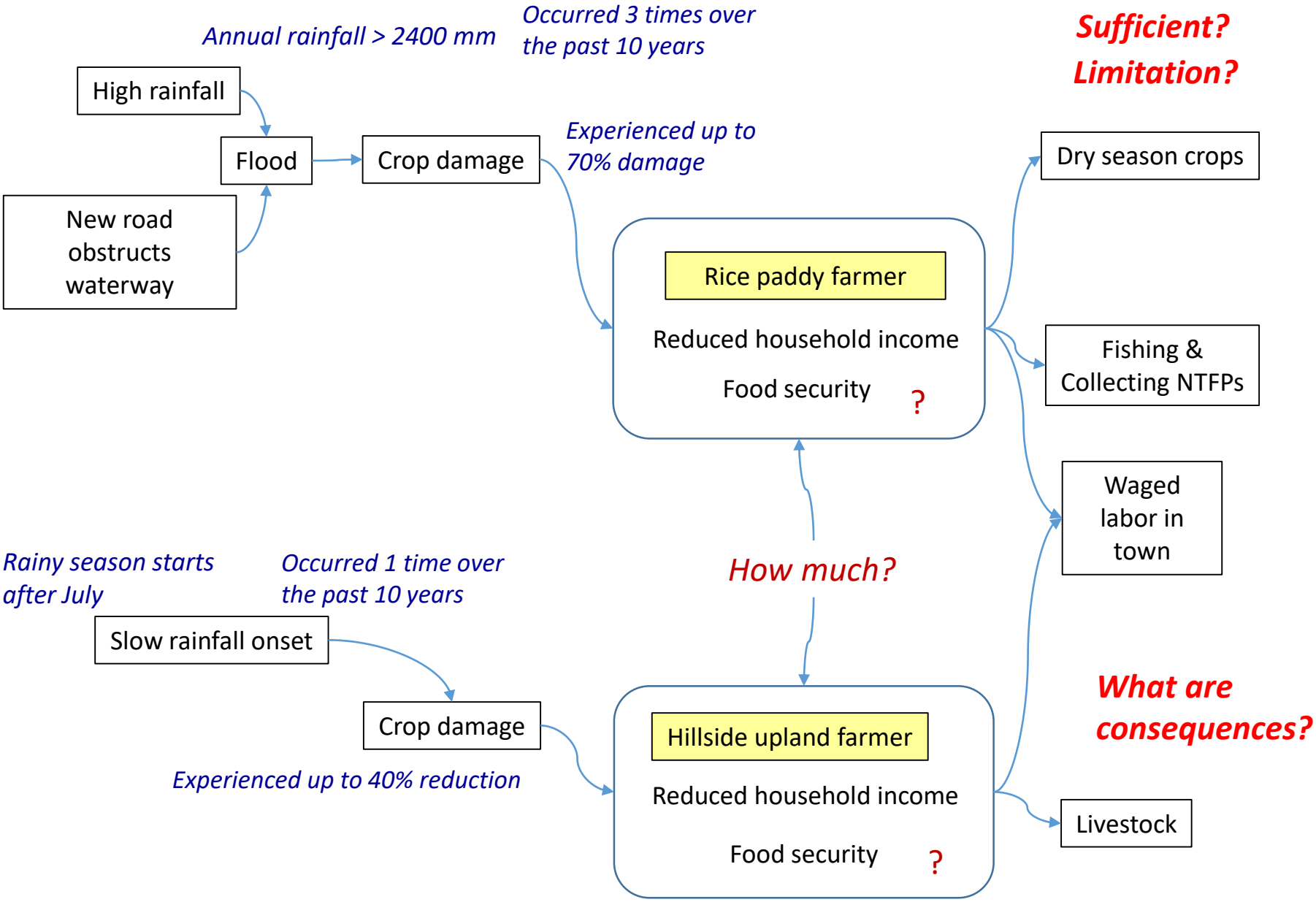
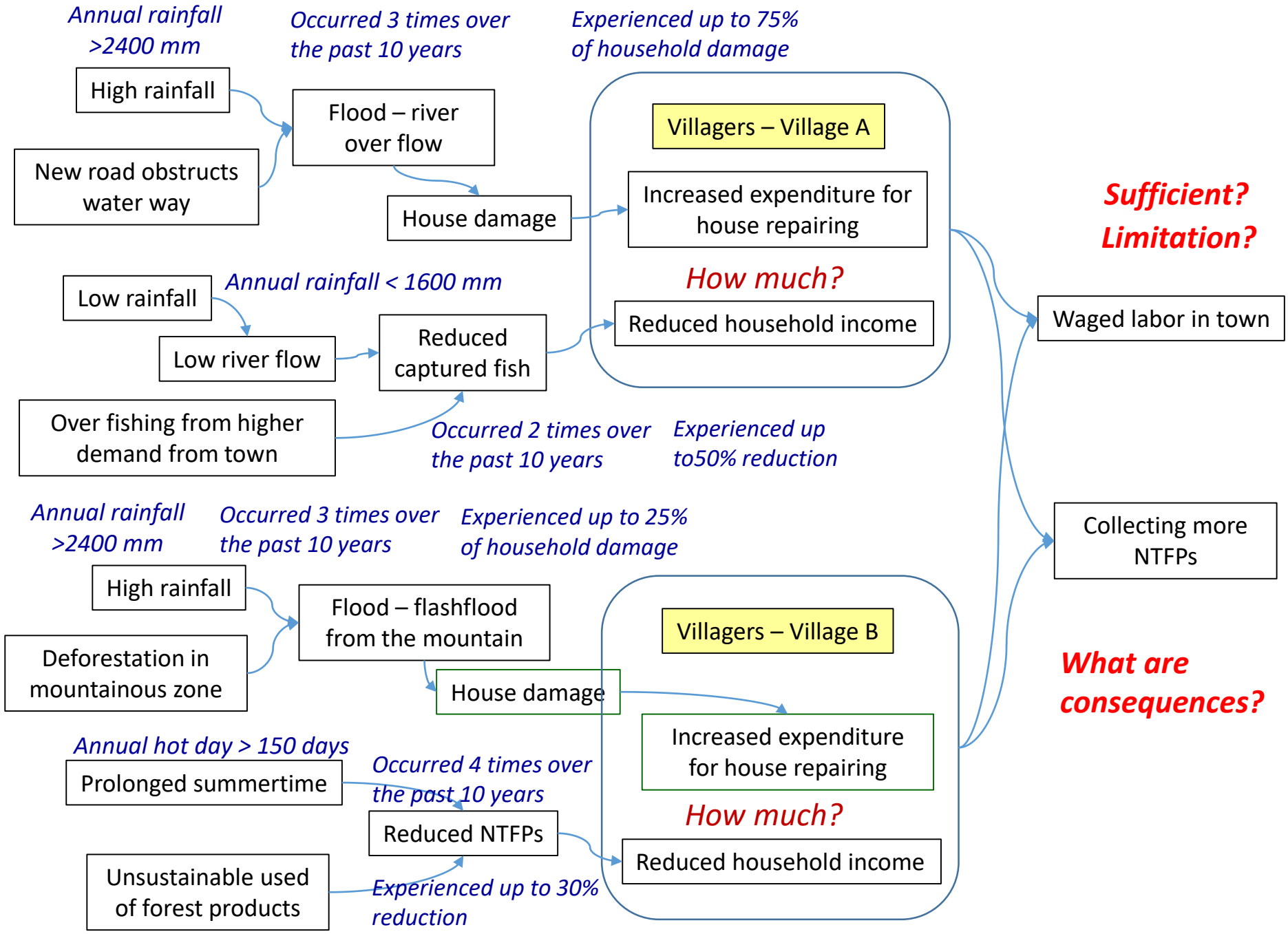
# Recapture and reminders on risk assessment

