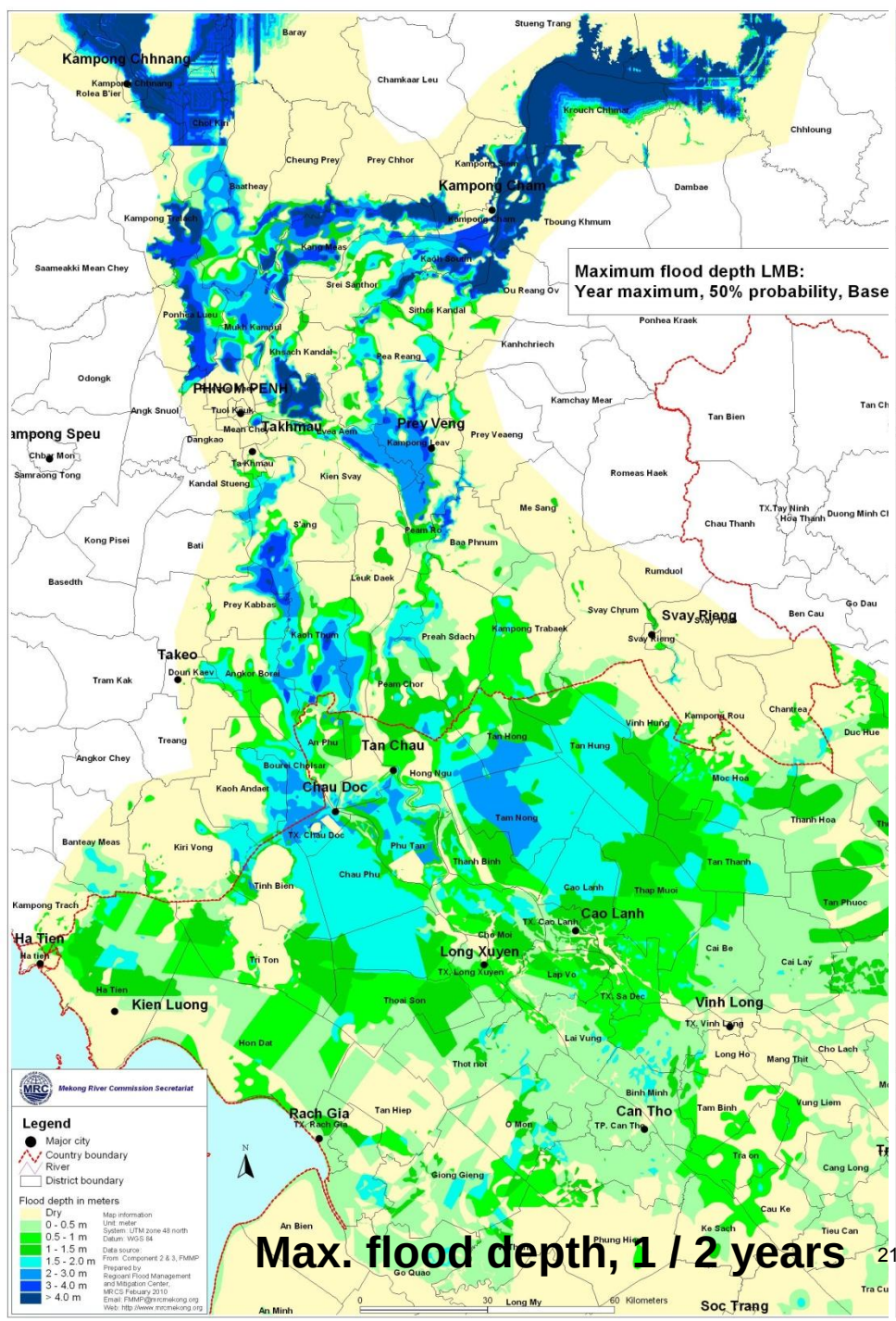


Forecasting points within benchmark:	
MRC-forecast	1/5
MRC RC	1/5

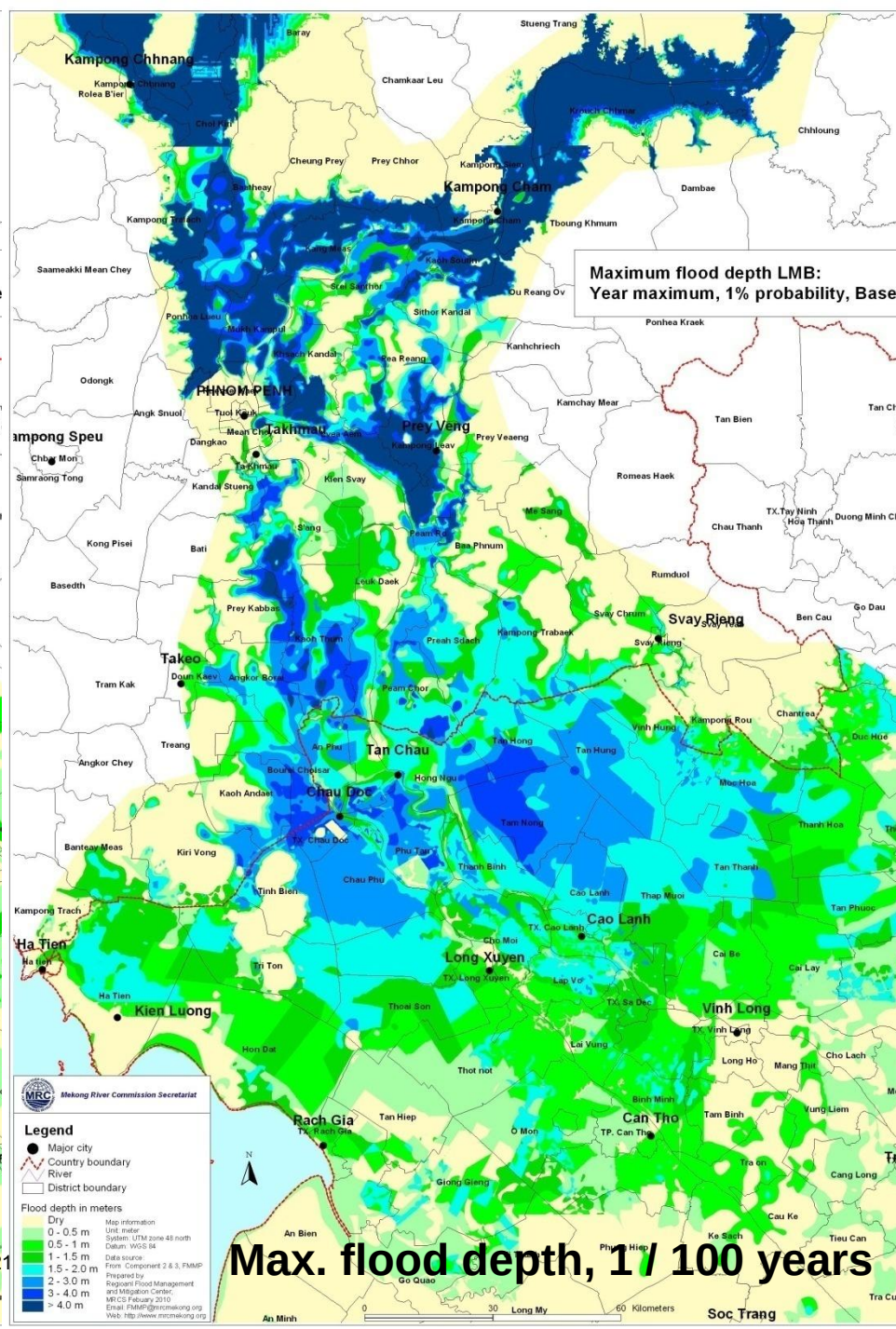
Lack of topography map.

