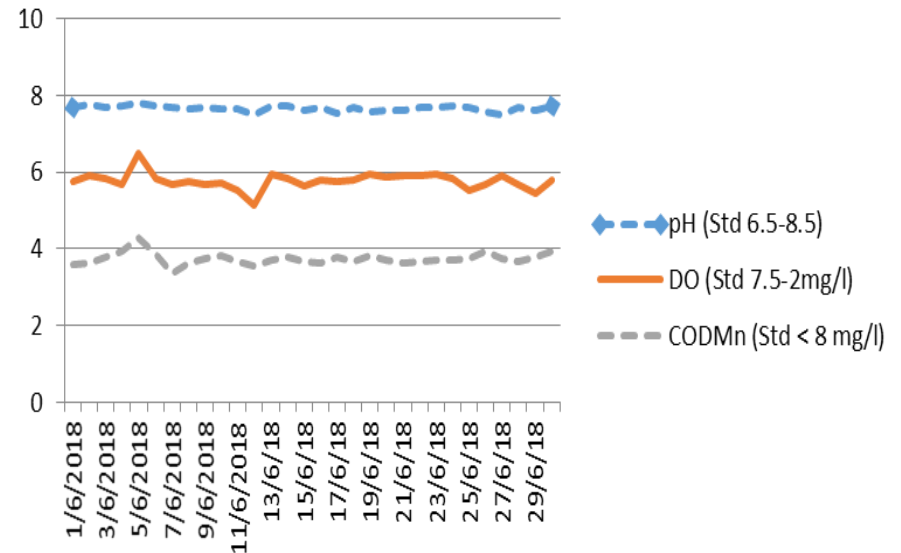


Progress of Water Environment Governance in Cambodia

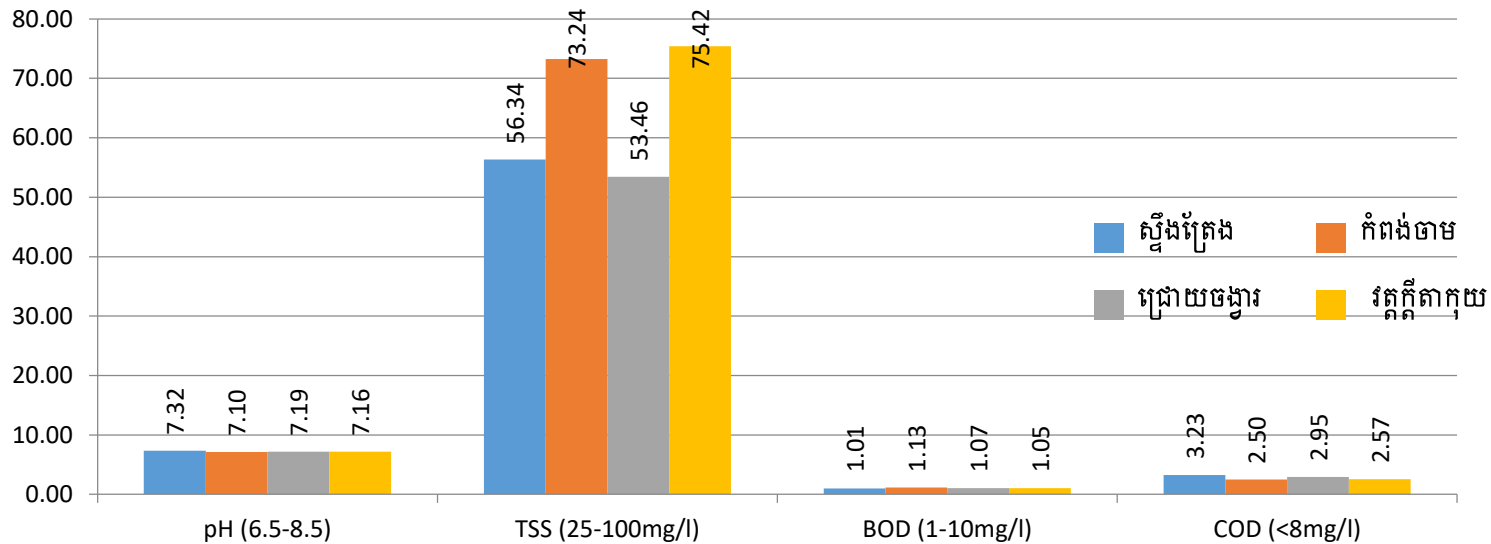
By Mr. Phin Rady , Director of Water Quality
Management Department, EPA, MoE

The 14th WEPA Annual Meeting
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Tokyo

Facts and statistics of water quality



River Water Quality



- Parameter : pH, TSS, BOD, COD, TN, TP
- Commonly, the values of pH, TSS, BOD, and COD are ranged in the standard, except few locations of which the values of TP and TN were identified to slightly exceeded the standard.