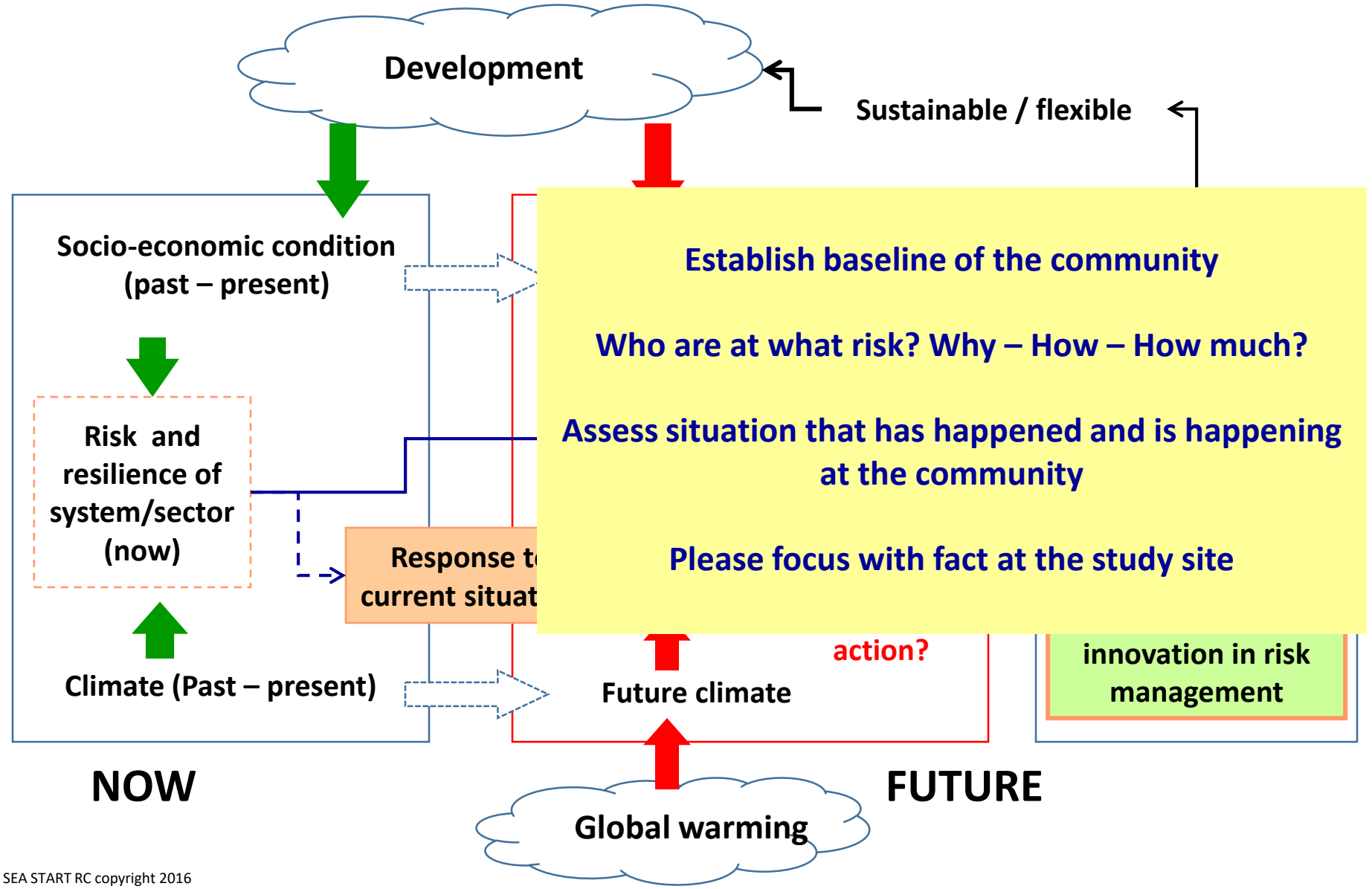
Suppakorn Chinvanno
Southeast Asia START Regional Center
Chulalongkorn University
Thailand

