



Joint Research and Development Project
on Science and Technology Usage for Water Resource Management
between

**Department of Technology and Innovation (DTI),
Ministry of Science and Technology, Lao PDR
and**

**Hydro and Agro Informatics Institute (HAI),
Ministry of Science and Technology, Thailand**

Hanoi, August 19, 2014



Joint Research and Development Project on Science and Technology Usage for Water Resource Management

Background

During the fifth Ministerial Meeting on “Cooperation in Science and Technology” between the Ministry of Science and Technology of Thailand (MOST, Thailand) and the National Authorities for Science and Technology of Lao PDR (later changed the name to Ministry of Science and Technology of Lao PDR (MOST, Lao PDR)) in February 2011 and the Lao PDR – Thailand Science Technology and Innovation Cooperation Workshop in Vientiane during March 1-2, 2012, Dr. Royboon Rassameethes, the Director of Coordination and Management for the Special Project of Hydro and Agro Informatics Institute (HAIL) presented “Community Water Management in North-eastern Part of Thailand”. To proceed the collaboration in Water Resource Management according to the “Krabi Initiative” at Lao PDR, Department of Technology and Innovative and HAIL held the discussion meeting about the Water Resource Management with Department of Technology and Innovation under the Ministry of Science and Technology of Lao PDR, at Ministry of Science and Technology of Lao PDR on May 14, 2012.

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Outcome (Year 2012)



During signing Ceremony



Staffs and medias visited telemetering station



Discuss and plan the process



Discuss with the regional staff of Lao PDR



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Objectives

1. To enhance and promote the use of information technology for water resource management
 - Telemetering information available to the public via website
 - Capacity building on information technology for water resource management
2. To exchange the best practices of Community Water Resource Management (CWRM) following His Majesty King Bhumibol Adulyadej's Initiative, Thailand

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What Lao PDR get from the project?

Using Data



forecasting

Disseminate information to the public



Natural disaster (flood, Very Rainfall)

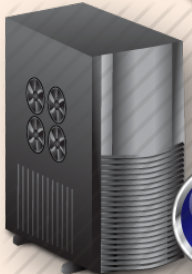


Data from Telemetering

Water Resource Management (drought, flood, Water storage)