Facts and statistics of domestic wastewater management

- Domestic wastewater commonly are collected and treated via septic tanks prior to run to public sewage system and to series retention pounds afterward due to passing the natural treatment/purification process, and finally run to receiving sources.
- However, some main provinces have the central domestic wastewater treatment plant (DWTP), e.g. Sihanoukville province, Siem Reap province, Battambang province, and some are planned to construct DWTP. So far, DWTP type, volume and treatment capacity in Phnom Penh municipality is under feasibility study separately.

Facts and statistics of Industrial wastewater management

Statistic of factories in Cambodia

N ^o	Type of Factories	Number
1	Garment	407
2	Garment and Washing	69
3	Bag and Shoes	67
4	Printing	43
5	Jean washing	23
6	Animal food	10
7	Electricial Material	9
8	Cigarette	8
9	Beverage	6
10	Medicine	5
11	Other	497
	Total	1, 144

- ❑ To assess effluents discharging from industrial sector, the Ministry of Environment uses standards which are annexes of the Sub-decree on Water Pollution Control.
- ❑ 99 Factories were control by Inspection team.
- ❑ 10 Factories discharged wastewater excess effluent standards:
 - 7 Factories were fine and
 - 3 factories were ordered to correct mistakes.

Sources: Department of Law enforcement and Inspection (2018)

Legislative framework for water environmental governance

- Laws on Environmental Protection and Natural Resources Management (1996)
- Laws on Water Resources Management(2007)
- Sub-decree on Water Pollution control (April 6, 1999)
- Sub-decree on Solid Waste Management(April 27, 1999)
- Sub-decree on Environmental Impact Assessment (August 11, 1999)

Legislative framework for water environmental governance

- Sub-decree on the Management of Sewage and Wastewater Treatment System(25 Dec. 2017)
 - Delegate the function of management of sewage system and wastewater treatment system to the sub-national administration to abide by the Government's policy of promoting decentralization and de-concentration programme, which aims to ensure public health safety and biological diversity conservation
 - Delivers full roles and responsibilities toward sewage and wastewater treatment system's management to sub-national authority, while the central office (MoE, Ministry of Public Works and Transport, Ministry of Interior) plays role to set policy, guideline, standard, etc., as well as control the process and results of implementation at sub-national level

Legislative framework for water environmental governance

- Draft of Environmental and Natural Resource Code: Currently, MoE in cooperation with inter-ministries, line agencies, lawyer, developed partners, international organization and NGOs, is finalizing the draft of Environmental and Natural Resources Code, where water quality management including environmental standard, effluent standard, river water quality standard becomes a part of it.

Legislative framework for water environmental governance

- Draft of Sub-decree on self monitoring and report
High potential pollution sources have to :
 - Install real-time online monitoring equipment at end pipe
 - Regularly reporting to entity competent institution, MoE
- Sub-decree on Water Pollution Control is in the amendment process (JICA Project for Effective Implementation of EIA and Pollution Control through Capacity Development)
 - Guideline on Wastewater Treatment and facilities
 - Guideline on Inspection Manual
 - Guideline on Groundwater Protection
 - Guideline on Laboratory Registration

Institutional framework for water environmental governance

- Ministry of Water Resources and Meteorology, based on the Law on Water Resources Management, are paying more attention on monitoring watercourses (in terms of quantity and quality) in Cambodia.
- Cambodia National Mekong Committee (CNMC) is a governmental institution operating under the direct supervision of the Council Minister. Its main mission is the coordination in management, protection, conservation and development of water and other related resources in the Mekong River Basin.
- Ministry of Environment, in complying the Environmental Law and Sub-decree are paying more attention on monitoring environmental quality (in terms of water, soil and air) in Cambodia.

Water quality monitoring framework

- Officer of MoRAM base on Water Quality Monitoring Network (MRC Program) collect water samplings monthly at primary and secondary stations in parallel with the Water Quality Monitoring Network (the MRC supporting programme), and done at the MoWRM's LAB.
- Officer of MoE, in complying the Environmental Law and related Sub-Decrees, conducts:
 - Monthly monitoring and analyzing water quality at the MoE's LAB (*those water samples are taken from Mekong River, Bassac River, Tonle Sap River, Tonle Sap Great Lake, their tributaries, and marine water*), in order to identify the implication of pollution and water environment.

Enforcement instruments for water environment management

- Department of Law Enforcement and Inspection in operating under the direct supervision of the Directorate of Environmental Protection, MoE.
- Its main mission is the coordination among technical department under EPA and leading in monitoring, inspection all kind of environmental pollution sources in Cambodia .

Future targets/plans, issues and challenges of water environment governance

- Cooperation with country in the region, Water Quality Monitoring Station will be installed in some provinces.
- Draft on National Environmental Strategic Plan (2018-2023) should be approved by MP.
 - Central Sewage Treatment Plants will construct at Phnom Peng and Some City.
- Draft on Environmental and Natural Resource Code, should be approved by National Parliament.

Future targets/plans, issues and challenges of water environment governance

- Environmental violation still happen, especially discharging wastewater from factories without treatment or treating not comply to effluent standard
- Lack of budget, technical equipment, and human resources (both quantity and quality)
- Suggest WEPA to conduct training course on TOT, which parallel to the Government's policy of promoting decentralization and de-concentration programme.

Thank you for you
kind attention