Flood extent map just for pilot areas

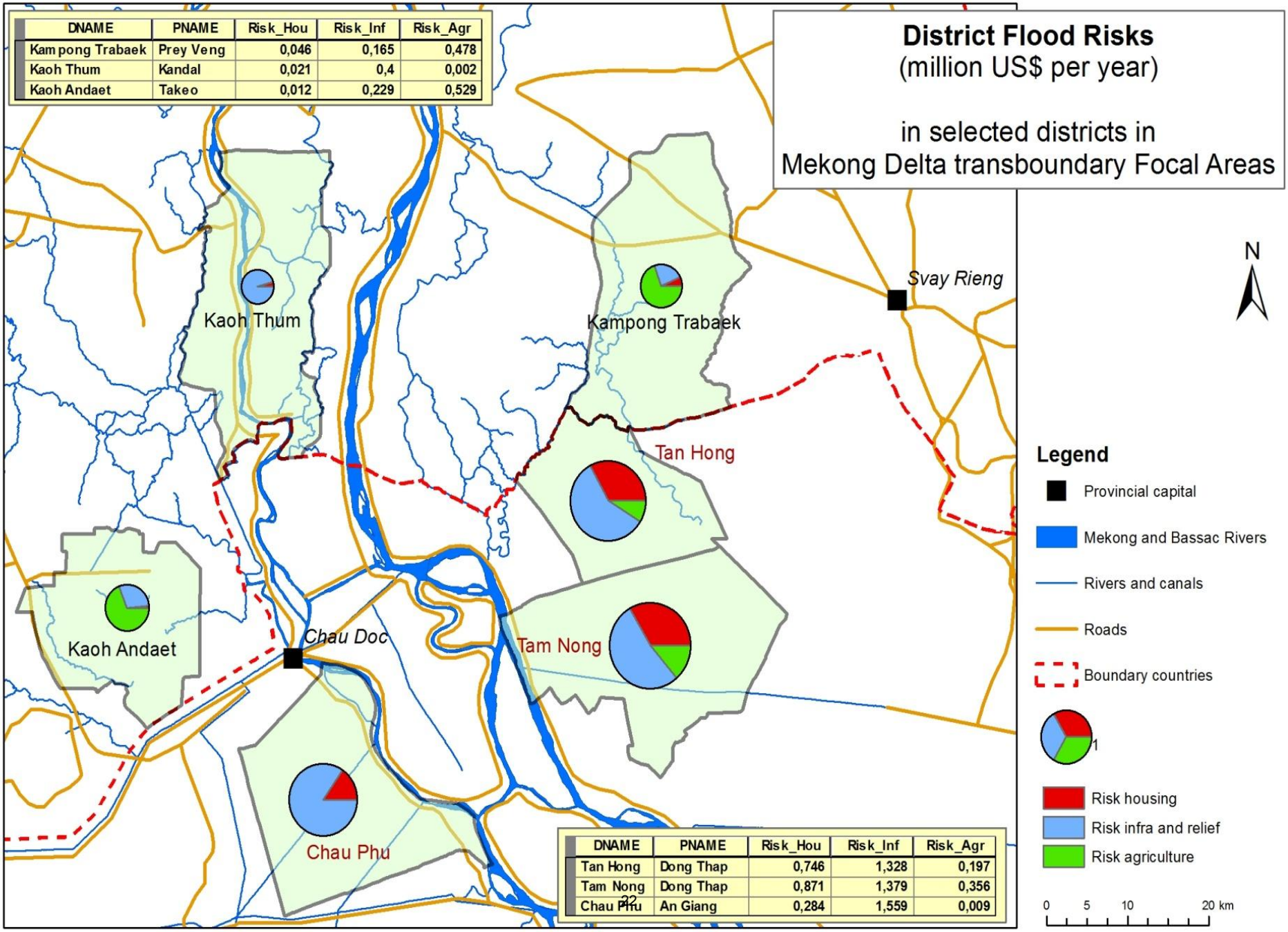




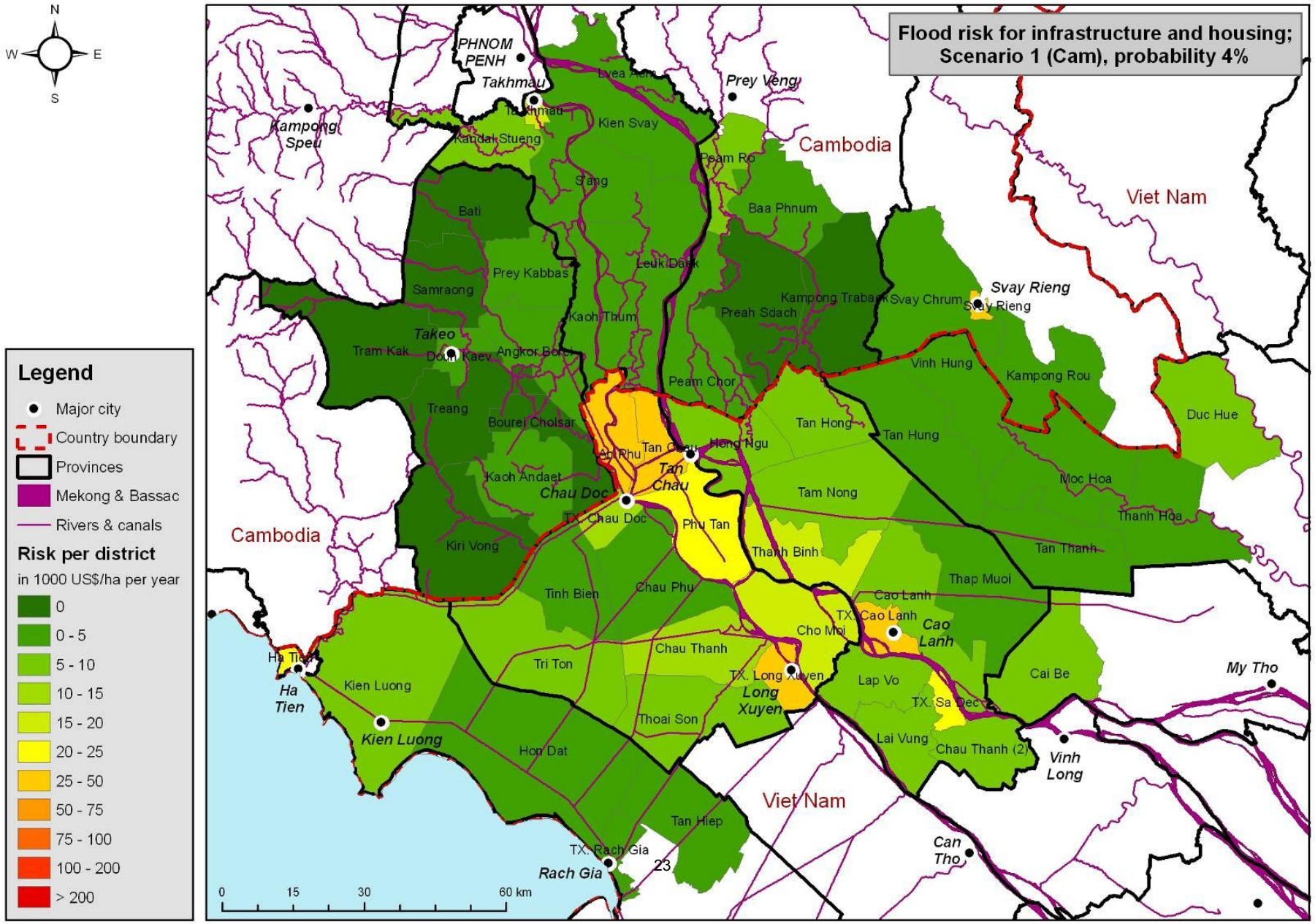
Max. flood depth, 1 / 2 years



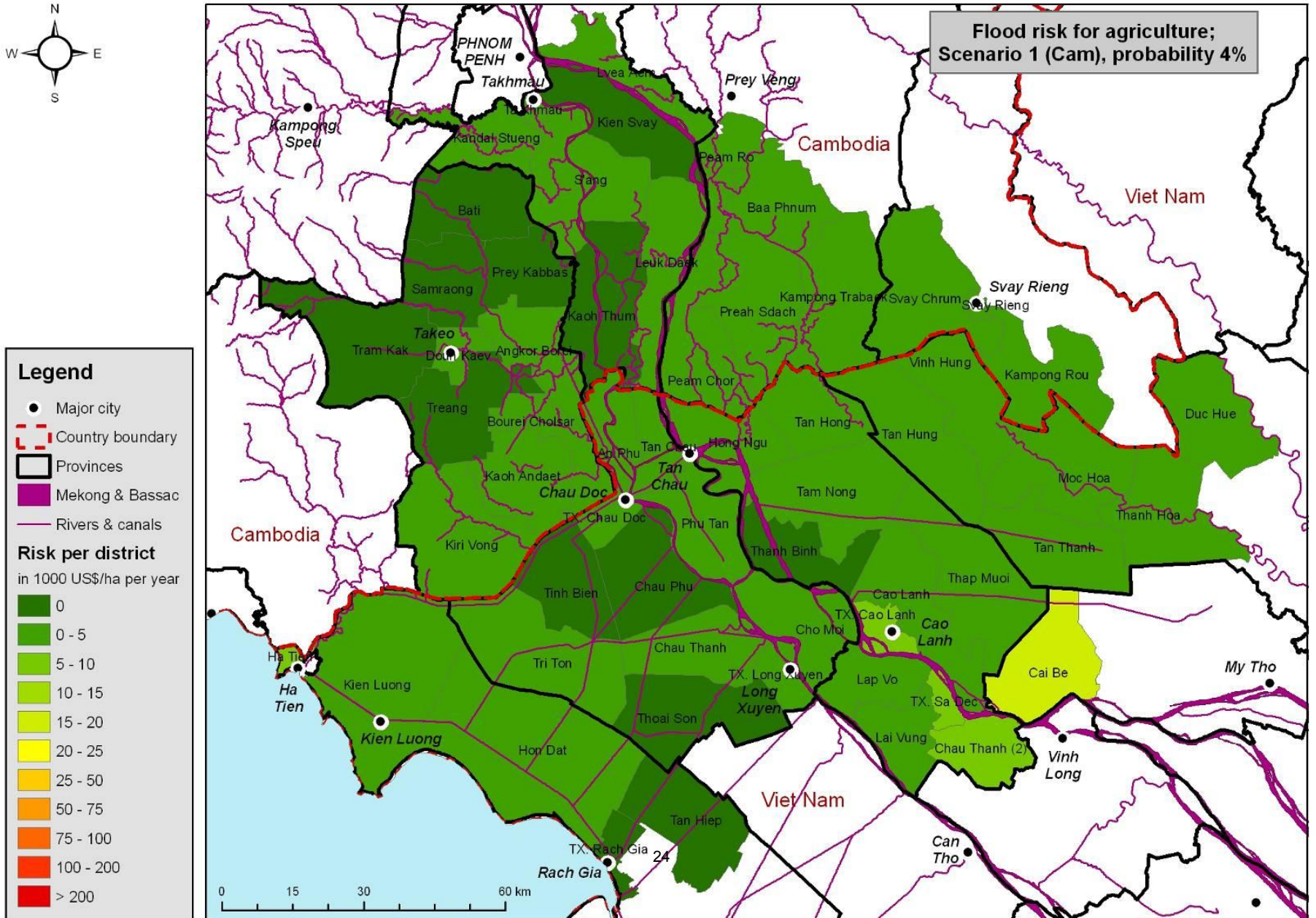
Max. flood depth, 1 / 100 years


DNAME PNAME Risk_Hou Risk_Inf Risk_Agr
Kampong Trabaek Prey Veng 0,046 0,165 0,478
Kaoh Thum Kandal 0,021 0,4 0,002
Kaoh Andaet Takeo 0,012 0,229 0,529
District Flood Risks
(million US$ per year)
in selected districts in
Mekong Delta transboundary Focal Areas
N
Svay Rieng
Kaoh Thum
Kampong Trabaek
Tan Hong
Kaoh Andaet
Chau Doc
Tam Nong
Chau Phu
Legend
Provincial capital
Mekong and Bassac Rivers
Rivers and canals
Roads
Boundary countries
1
Risk housing
Risk infra and relief
Risk agriculture
0 5 10 20 km
DNAME PNAME Risk_Hou Risk_Inf Risk_Agr
Tan Hong Dong Thap 0,746 1,328 0,197
Tam Nong Dong Thap 0,871 1,379 0,356
Chau Phu An Giang 0,284 1,559 0,009

