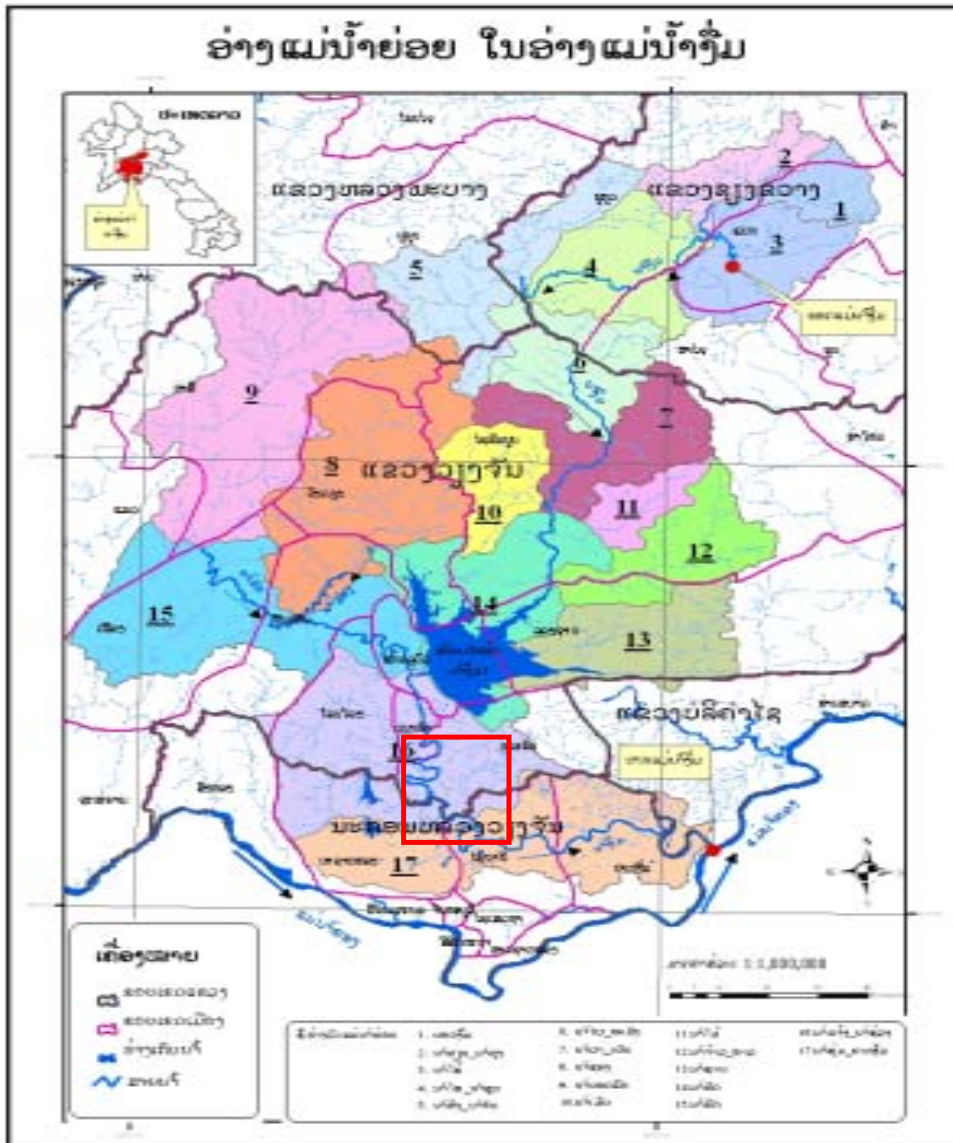


# **“Assessment of Impact and Adaptation to Climate Change in Vientiane Plain, Lao PDR”**

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# Introduction



- cased at a part of Vientiane Plain, located at 30 Km Northeast of Central Vientiane Capital, where irrigation system was not yet available.
- The study area covered parts of 3 districts: Xaythany and Naxaythong of Vientiane Capital, and Thoulakhom of Vientiane Province.

# Introduction

- A group of 13 researchers were formed from different academic and social institutes, led by the former Environmental Research Institute, Science Technology and Environment Agency,
- conducted through May 2005 – March 2006,
- with data coverage of 2004 – 1995.
- Head of or representatives of 300 households of 20 villages had been interviewed through questionnaires,

# Introduction

- The objectives of this study were to:
  - (i) Address vulnerability and adaptation of targeted villagers in Vientiane Plain to the climate change, including impacts to their livelihoods and adaptation, assessment of their agricultural productive ability, and seek of their opinion for further adaptation; and
  - (ii) Provide technical recommendations as the basis for further adaptation at grass-root and administrative levels for adaptation and planning.

