

Cambodia • Lao PDR • Thailand • Viet Nam  
For sustainable development



# Council Study

## Domestic and Industrial Water Use Thematic Sub-scenario

5<sup>th</sup> RTWG Meeting  
Siem Reap, Cambodia  
13-14 August 2015

[www.mrcmekong.org](http://www.mrcmekong.org)

## Thematic Sub-Scenarios for Domestic and Industrial Water Use



- Planned Development Scenarios 2020 and 2040 in Domestic and Industrial Water Use Thematic Area includes the water resources development in 2020 and 2040.
- The Domestic and Industrial Water Use will cover the following sub-sectors:
  - Domestic water supply;
  - Industrial development and water consumption; and
  - Sand Extraction.

[www.mrcmekong.org](http://www.mrcmekong.org)

## Proposed Thematic Sub-Scenarios for Domestic and Industrial Water Use



- The sub-scenarios of the domestic and industrial water use are presented as plausible outcomes of the planned development due to varying levels of implementation.
- Three development sub-scenarios are identified to illustrate these likely outcomes, including the driving forces and trends that can affect the level of implementation of the development plans.

[www.mrcmekong.org](http://www.mrcmekong.org)

## Proposed Thematic Sub-Scenarios for Domestic and Industrial Water Use



- **Sub-scenario 1:** Low Development – This sub-scenario takes into account only specific plans are implemented.
- **Sub-scenario 2:** Medium Development – This sub-scenario takes into account not only the specific plans but also vision/strategic development directions are implemented.
- **Sub-scenario 3:** High Development – This sub-scenario also include other development potentials in addition to the implementation of specific plans, and vision/strategic development directions.

[www.mrcmekong.org](http://www.mrcmekong.org)

## Proposed Thematic Sub-Scenarios for Domestic and Industrial Water Use



- When developing the sub-scenarios, the levels of development can be varied for each sub-sector.
- A sub-scenario may represent a low development level for the domestic water use, medium development level for the industrial water use, and high development level for sand extraction industry.
- Due to the limited number of sub-scenarios (i.e., maximum of three) that can be assessed for the domestic and industrial water use thematic area, it is most likely that each sub-scenario will represent the same level of developments for all sub-sectors of this thematic area.

www.mrcmekong.org

## Domestic and Industrial Water Use – BDP2

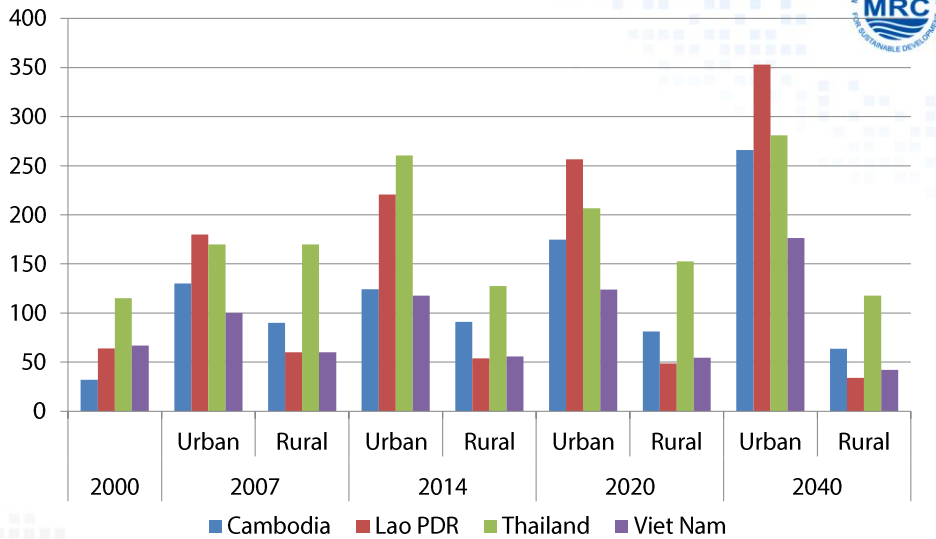


- The water supply assessing during the BDP 2 was mainly based on the population growth, while the industrial demands were taken as 20% of the gross domestic demand.