Flood risk map at p=4%, Infrastructure and Housing

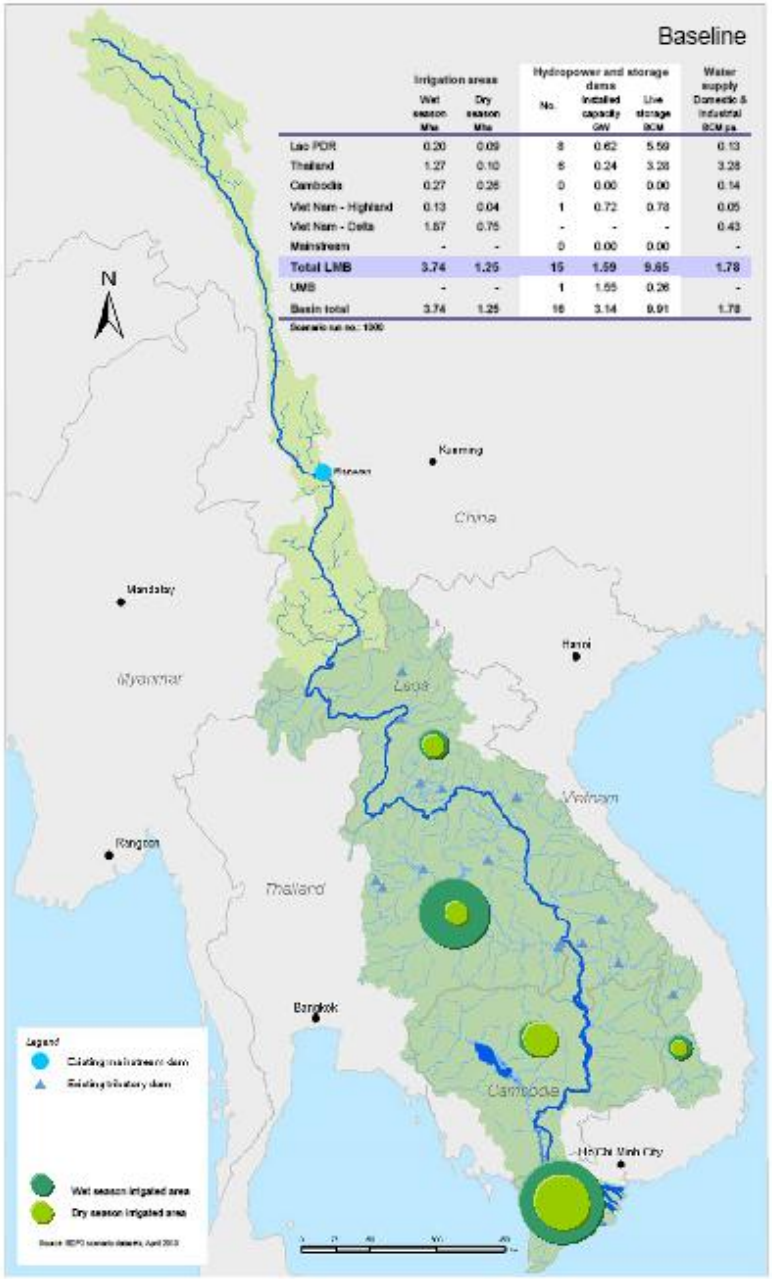


Flood risk map damage at p=4%, Agriculture



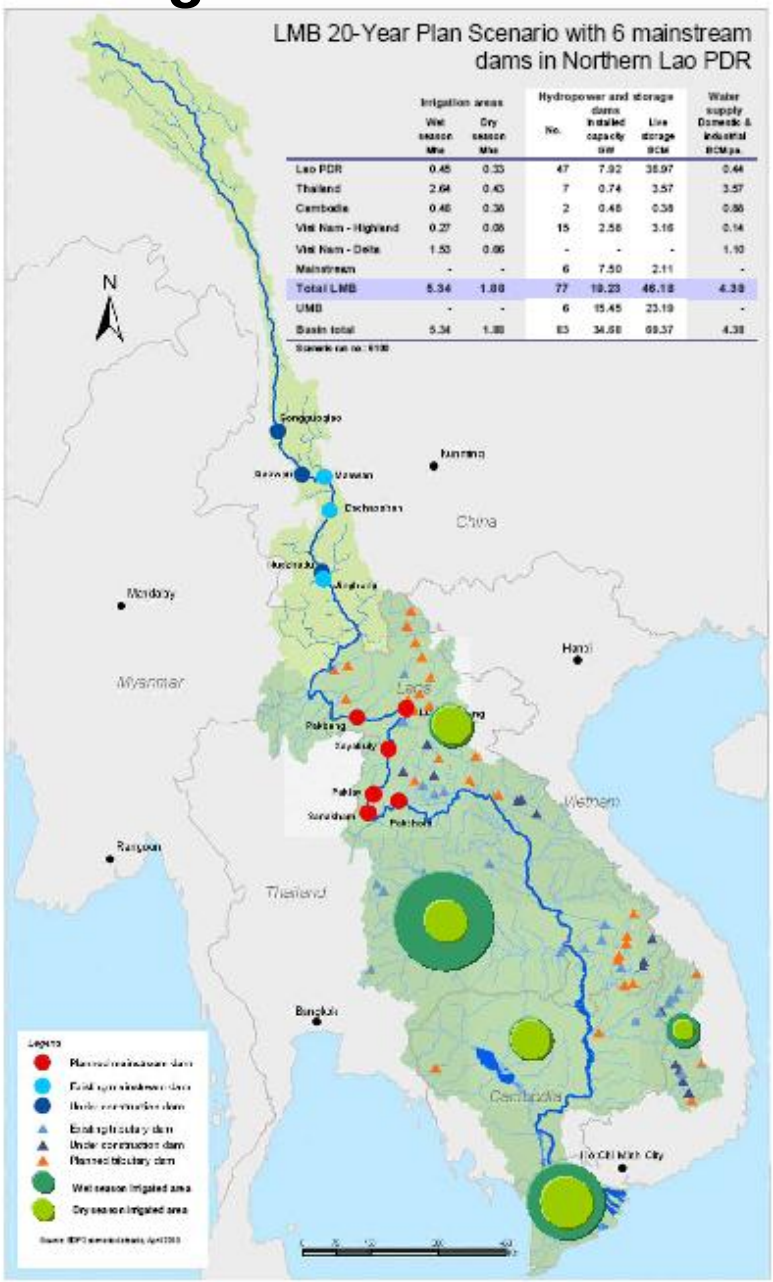
3. Flood Management and Mitigation
(medium and long term)

Basin Development Planning



	Irrigation areas		Hydropower and storage dams			Water supply
	Wet season Mha	Dry season Mha	No.	Installed capacity GW	Live storage BCM	Domestic & industrial BCM pa
Lao PDR	0.20	0.09	8	0.62	5.59	0.13
Thailand	1.27	0.10	6	0.24	3.28	3.28
Cambodia	0.27	0.26	0	0.00	0.00	0.14
Viet Nam - Highland	0.13	0.04	1	0.72	0.78	0.05
Viet Nam - Delta	1.67	0.75	-	-	-	0.43
Mainstream	-	-	0	0.00	0.00	-
Total LMB	3.74	1.25	15	1.59	9.65	1.78
UMB	-	-	1	1.55	0.26	-
Basin total	3.74	1.25	16	3.14	9.91	1.78

Scenario run no.: 1000



	Irrigation areas		Hydropower and storage dams			Water supply
	Wet season Mha	Dry season Mha	No.	Installed capacity GW	Live storage BCM	Domestic & industrial BCM pa
Lao PDR	0.45	0.33	47	7.92	38.97	0.44
Thailand	2.64	0.43	7	0.74	3.57	3.57
Cambodia	0.46	0.36	2	0.46	0.58	0.86
Viet Nam - Highland	0.27	0.08	15	2.56	3.16	0.14
Viet Nam - Delta	1.53	0.66	-	-	-	1.10
Mainstream	-	-	6	7.50	2.11	-
Total LMB	5.34	1.88	77	19.23	46.18	4.38
UMB	-	-	6	15.45	23.19	-
Basin total	5.34	1.88	83	34.68	69.37	4.38

Scenario run no.: 6100

Water resources development projects.

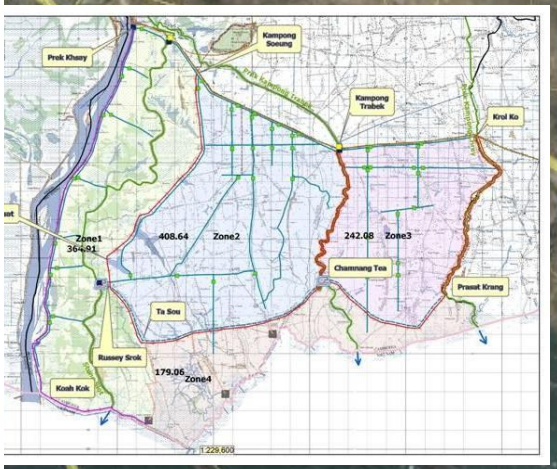
Phnom Penh, Cambodia

Land-use changes, industrialisation, urbanisation, irrigation & drainage, flood protection, etc.

