

Groundwater Resource Management and Villagers' Wellbeing in Northern Thailand

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Background

Background and rationale:

- Since 1997 the concept of wellbeing has become a widely used aspect of Thai national development plans.
- Groundwater resource theories can provide for the wellbeing of Thai people which is one goal of the department of groundwater.

Khlong Khae Village ,Phrom Phiram District Phitsanulok Province







Agricultural and farm economics



unstable water supply

Methodology

- Using qualitative and quantitative research methods for data gathering.
 1. Qualitative research method : Focus group discussions were carried out with committees, in-depth interviews with groundwater technical officers, groundwater users followed by participatory and non-participatory observations.

2. Quantitative research method

- Population 202 HH
- sampling method-Taro Yamane

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{202}{1 + 202(0.05)^2}$$

$$n = 134.2$$



The first community
groundwater since 1983.

A group of groundwater users



- The group is managed by a committee elected by the villagers themselves and has been in operation continually to date.
- Groundwater management applies the 3 principles of groundwater governance - participation, transparency, and equality.

The 5 steps in groundwater management

- 1) Determining the structure, regulations, and rules
- 2) Proceeding and receiving benefits
- 3) Maintenance of groundwater system

- 4) Income allocation and groundwater system development
- 5) Improving the operational structure

In addition to groundwater governance, flexibility and trust are also applied in some cases.

The results of objective and subjective wellbeing measures from quantitative research using a 10-item measurement indicated that most villagers perceived high levels of objective and subjective wellbeing at the level of 7 and 8 respectively.

The highest mean was living in a good environment for objective wellbeing, while good relations in family and with neighbours was ranked the highest for subjective wellbeing.



“ After graduated and I chose to go home to do business at home. At first, I didn't mean to do farm fish. I was going to trade and grow vegetables, but I saw the groundwater is good, so I do fish farm”

(Male 8th September 2019)





Groundwater pumping system with electricity from the solar energy in 2019.

Conclusions

Having resources and environment for living, living in a good environment, there is food to eat every day, water to use all year round, good income and a decrease in debt are villagers' wellbeing.

Conclusions

Thus, having community-groundwater contributes to a high level of the villagers' objective and subjective villagers' wellbeing because a community-groundwater facility can solve water shortages in terms of consumption and agriculture.