SOUTHEAST ASIA
START
global change SysTem for Analysis, Research & Training
REGIONAL CENTER


Annual rainfall > 2400 mm
Occurred 3 times over the past 10 years
Sufficient? Limitation?
High rainfall
Flood
Crop damage
Experienced up to 70% damage
New road obstructs waterway
Dry season crops
Rice paddy farmer
Reduced household income
Food security ?
Fishing & Collecting NTFPs
Waged labor in town
How much?
Rainy season starts after July
Occurred 1 time over the past 10 years
Slow rainfall onset
Crop damage
Experienced up to 40% reduction
Hillside upland farmer
Reduced household income
Food security ?
Livestock
What are consequences?


Annual rainfall >2400 mm
Occurred 3 times over the past 10 years
Experienced up to 75% of household damage
High rainfall
New road obstructs water way
Flood – river over flow
House damage
Villagers – Village A
Increased expenditure for house repairing
How much?
Reduced household income
Sufficient? Limitation?
Waged labor in town
Low rainfall
Annual rainfall < 1600 mm
Low river flow
Reduced captured fish
Over fishing from higher demand from town
Occurred 2 times over the past 10 years
Experienced up to50% reduction
Annual rainfall >2400 mm
Occurred 3 times over the past 10 years
Experienced up to 25% of household damage
High rainfall
Deforestation in mountainous zone
Flood – flashflood from the mountain
House damage
Villagers – Village B
Increased expenditure for house repairing
How much?
Reduced household income
Collecting more NTFPs
What are consequences?
Annual hot day > 150 days
Prolonged summertime
Occurred 4 times over the past 10 years
Reduced NTFPs
Unsustainable used of forest products
Experienced up to 30% reduction

**Don't get loss in the process, always remind yourself of the framework – where you are and what you are trying to do – do NOT jump to conclusion**