+

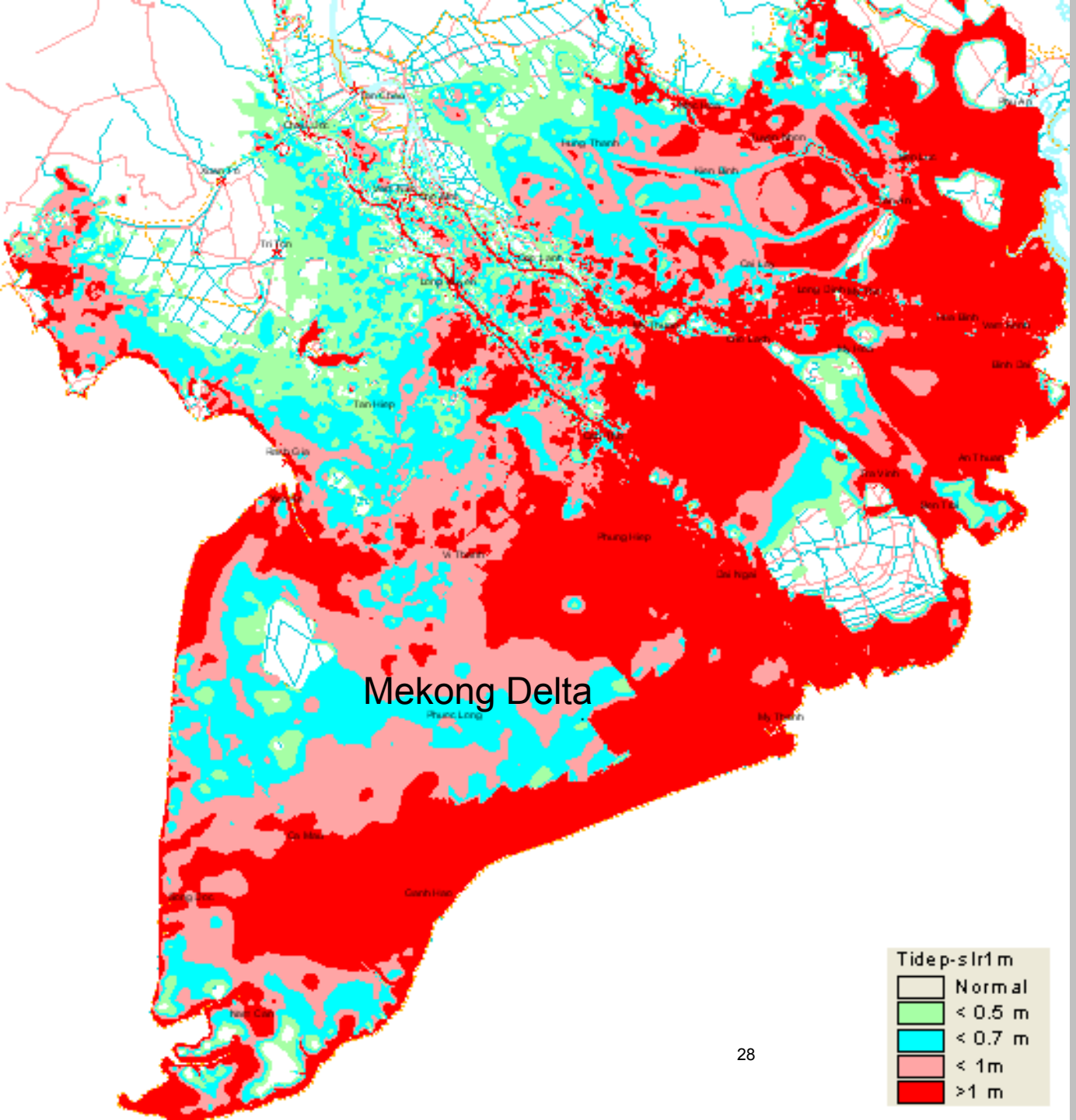
impacts climate change

Cambodian Floodplain



…all these developments lead to **reduction of floodplain storage area…**

Cambodia is moving toward increasing intercountry road networks in Asia, and the basic framework for such plan is being set in place.



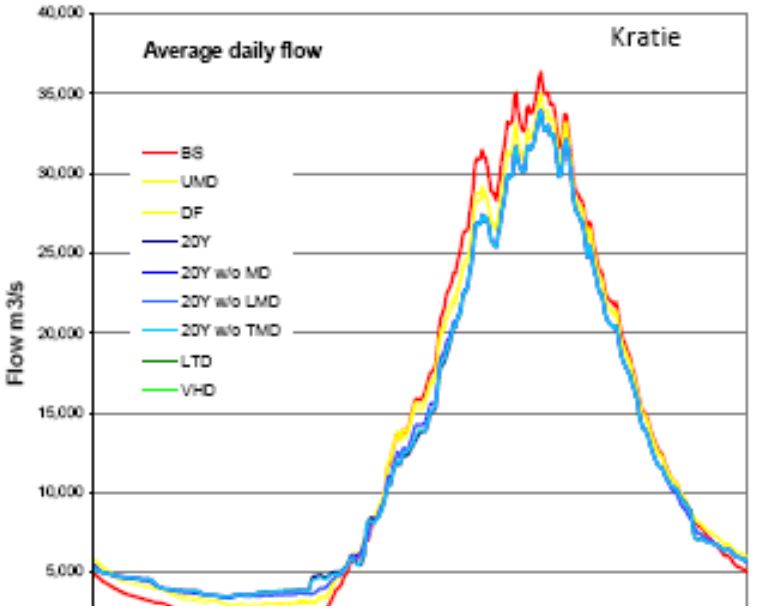
SLR is a **major concern** in the Mekong Delta...

…therefore Viet Nam is drafting its **Mekong Delta Strategy 2100**

SLR will also affect the drainage function in the Cambodian floodplains…

Impacts from upstream developments and CC on floods:

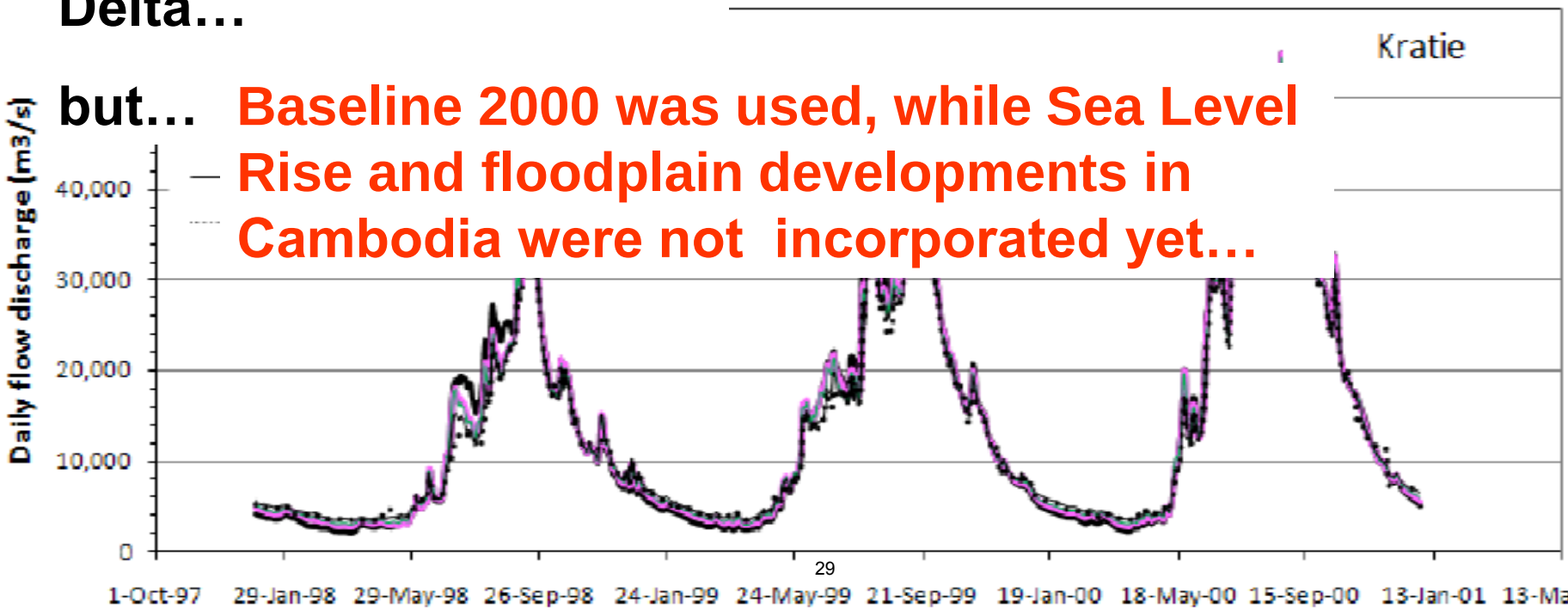
…assume that these would slightly reduce flood flows / flood levels in the CAM floodplain and in the Mekong Delta…



