



# **The Importance of Spatial Data and the Use of Geoportal In Disaster Management:**

**“Public-Private Partnership in SFDRR  
Implementation”**

# Overview:

## Spatial Geoportal Data

### *General...*

- ❑ Decision making at all levels; national, subnational, and local, are expected to quickly in implementation of disaster management plans; either mitigation, reduction, response and recovery;
- ❑ When it comes to an emergency response, speedy and qualified decisions taken in different disaster situations are critical factors for live and dead;
- ❑ Disaster risk mapping is an important exercise for disaster management; gathering data and creating maps for early warning, evacuation, rapid assessment and humanitarian relief, and early recovery;

# Overview...

- ❑ Collecting fundamental information as well as preparing risk and resource maps prior to disasters is required. But producing such maps requires such as physical and social data, and it is considered as a complex decision making, so analytical hierarchy process must be considered;
- ❑ GIS and Spatial Data Infrastructure (SDI) provides platform and capability of data management and making up-to-date maps. So, what are the role of GIS and SDI in disaster management? It helps improve the availability, accessibility, and applicability of spatial information for decision-making;

# Overview...

- ❑ SDI is an effective and efficient disaster management tool as spatial data is the essential element of Emergency Response Systems. It maximizes the use of geospatial information to meet the real needs of users across a wide variety of different sectors and disciplines.
- ❑ Measuring and anticipating the effects of future natural hazards is important in order to implement measures to mitigate the effects of disasters. In all phases of disaster management, satellite-derived information plays an essential role as a synoptic, independent and objective source;

# Overview: Public-Private...

*Global...*

## **The SFDRR:**

- ❑ States have the overall responsibility for reducing disaster risk, it is a shared responsibility between Governments and relevant stakeholders...non-state... (**V. Role of stakeholders**);
- ❑ When determining specific roles and responsibilities for stakeholders, and at the same time building on existing relevant international instruments, States should encourage the following actions on the part of all **public and private** stakeholders (Para 36, SFDRR);

# Overview: Public-Private..., cont'd

*National...*

## **The Law on Disaster Management:**

- ❑ Disaster Management Law: a national legal framework promulgated on 10<sup>th</sup> July 2015 to enforce disaster-resilient, climate change measures and disaster management;
- ❑ **Article 15.-** The National Committee for Disaster Management shall coordinate all disaster management activities together with ministries institutions, armed forces, the public sector, private sector...

# Overview: Public-Private...,cont'd

*National... cont'd*

## **The Law on Disaster Management:**

- ❑ Subsequent to the placing country or area under the disaster situation... the administration on-site and the responsible sub-national committees for disaster management shall have the privilege to mobilize the people, **private and public assets** for the disaster relief...
- ❑ ...emergency response operations and request the ministries-institutions, armed forces, public sector, **private sector**, and health centres to provide specialized services, spaces, shelters and treatment to victims unconditionally...

# Cambodia Experience

- ❑ Disaster Risk Monitoring and Identification
- ❑ Risk Mapping and Zoning
- ❑ Impact Assessment for Emergency Response
- ❑ Disaster Emergency Response and Recovery with participation from wide range of partners.
- ❑ Capacity Building by UNITAR/UNOSAT for using GIS application for disaster response
- ❑ Risk Mapping and Risk Assessment support by WB