## Be cautious about the following issues

Climate threat ≠ Climate impact ≠ Climate risk ≠ Vulnerability

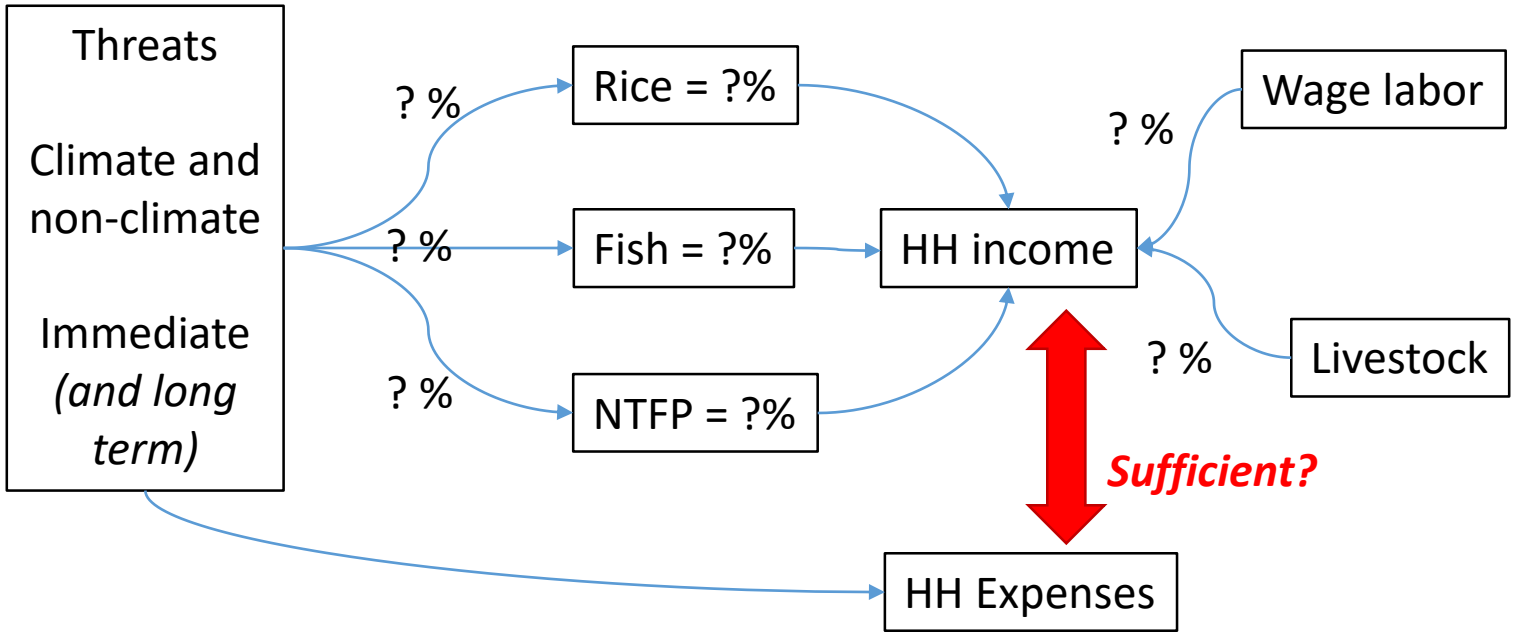
High risk ≠ Vulnerability

- Be careful with the terms used in the assessment
- Avoid bias assessment – do NOT pre-determine who is vulnerable
- Avoid abstract – be specific – clear context is very important
- Be able to explain why this site is important for climate change adaptation assessment work
  - This community is under climate pressure – wellbeing of groups of people is being threaten (by climate and non-climate factors)

| Who is threaten? | By what? | How? | How much? |
|---|---|---|---|

Must be able to explain risk profile

Threats is not risk until they cause negative effects to the target group of our study -
**Seriousness of the situation – how to explain?**




Income / production

| Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y7 | Y8 | Y9 | Y10 |
|---|---|---|---|---|---|---|---|---|---|

***Sufficient?***

*Time series analysis*

Expense / consumption

| Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y7 | Y8 | Y9 | Y10 |
|---|---|---|---|---|---|---|---|---|---|

- Other indicators may also be used e.g. no. of deaths caused by flood / malnutrition caused by lack of food security / damage area caused by flood / loss of species or diversity of NTFPs / etc. etc.
- Get to the root to determine risk
- Risk will be the focus for adaptation planning at later stage – adaptation will address risk, both now and future
  - It could be by reduce exposure to risk / sensitivity to risk and/or increase coping capacity. Or everything combined.
- Use relative term to explain seriousness of situation / risk

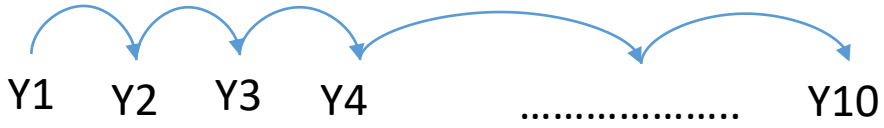
**Loss of household income by $10,000** **?**

**Loss of household income by 50%** **?**

**Income deficit by 50% (e.g. income = 100 / expense = 200)**

Risk can have residual effect, i.e. deficit can be carried over to the other year …. Need to think about risk that occurs in consecutive years

- Pressure of risk and shock




| Cause and driver of risk (climate) | Risk | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Flood >> crop damage / house damage | Loss of household income / increase expenses | | | | | | | | | | |
| River low flow >> low fish capture | Loss of household income | | | | | | | | | | |
| Delayed onset of rainy season >> low productivity | Loss of houshold income / increase expense | | | | | | | | | | |
| Long summertime >> NTFPs reduced | Loss of household income | | | | | | | | | | |

*Shock is the situation when risk is far beyond the coping capacity – we normally see vulnerability stage with shock situation*

Risks can have combined effect and create shock, especially in the years that community faced multiple risks

- Frequency and magnitude of risk/cause of risk can help determine:
  - High exposure to risk / high sensitivity to risk
- Low coping capacity needs to be assessed to determine vulnerability
  - Response – sufficient – limitation
- Quantitative VS qualitative analysis – both can be used
- Observation can be the basis of site understanding (including site survey / interview / expert judgement), but need to verify with some evidences
- Keep assessment simple, avoid information over flow. Be selective about cause and driver of risk.