# General information

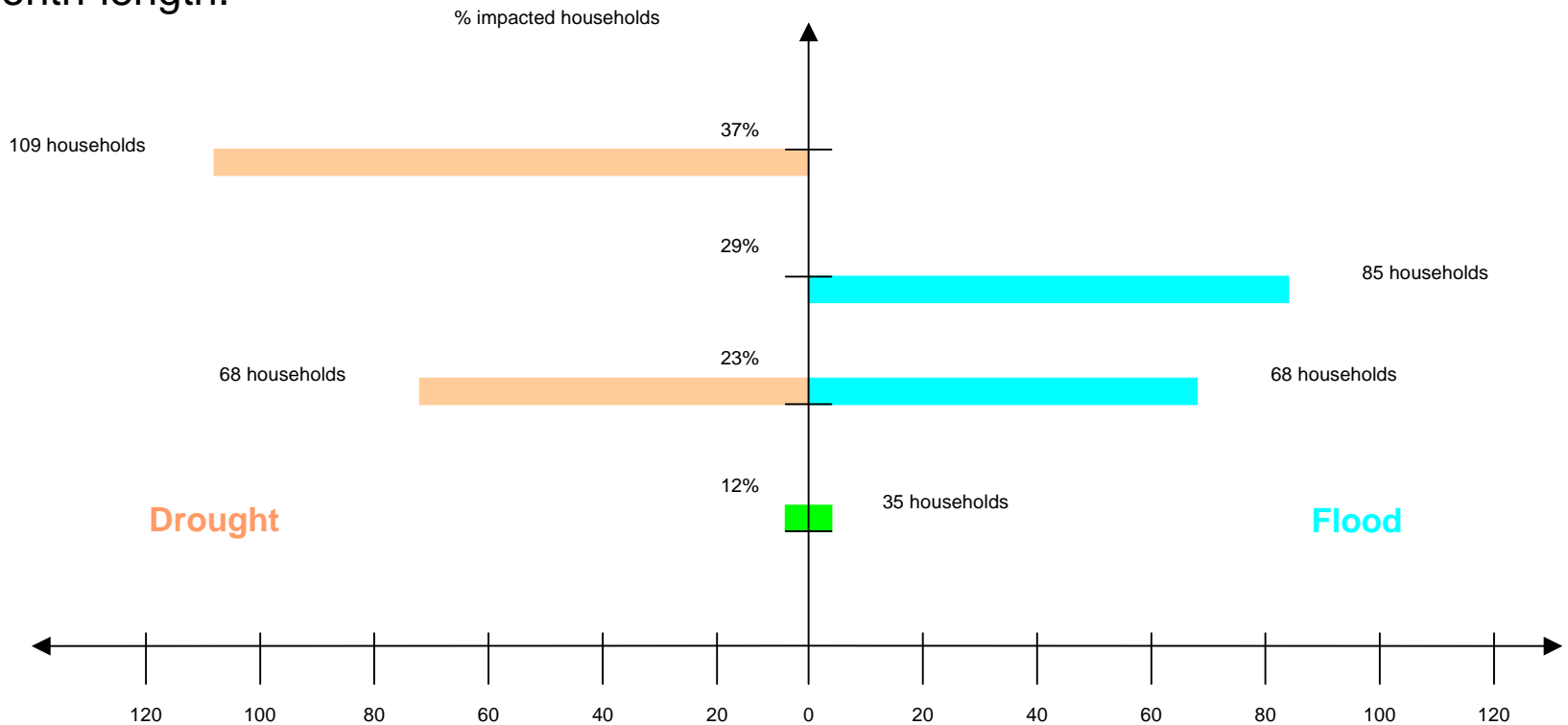
- The number of targeted study villagers were almost equality in sex ratio,
- half of them were completed primary education, and 13% were illiterate
- the higher education, the smaller ratio of distributed population.
- Most of the interviewees were professional farmers and half of those had secondary careers as livestock raisers, while the other half had practiced other trade and service activities.

# General information

- Income generated from non-agricultural activities was considered as important factor for adaption of climate change, which approximately covered 27% of total income of individual household.
- Annual household consumption was observably fluctuated, in which expenditure for food covered almost half of other daily expenses.
- Household saving in form of cattle rising was popular, which covered 60% of other forms of saving.
- Official debt and loans of villagers were considerably small, due to the villagers were keen to borrow cash as well as had limited chance to access financial sources.