Country	Average per capita use (lit/day)			
	2000	2007	2030	2060
Lao PDR	64	Rural = 60 Town = 140 Urban = 180	Rural = 80 Town = 160 Urban = 200	Rural = 100 Town = 160 Urban = 200
Thailand	115	170	180	200
Cambodia	32	Rural = 90 Urban = 130	Rural = 100 Urban = 150	Rural = 100 Urban = 170
Viet Nam	67	Rural = 60 Urban = 100	Rural = 80 Urban = 150	Rural = 100 Urban = 175

www.mrcmekong.org

## Domestic Water Use



Average per capita use (l/day)

[www.mrcmekong.org](http://www.mrcmekong.org)

## Industrial Water Use

- According to the UNESCAP (2013), the total water withdrawal of the industrial sector was approximately 1.5% (2006), 4.9% (2005), 4.8% (2007), and 3.7% (2005) of the total water withdrawal for Cambodia, Lao PDR, Thailand and Viet Nam, respectively.

[www.mrcmekong.org](http://www.mrcmekong.org)

## Sand Mining



- According to study by EchoGeo (2013), a total volume of 34.48 million cubic metres (55.2 million tons, density of 1.6 ton per cubic metre of dry sand) of sediment were extracted from the Mekong mainstream in Lao PDR, Thailand, Cambodia, and Viet Nam in 2011. Of which, approximately 90% (49.68 million tons) of the total bulk on average could be considered as sand.

www.mrcmekong.org

## Sand Mining

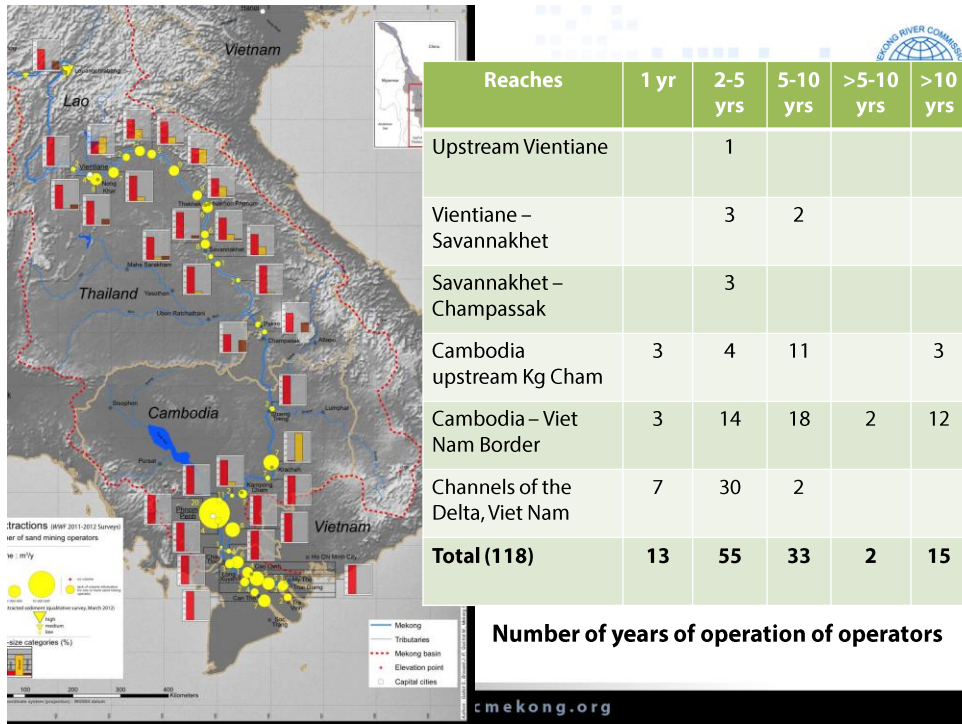


Country	Extractions (m <sup>3</sup> /year)				
	Sand	Gravel	Pebbles/ Cobbles	Total	%
Cambodia	18,748,503	2,044,940	0	20,793,443	60
Lao	904,100	10,000	454,500	1,368,600	4
Thailand	3,677,200	857,740	0	4,534,940	13
Viet Nam	7,750,000	0	0	7,750,000	22

Source: WWF, 2013

**Volume of grain-size categories per country**

www.mrcmekong.org



## Detailed Schedule

Activity	Due Date
1. Draft work plan for the formulation of development scenarios	Completed
2. Progress update – 5 <sup>th</sup> RTWG Meeting	13 – 14 Aug 2015
3. Data collection and Analysis	Jul – Aug 2015
4. Submit a 1 <sup>st</sup> draft report to be discussed at the national consultation workshop	27 Aug 2015
5. National Consultations	Sep – Oct 2015
6. Data collection, data gap filling and analysis	Sep – Oct 2015
7. Final draft formulated development scenarios (data and technical document)	Oct 2015
8. Approval of scenarios and data – 6 <sup>th</sup> RTWG	Oct – Nov 2015 (Tentatively)



**THANKS FOR YOUR KIND  
ATTENTION!**



[www.mrcmekong.org](http://www.mrcmekong.org)