**(None were engaged with Private)**

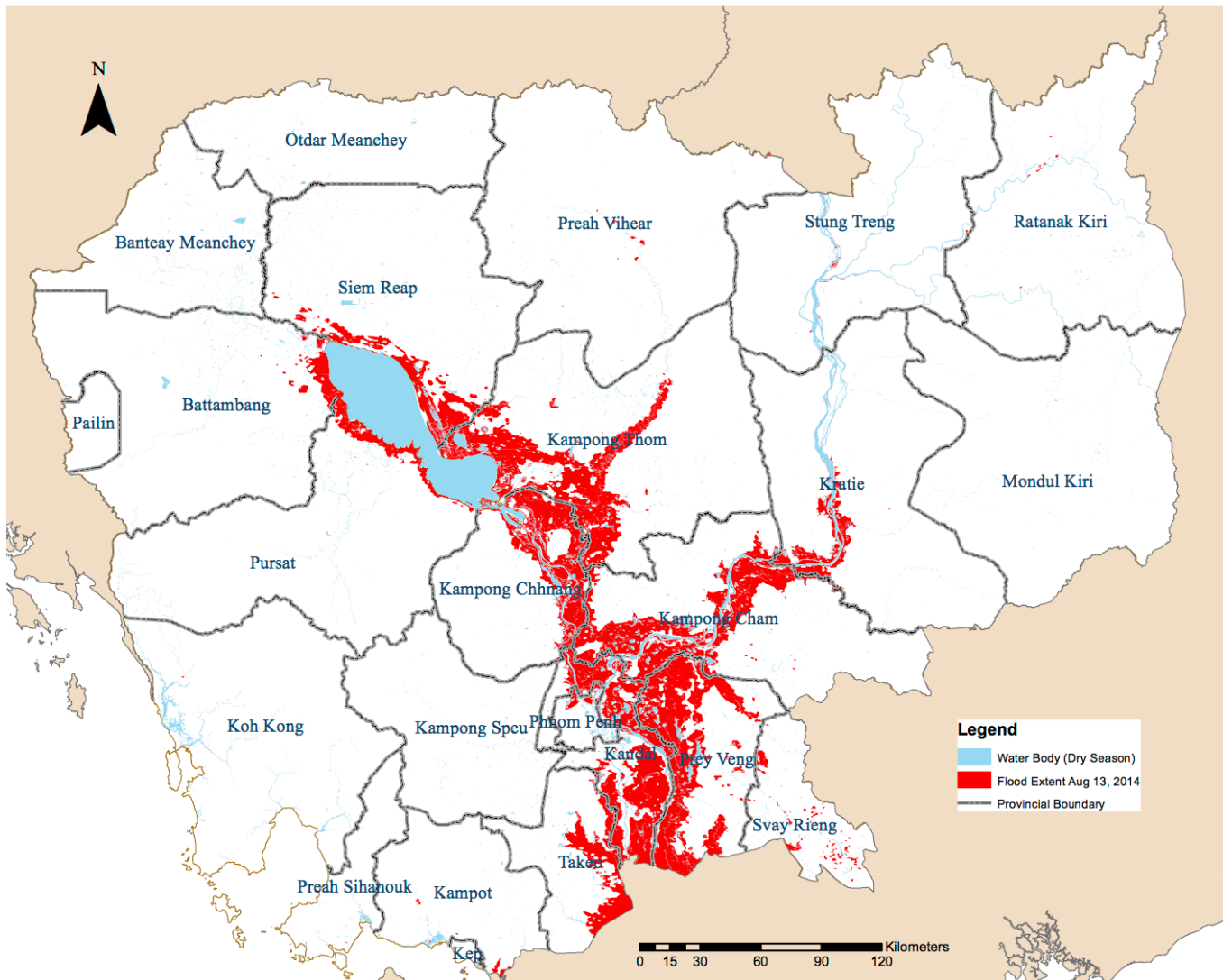


# Flood Impact Assessment (UNITAR/UNOSAT)

## Overview of Flood Extent August 13, 2014, Cambodia



National Committee for Disaster Management  
Emergency Operation Centre



Province	Impact(%)
Battambang	2.07
Kampong Cham	20.36
Kampong Chhn	23.18
Kampong Thom	16.56
Kampot	0.62
Kandal	52.72
Kep	0.49
Koh Kong	0.01
Kratie	3.62
Phnom Penh	10.42
Preah Sihanouk	0.01
Preah Vihear	0.09
Prey Veng	40.61
Pursat	2.84
Ratanak Kiri	0.06
Siem Reap	6.55
Stung Treng	0.21
Svay Rieng	3.56
Takeo	18.79

**Description:**  
This map shows the flood extent on August 13, 2014.

**Data Source:**  
-Ministry of Land Management, Urban Planning and Construction (MLMUPC)  
- Satellite Data: MODIS\_FAS\_Indochina (Terra)  
- Date: 2014212 (07/31/14)

**Disclaimer:**  
The intention of creating this map is to use as a tool for disaster risk management. NCDM and any of their staff make no warranties regarding the precision of any content, and disclaim all legal liabilities, whatsoever, arising from the use of the product. Depiction of boundaries is not authoritative.

# Issues and Challenges

- ❑ What products and services are available and most appropriate for the country?
- ❑ Where to have sustainable access to the high resolution satellite imagery
- ❑ Ability to interpret and assess real time high-resolution imagery
- ❑ Inter-ministry agreement on common use and interpretation for unified coordination and response
- ❑ How to communicate technical and scientific information to end-users and communities

# Challenges

- ❑ Gaps between Disaster Forecasting/Prediction and Actionable Early Warning;
- ❑ No disaster scenario mapping using GIS and remote sensing in DRM;
- ❑ Ability to assess real-time high-resolution imagery;
- ❑ Assess the high resolution satellite imagery;
- ❑ Limitation of Risk Monitoring such as drought
- ❑ Not full range of disaster risk monitoring; assessment, identification and sectoral advisory warning; such as agricultural impact and adaptation recommendations;
- ❑ Limitation of using earth observation and high technology for Disaster Risk Reduction;

# Way Forward and Opportunities: Spatial Geoportal Data

- ❑ Sustainable access to high resolution imagery when required (i.e. availability and timeliness)
- ❑ Capacity building for interpretation by international/regional institutions
- ❑ End-user communication and dissemination
- ❑ Inter-ministry mechanism for sharing and use of satellite-based information
- ❑ National policy formulation based on international best practice

# Way Forward and Opportunities: Partnership and Resources Mobilization

- ❑ Enhance the awareness & knowledge of SFDRR and Law on Disaster Management;
- ❑ Institutionalise and operationalise mechanisms for *Whole-nation-approach* such as **National Platform** through concerted national efforts and intensified Public-Private cooperation
- ❑ Mechanisms for building up and managing the technology, space, GIS and spatial data required for overall disaster management

# Partnership Strategies

- ❑ Platforms for collaboration and partnerships
- ❑ Identification of strategic partners
- ❑ Principles & guidance for partnerships
  - Mechanisms for Privates to engage at the national level and also at the sub-national level;
  - Accreditation

# Modes of Private Sector Engagement

## Business Continuity

Climate-proofing supply chains and operations;  
Safe-guarding own interest

## Business as a Stakeholder

Reaction to public sector or civil society initiatives;  
Primarily in building Infrastructure and  
Providing advisory services

## Business Opportunity

Provision of products or Services in response to a market need

*Source: Opportunities for Private Sector Engagement in Urban Climate Change Resilience Building, Intellecap*

**Thank You!**