Fig

rent scenarios

but… **Baseline 2000 was used, while Sea Level Rise and floodplain developments in Cambodia were not incorporated yet…**



combined effects of all these developments…

…the **flood risks levels** and thus also the **flood vulnerability of people living in the floodplains of Cambodia and the Mekong Delta in Viet Nam** are expected to dramatically **increase** over the next 3-5 decades.

FMMP therefore sees as one of the major challenges for the future…

…the development of **strategic flood management options to prevent and reduce negative impacts**…

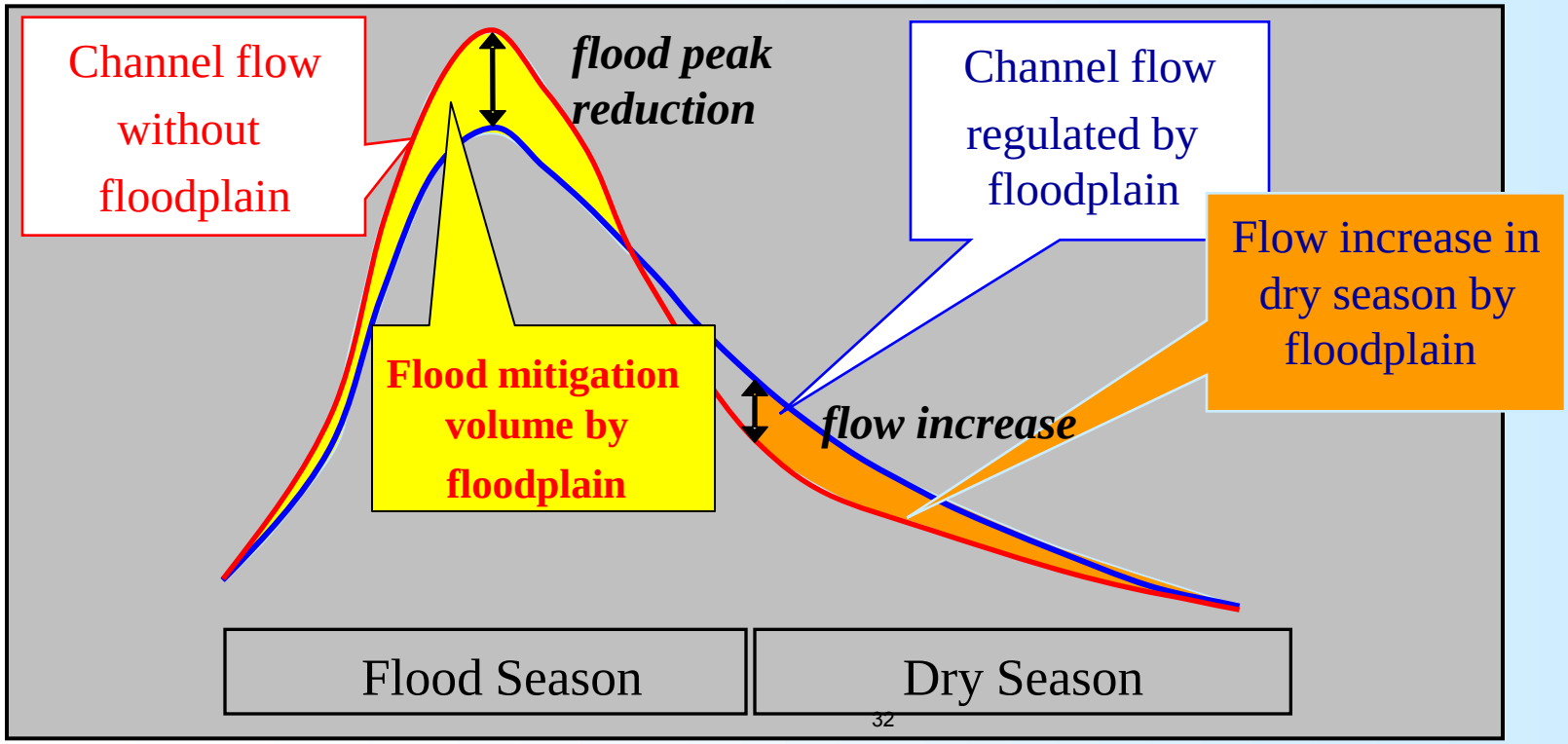
and…

to **incorporate the effects of medium and long term flood risks** into the **spatial planning…**

…by defining, designing and implementing **zoning**, **flood proofing**, flood protection, **design of irrigation & drainage**, road construction in a **strategic** manner in order to **prevent and reduce negative impacts**

Floodplain developments will cause reduction of the floodplain storage area

- ***Reduction of storage area will increase the flood peak, while Sea Level Rise will impact the flood duration***



Questions for discussion

- **Given the dramatic increase in potential flooding, what measures should be undertaken by regional governments to reduce risk, save lives, and protect property?**

- **Knowing that land-use changes impact the floodplain, what recommendations can your group develop to reduce flood risk while still allowing for economic growth?**

Thank you for your attention

SESSION 1: HYDROLOGY & HYDRAULICS

BLUE

Q1. Given the dramatic increase in potential flooding, what measures should be undertaken by regional governments to reduce risk, save lives, and protect property?

- Early warning system (timely information sharing)
- Building regulation
- Updated map (vulnerable areas)
- Forecasting
- Plant forests upstream
- Evacuation plans and infrastructure
- Conduct regular exercises
- Increase awareness and information dissemination
- Regular inspection programs
- Budget
- Contingency plan
- Modeling
- Communication partners and networks

Q2. Knowing that land-use changes impact the floodplain, what recommendations can your group develop to reduce flood risk while still allowing for economic growth?

GREEN

Q1. Given the dramatic increase in potential flooding, what measures should be undertaken by regional governments to reduce risk, save lives, and protect property?

Before

- Identify flood risk areas (topography)
- Conduct risk assessment (ex. hazard mapping)
- Prepare a contingency plan, including mechanism for humanitarian assistance)
- Make a regional agreement for joint assessments and response / mitigation activities

After

- Evacuate people
- Collect information
- Prepare materials and personnel
- Disseminate information
- Recovery plans

Q2. Knowing that land-use changes impact the floodplain, what recommendations can your group develop to reduce flood risk while still allowing for economic growth?

- Conduct a scientific study on land-use changes using local economic assessments
- Provide warning information to people to prepare
- Mitigation measures, including building codes, regulations & laws, and enforcement
- Managing forests, water, etc
- Changes in agricultural practices

RED

Q1. Given the dramatic increase in potential flooding, what measures should be undertaken by regional governments to reduce risk, save lives, and protect property?