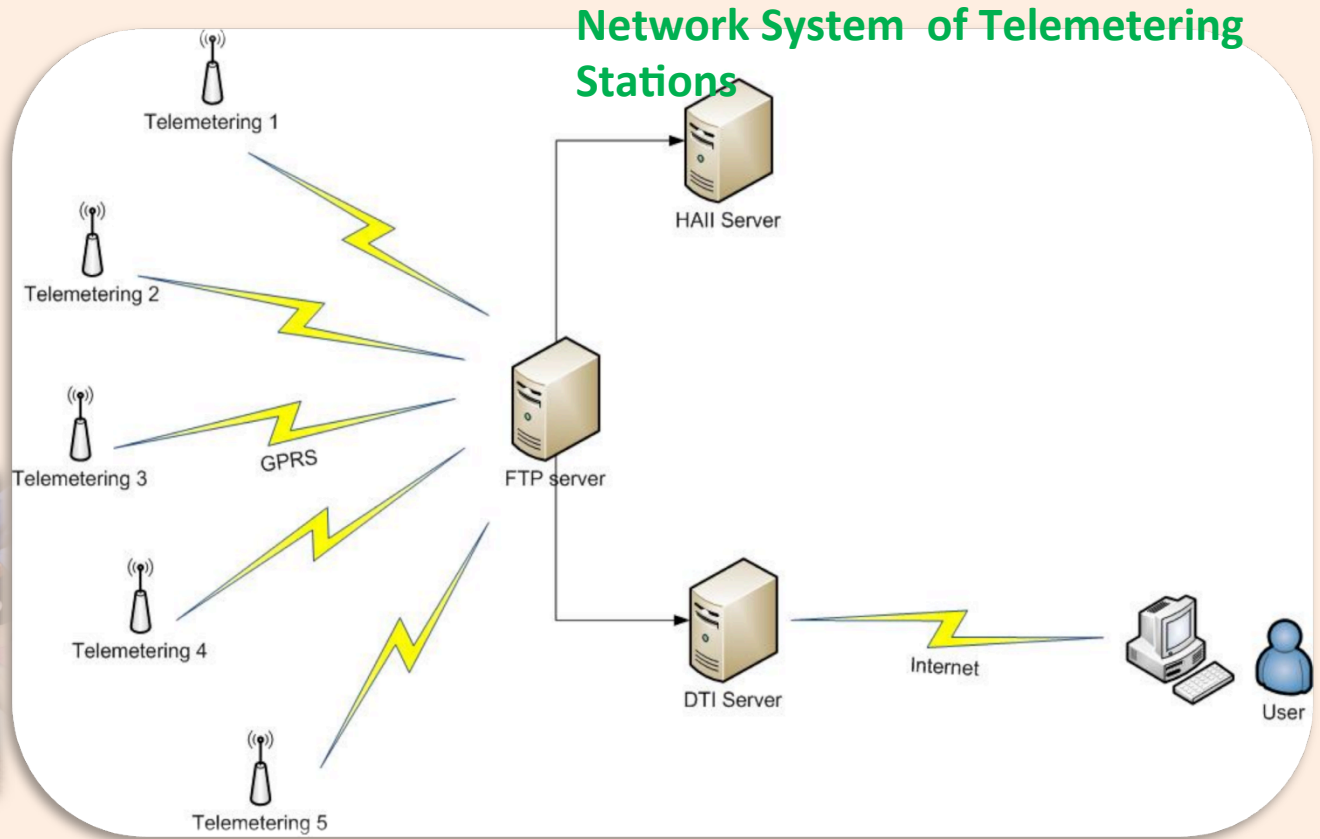


storage weather data and data water level



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What Lao PDR get from the project?



Telemetry stations will transmit data to an FTP server (both DTI and HAI servers). The data will store in a database and process data through the website which the external user can easily access to get the data.



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Work Process: in Year 2012

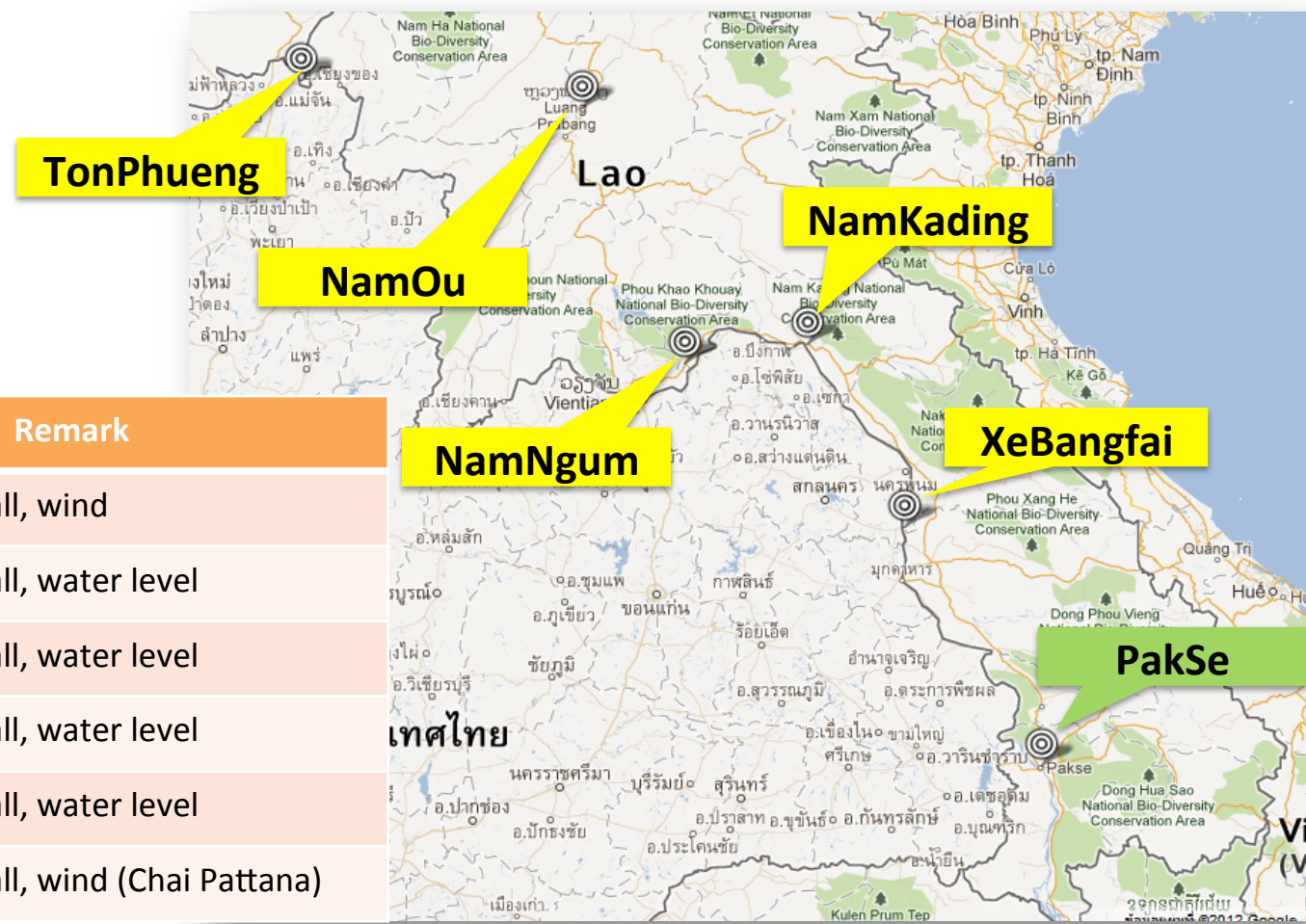
1. Community Water Resource Management following the king's initiative
2. Science and Technology for Community Water Resource Management