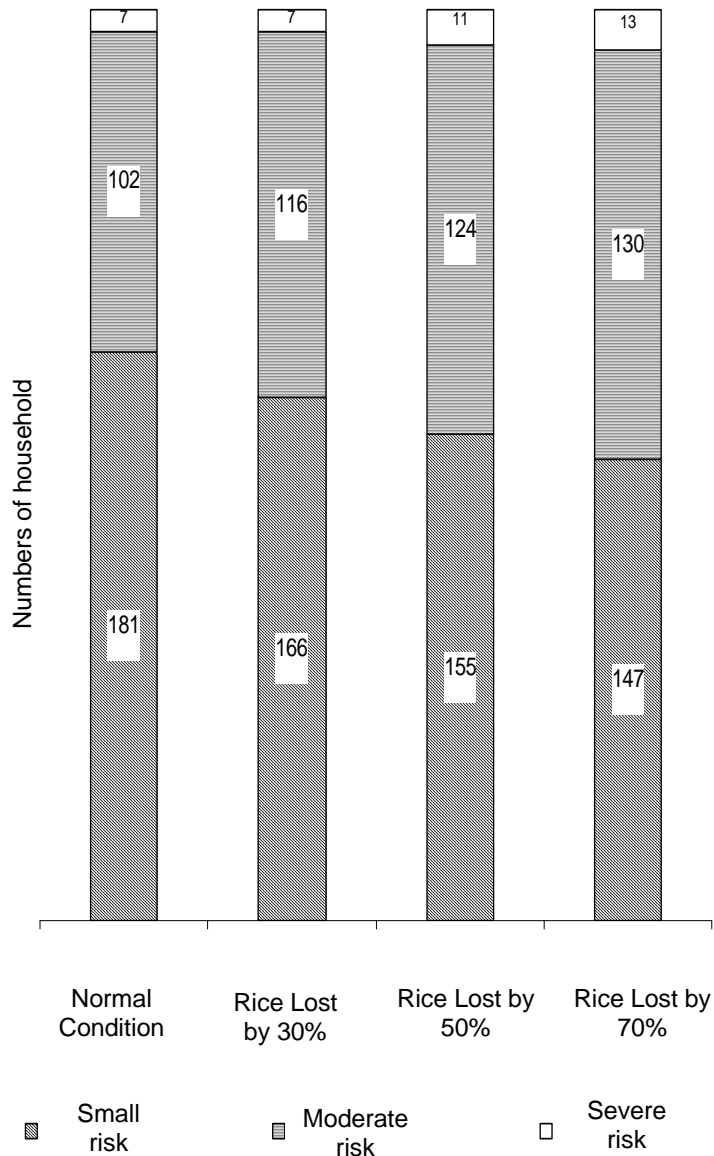
# Findings

- From the period of study: 1990 - 2004, Vientiane Plain had been both impacted by flood and drought with more severe since 1995. The extremely drought occurred in 2004 and flood in 1995.
- Lengths of both flood and drought were less than 3 months, which mostly one month-length.



# Findings

- Based on the villagers' historical experiences, lost of rice product due to the impact of flood and drought were rated about 30%, 50% and 100%.
- Study simulation had made for the impact at the rates of 30%, 50% and 70% rice lost, comparing to normal condition.



- In normal condition, livelihood security of targeted villagers was about 90%, while the rest was usually non-secured.
- Generally, it was observed that ranges of rice lost from normal condition to lose by 30%, 50% and 70% had made a little impact to livelihood security of the villagers.
- Major risks of the villagers from different ranges of impacts mostly affected to food and financial security. Livestock and health seemed to have minor impact.

# Findings

- The villagers had ability to accept continue impacted condition to their rice productivity at 2 to 3 year maximum. If more than those, they would struggle for other livelihood alternatives as their main careers, such as fish farming or livestock rising.
- In case of severe impact, the villagers had mostly assisted by their outsider relatives, local administrations and other organizations at basic levels, neighboring villages and households, and other forms of assistance in both cash and kind.
- In general, even though the villagers had lost their rice product due to impacts from natural disaster at different ranges, they would still prefer to be the farmers as usual. This was because of their deep custom and limited opportunity to alternate their professions due to the lack of knowledge and skill and other reasons.

# Recommendations

- Provision of alternative crops and other forms of agricultural investment;
- Promotion of livestock rising;
- Provision of alternative financial source access, including village development fund and community credit;
- Provision of alternative livelihood opportunities;

# Recommendations

- Application of chemical fertilizer in rice farming at appropriate and sustainable level;
- Cooperate and network with among villages for sharing of agriculture plot, during disaster event;
- Provision of reliable and on-time meteorological and other technical information to farmers for the alternative crop cultivation; and
- Promotion of appropriate cultural practices as existed.

**Thank you for your attention!**