Government Measures	Myanmar	Lao PDR	Thailand	Cambodia	Viet Nam
1. Stop deforestation (ex. reforestation)	x	x	x	x	x
2. Structural water management	x	x	x	x	x
3. land concession for forestry (ex. regulatory law)	x	x	x	x	x
4. Improve flood forecasting (early warning system)				x	
5. Regional regular forum (strengthen regional collaboration)	x	x	x	x	x
6. National disaster management agency and plan exists	x	x	x	x	x

- Myanmar: continual regular regional forum for collaboration every three months
- Lao PDR: structural water management
- Thailand: Stop deforestation
- Cambodia: Land concession for forestry activities
- Viet Nam: better flood forecasting and early warning

Q2. Knowing that land-use changes impact the floodplain, what recommendations can your group develop to reduce flood risk while still allowing for economic growth?

Recommendations	Myanmar	Lao PDR	Thailand	Cambodia	Viet Nam
1. Better land-use management (start dialogue at national – regional)	x	x	x	x	x
2. Drainage to release flood water and building dump to protect from flood and sea level rise	x	x	x	x	x
3. Physical infrastructure integrated into disaster risk reduction measures				x	
4. Evacuation plans (safe plans)	x	x	x	x	

WHITE

Q1. Given the dramatic increase in potential flooding, what measures should be undertaken by regional governments to reduce risk, save lives, and protect property?

Save Lives

- Site visit to determine needs/requirements (rescue)
- Local government – short and long term plans for early warning
- Identify safe places, transportation, resources
- Short and longer term plan for food, water, shelter, sanitation and health

Reduce Risk

- Early warning system
- Infrastructure – water retention – dams
- Provide information to the community

Protect Property

- Land-use plans
    - Drainage
    - Development (approved areas)
    - City planning – water diversion
    - New construction – adaptive for flooding
    - Floating “house”
    - Security (protection)

YELLOW

Q1. Given the dramatic increase in potential flooding, what measures should be undertaken by regional governments to reduce risk, save lives, and protect property?

- Upstream/downstream communication
- Well understood and agreed upon plan by all parties (affected community all the way to the national disaster management organization).
- Education dissemination on risk reduction plan
- Community-based evacuation plan
- Evacuation and mitigation plans regularly practiced
- Understand what normal and abnormal flood conditions are
- Differences in acceptable water levels by each country along the Mekong
- Adequate early warning system
- Establish a pilot to be practiced at all levels (local through international)
- Relocation of people in flood areas (plan for the whole basin)
- Economic and strategic flooding
- Mitigation and recovery plan need to be joined

Civil-Military Integration: Case Study 1

Review the following scenario with your work group. What are three actions that the Host Nation, US Government, or the International Humanitarian Community could have taken that would have changed the outcome for the scenario below?

Republic of Georgia
Complex Emergency
2008

Georgian Armed Forces entered into the breakaway region of South Ossetia to assert Georgian governance of the region - a de facto (yet largely unrecognized) independent republic that had support from neighboring Russia. Russia responded by sending its own military into Georgia. To support humanitarian relief, the U.S. European Command (EUCOM) was asked to send ships to the region from Italy. These U.S. ships were filled with humanitarian supplies that were purchased on the open market in Italy. These supplies (pictured above) included boxed milk that spoiled, infant formula, loose hygiene items (toothbrushes, soap, etc), cookies, candy, and plastic ware.

These donations were full of useless/inappropriate/potentially harmful items. No local Host Nation National Disaster Management Agency or NGO asked for these items. What could we have done differently?

Civil-Military Integration: Case Study 2

Review the following scenario with your work group. What are three actions that the Host nation, the US government, or the international Humanitarian community could have taken that would have changed the outcome for the scenario below?

Myanmar
Cyclone Nargis
2008

One of the strongest cyclones every recorded, Cyclone Nargis made landfall in Myanmar in May 2008. To support humanitarian relief, the U.S. Pacific Command (USPACOM) sent five C-130 flights per day of supplies from Thailand into Myanmar. In the first few days, many flights were filled with bottled water. However, some planes were also filled with purchased supplies from Thailand. Purchased items included: first aid kits written in Thai (pictured above) that included methyl alcohol which would be dangerous when swallowed; paper-thin plastic sheeting; and non-collapsible water containers. To complicate matters, the civilians receiving the aid in Myanmar had no ability to verify if commodities were actually reaching the beneficiary population. After a week or so, NGO partners were able to serve as consignees to receive the some of the goods. What could we have done differently?

SESSION 2: CIVIL-MILITARY INTEGRATION

BLUE

Q. What could we have done differently?

Host Nation

- Communication on what is needed
- Inform what is available
- AADMER
- Lead coordination – institution with responsibility

US Government

- Quality of items sent – shelf life
- Awareness
- Follow SPHERE standards

International Humanitarian Agencies

- Coordinating mechanisms
- Assisting local NGOs

Prior coordination within countries and organizations

GREEN

Q. What could we have done differently?

Actions

- Organize station for all kinds of donated items
- Pull out needs for response
- Follow SPHERE minimum standards
- Coordination (identify one agency to support quality control by UN Cluster)
- Media
- Consider local markets (local economy [ex. rice])

RED

Q. What could we have done differently?

- Coordination (joint assessments, meetings, etc) among:
    - host nation
- Foreign government/donor
    - Humanitarian Community (JICA, OCHA, UN, etc)
- Multi-sectoral working group (ex. health, civil-military, etc)

- Request quality items for disaster response
- Communicate to donors what is needed
- ASEAN, UN-OCHA, USAID, Host Nation, and others must coordinate and communicate to ensure response is efficient and the right type of aid is delivered.
- Ensure appropriate language translation is available to requests and offers are properly understood
- Quality assurance of donated items
- Donor database management system

WHITE

Q. What could we have done differently?

Best Practices

1. Work together through the cluster system
2. Setup civil-military coordination center
3. Setup liaisons between civil and military organizations

Host Nation

- Should identify in advance what items are needed
- Identify areas in country where items can be purchased locally
- Should decide if they need donations at all or what type
- Civilian authorities must be transparent with NGOs, as well as military on needs and plans

International Community

- Ensure appropriate distribution of labor among aid providers
- Work together to identify needs and communicate; ensure information is made available

Foreign Government

- US Embassy in the country asks what host nation and/or international community needs
- USAID requests to be informed in advance to provide technical guidance/better communication
- Confirm if aid providers (international community) can take the supplies
- Consignee identified in advance

YELLOW (GOLD)

Q. What could we have done differently?

- Essential supplies (donor pre-positioned, legal waiver, representatives to monitor distribution)
- Ask host country what the needs are (need to be prioritized)
- Try to buy local items
- Cash donations
- Deliver goods that are appropriate to the needs assessment (ex. water purification kits)

- Providing items that are in the local language and are fully organized before shipment
- National Disaster Management Organization focal points need to be known ahead of time
- Understand what has already been shipped by others
- Distribution is key; need logistical lift organized and managed
- Phase 1: monitor; Phase 2: needs assessment: Phase 3: distribute, ensure, and re-assess

Scenario: Large Scale Floods

Planning, Collaboration, Coordination and Response to an Large Scale Emergency

Objectives

On the session, you will:

- First understand the scenario you are faced with
- Second, identify the main steps that should have already taken place in preparedness and coordination. Who should be coordinated with in the preparedness phase?
- Third, how should you respond and what are some of the issues which could arise including issues while collaborating and coordinating with others including International organizations?