Outcome:

HAI and MOST, Lao PDR had processed in the part of “Science and Technology Usage for Water Resource Management” by finishing the installation of 5 more telemetering stations and a renovation of one existing telemetering station (installed within Chai Pattana Foundation’s Project area): Total 6 stations.

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Outcome (Year 2012)



Station	Remark
TonPhueng	Weather, rainfall, wind
NamOu	Weather, rainfall, water level
NamNgum	Weather, rainfall, water level
NamKading	Weather, rainfall, water level
XeBangfai	Weather, rainfall, water level
PakSe	Weather, rainfall, wind (Chai Pattana)

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Outcome (Year 2012)



HAIL's staffs installed the telemetering station at NamNgum and trained MOST, Lao PDR's staffs "how to install telemetering station?"

Telemetering Station at NamNgum

MOST, Lao PDR's staffs installed the telemetering station at NamOu by themselves after training from HAIL's staffs.



Telemetering Station at NamOu

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Outcome (Year 2012)



Staffs from MOST, Lao PDR improved the effective of telemetering station at Champasak University in the area of Chai Pattana Foundation.



Telemetry Station in PakSe

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Outcome (Year 2012)

JOINT RESEARCH AND DEVELOPMENT PROJECT

on Science and Technology usage for Water Resource Management

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Project's display system



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Work Process (Year 2013)

1. Community Water Resource Management following the King's initiative

- Staffs from MOST, Lao PDR and HAI visited the best practices in Community Water Resource Management in Nong Kai and Buengkan, Thailand

2. Science and Technology Usage for Water Resource Management

- 2 staffs from MOST, Lao PDR took the training program at HAI at Hydro Informatics Division (for 6 months) and Agro Informatics Division (for 3 months)

- Develop data system and display system including warning system in accordance with criterions and disasters of Lao PDR

3. Make a plan together to develop the collaboration and expand the success in Lao PDR

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Work Process and Outcome (Year 2014)



HAI's staffs installed servers for receiving and processing data from telemetering stations at MOST, Lao PDR



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Work Plan (Year 2015)

Community Water Resource Management following the King's initiative

- MOST, Lao PDR chose one area in Laos to run the community water resource management which is "Ban Nalad, Sangthong district, Vientiane Capital"
- The staffs from MOST, Lao PDR will visit one of the best practice in Thailand in order to apply the principle that they learn from Thailand to their own area.
- Follow the work plan and expand the success to other areas

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Work Plan (Year 2015)

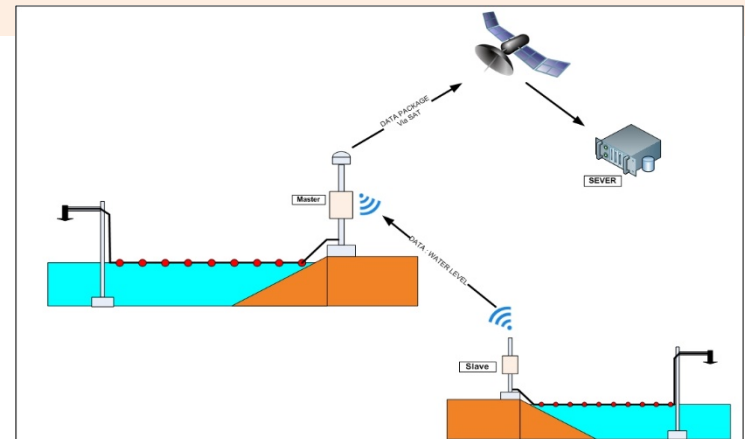
Science and Technology Usage for Water Resource Management

To reduce the limitation, obstacles and problems in communication and receiving-sending data stability from telemetering stations; which are installed in the areas, to servers through the transmission system of local providers.

HAIL has developed Satellite Communication System (Sky Wave) in order to receive-send data and has presented to DTI, MOST Lao PDR. DTI is interested in collaborating to develop and take technology (Sky Wave) to use in the area by expecting to start in 2015.



Working System of Satellite Communication Technology



The format for the development of Installation and sending data to apply for using with telemetering stations.

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THANK YOU !