Remember

Key actions to prepare for and respond to emergencies

- ✓ What is your role
- ✓ How should you Prepare
- ✓ When and how do you respond
- ✓ What is the role of others

Scenario Case Study

Also concentrate on your

Main emergency response steps during

- first 24 hours
- first week

Scenario

- It is late August and rain fall has persisted throughout the month with no sign of it easing off.
- It is not clear if the two typhoons now hitting the coast of Vietnam will hit Cambodia yet the Mekong River has already begun to flood in NE Thailand and Lao.
- Thai reservoirs in eastern Thailand near the border with Cambodia are overflowing and the RTG is threatening to release flood gates which might cause dangerous flash flooding in parts of the NW Cambodia.
- Meteorologist are predicting the worse and unfortunately a third storm is headed out of the north China Sea for Cambodia and gaining more power as it moves.

Questions

- What should already be in place in terms of preparedness both along the Mekong and in NW Cambodia to mitigate flooding?
- It looks like the flood waters will be even worse than previously predicted, should people living in areas along the Mekong which traditionally flood occurs be moved or relocated? Some say they are willing while other refuse to move and flood water are rising so fast it is life threatening.
- Reports were received that the Thai are opening their gates and many fear flash flooding which should be done now to help save lives and help prevent big damages?

SESSION 3: FOREIGN HUMANITARIAN ASSISTANCE

BLUE

Q1. What should already be in place in terms of preparedness both along the Mekong and in NW Cambodia to mitigate flooding?

- Warning system
- Safe place, high grounds
- Good communication with locals
- Tunnels and ditches to help move flood waters
- Awareness of damage and plan
- Who should help? Military (equipment/supplies), civilian institutions (hospital staff, people helping people), Red Cross

Q2. Reports were received that the Thai are opening their gates and many fear flash flooding which should be done now to help save lives and help prevent big damages?

- Communication vital (how much water, etc)
- Embassy contact, UN-OCHA
- Evacuate people
- Prepare aid

- CMAC involvement for land mines

Q3. It looks like the flood waters will be even worse than previously predicted, should people living in areas along the Mekong which traditionally flood occurs be moved or relocated? Some say they are willing while other refuse to move and flood water are rising so fast it is life threatening.

- Cambodia: Encourage to move, but in the end force.
- Thailand: Security of property, evacuation centers, police assistance, keep old people close to home (if possible); in the end, move them
- Laos: Local authorities first (each village has a plan to move people); national level later

Top down and rapid deployment team to assess damage

GREEN

Q1. What should already be in place in terms of preparedness both along the Mekong and in NW Cambodia to mitigate flooding?

- Evacuation plan/emergency action plan
    - Areas
    - Transportation
    - Life/logistics/shelter
    - Security/protection

- Monitoring systems
    - Levels/forecasting
    - Flood-plain saturation
    - Communication systems
    - Risk assessment
- Pre-positioned assets

Q2. It looks like the flood waters will be even worse than previously predicted, should people living in areas along the Mekong which traditionally flood occurs be moved or relocated? Some say they are willing while other refuse to move and flood water are rising so fast it is life threatening.

-Move or relocate

-Begin evacuation

-Relocate vulnerable populations

-Monitor persons left behind

-Use of more assertive methods to re-locate persons

-Always protect life

Q3. Reports were received that the Thai are opening their gates and many fear flash flooding which should be done now to help save lives and help prevent big damages?

-Constant coordination and communication with Thai authorities

-Communicate concerns to affected population

-Communicate actions people need to take

-Use of media outlets (consistent messages, actionable, where to get assistance)

RED

Q1. What should already be in place in terms of preparedness both along the Mekong and in NW Cambodia to mitigate flooding?

- Alarming on the development of the flood
- Monitor and control flood management
- Civil and military working together to mitigate the flood
- Develop and update the national and regional contingency plan – clear role of responsibility
- Emergency meeting to discuss the response plan
- Monitor the movement and development of the flood
- Activate the evacuation plan, to rescue the affected population
- Deploy the rescue team and respond to the needs of the affected population
- Coordinate with the development partners and NGOs to help the response

Immediate Relief response

- Food supply
- Sharing information
- NCDM & PCDM coordinate the response with all stakeholders

What should we do to be prepared to respond?

- Prepare the rescue equipments and vehicles to rescue the affected population
- Activate the safe area for the people to stay there in temporary shelter
- Sharing the alarming – early warning information through media and government mechanisms – PCDM, DCDM, CCDM, etc.
- Coordinate and regularly communicate with the nearby countries on the possible development and affect of the flood
- Working with the nearby countries to mitigate the possible affects

WHITE

Q1. What should already be in place in terms of preparedness both along the Mekong and in NW Cambodia to mitigate flooding?

1. Preparedness
    - Evacuation areas pre-identified and equipped, and population informed (identify places appropriate for high floods)
    - Early warning: informing population in advance (what is happening, what they should do)

2. Measures to Mitigate Flooding
    - Prepare sandbags
    - Maintain/clean existing drainage systems
    - Make use of dams for diverting/slowing water flow
    - Prepare/pre-position pumps, fuels and generators
    - Alert responsible authorities

Q2. It looks like the flood waters will be even worse than previously predicted, should people living in areas along the Mekong which traditionally flood occurs be moved or relocated? Some say they are willing while other refuse to move and flood water are rising so fast it is life threatening.

- Re-locate people at risk and provide food, water and re-location services
- Map where people who do not want to move are and bring them water and food
- Medical/first-aid capacity in place
- Find safe place for livestock and support re-location

3. Risk of flash floods and movement of mines
    - Ensure communication between Thai (or other countries along Mekong) and other governments regarding actions that have repercussions in other countries. The Mekong River Commission could be used.
    - Thailand will also have to re-locate people

- Inform population of the different risks of flash floods – encourage re-location
- The area of where mines are is known, although not the specific places
- Survey land mine areas after the flood and invite de-mining department to assist

Q3. Reports were received that the Thai are opening their gates and many fear flash flooding which should be done now to help save lives and help prevent big damages?

- Move people out from the affected areas, possibly to provinces that are not affected (but better to move people only one at a time to prioritized areas)
- Ensure there is enough food, water, etc for longer; evacuation points are ready to host people for longer (sanitation shelter) and prepare recovery phase (ex. crops)

YELLOW (GOLD)

Q1. What should already be in place in terms of preparedness both along the Mekong and in NW Cambodia to mitigate flooding?

Q2. It looks like the flood waters will be even worse than previously predicted, should people living in areas along the Mekong which traditionally flood occurs be moved or relocated? Some say they are willing while other refuse to move and flood water are rising so fast it is life threatening.

Q3. Reports were received that the Thai are opening their gates and many fear flash flooding which should be done now to help save lives and help prevent big damages?

Phase 1

- Agree on roles
- Common understanding of affect and impact of the flooding (pre-mapping of vulnerable areas)
- Communication plan (media –community; country-to-country)
- Pre-positioning of resources
- Community evacuation plan
- Contingency plan completed
- Collaborative communication mechanisms
- Simulate – learn
- Early warning

Phase II

- Lifesaving initiated
- Rapid assessment – joint team
- Who? (cross-sector) (NCDM/ PCDM)
- Re-locate affected populations
- Exercise communication plans (based on the initial needs assessment)
- Delivery humanitarian assistance by sector
- Ongoing assessments
- Meteorology information (predicting impact)
- Village assets?

- RJDM with village leadership
- Ongoing response plan for food distribution
- If residents refuse to move, bring assistance to them

Phase III

- Water subsides – return of displaced persons
- Assessment of damages by sector
- WASH, SHELTER, HEALTH
- Pumps
- Infrastructure Rehabilitation
- Continued relief assistance
- Livelihood creation – continuation
- Exit plan