Participatory approach & tools for livelihoods context analysis

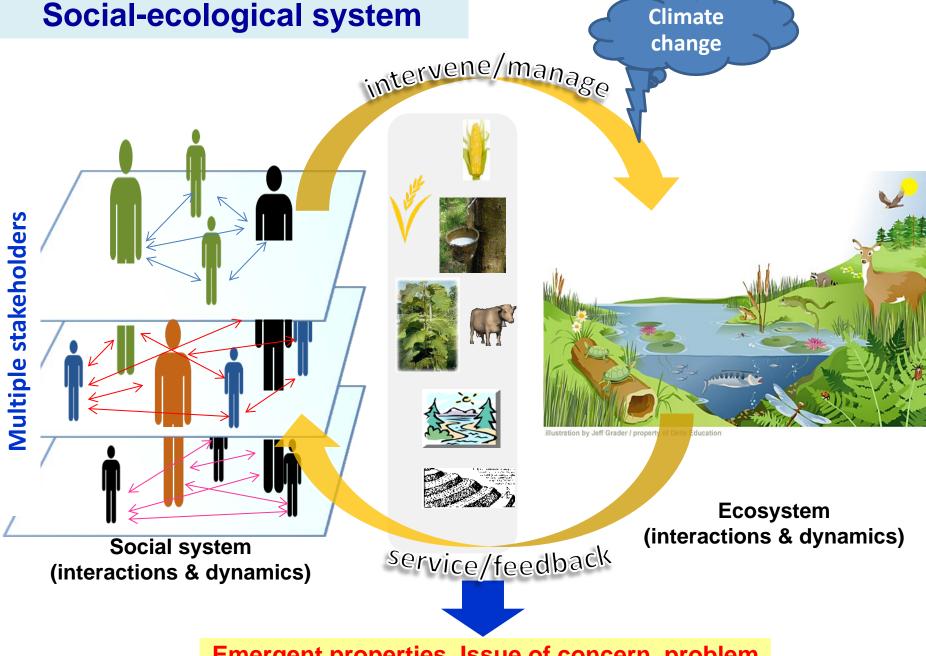
Panomsak Promburom
Center for Agricultural Resource System Research
Faculty of Agriculture, Chiang Mai University



34th International Vegetable Training Course: "Vegetables: From Seed to Table and Beyond"

14 September to 4 December 2015

AVRDC Research and Training Station Kasetsart University, Kamphaengsaen Campus, Nakhon Pathom, Thailand



Emergent properties, Issue of concern, problem

Participatory Approach & Agricultural system



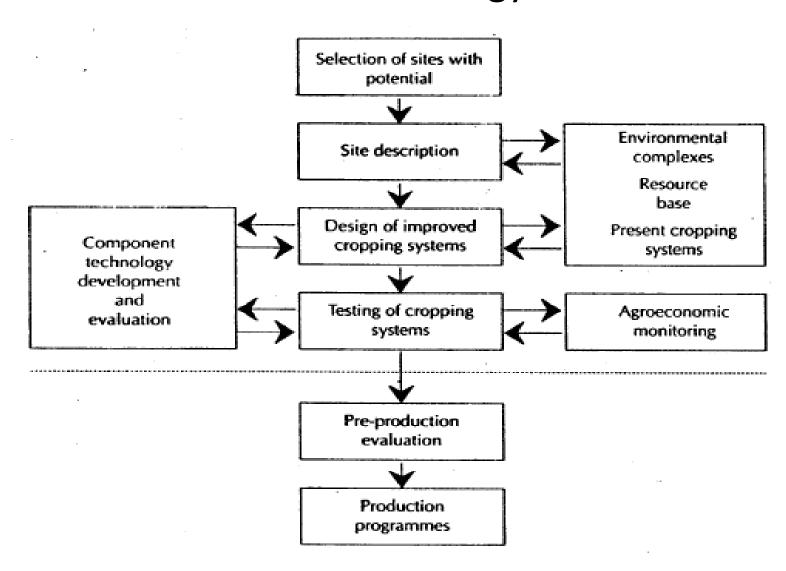
Farming System Research (FSR) approach

- 1960s : Green revolution, increase crop production.
 - Fertilizer-responsive, high-yielding varieties,
 - Fit to favorable and relatively homogeneous production environment (goo soil & moisture, access to cheap fertilizer, efficient markets.
- However, this did not fit some part of marginal areas (esp. sub-Sahara, parts of Latin America, Asia).
- This did not fit with resource-poor farmers.
- Static & deterministic, data extractive.
- Put aside dynamic of farmers operation & uncertain environment.

Farming System Research (FSR) approach

- FSR emerged in 1970s; partnership between farmers, technical & social scientists.
- Recognizes farmers' perspective in problem identification.
- Considers farmers' objectives, bio-physical & socio-economic environment.
- Involve farmers in research and development process.
- Holistic & interdisciplinary approach.
- Early FSR was on cropping system.
- Rapid Rural Appraisal (RRA) was a key tool.

On-farm cropping system research methodology



FSR approach: Positive results & limitations

- ✓ Scientists sensitized to farmers' production complexity → flexible & appropriate technologies.
- ✓ Interdisciplinary research team, co-learning & developing.
- ✓ Coupling policy support system with the new technologies.

- Farmers' participation was limited (give info, test technology).
- Commonly, 'ad hoc' in nature.
- Still not open enough for other disciplines (e.g. livestock, health, engineer)

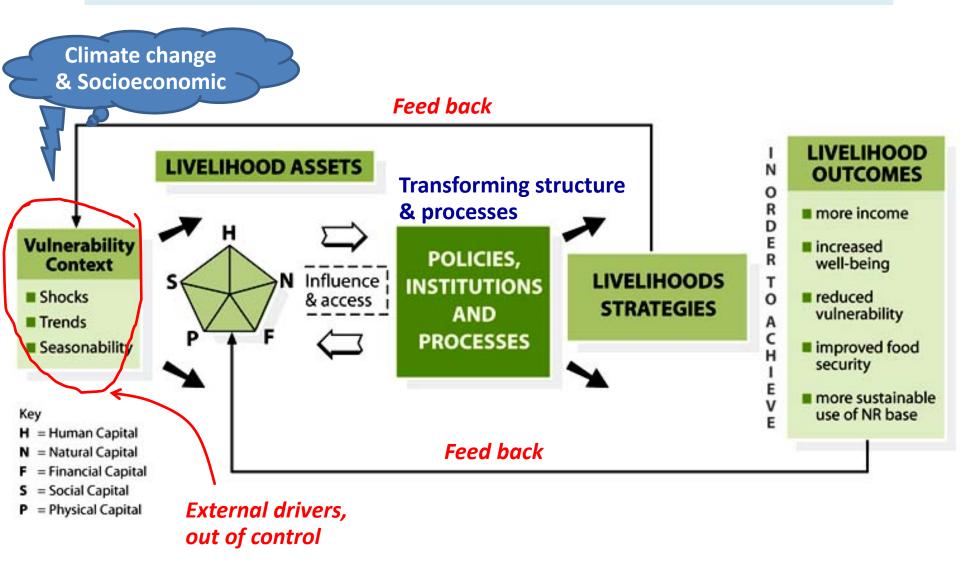
FSR in Late 1980s – early 1990s

- Additional concerns:
 - How farmers interpreted/represented their production situation,
 - How this influenced the way they articulated their constraints and needs,
 - Inclusive participation of farmers (specify the needs, design & evaluate technologies), and gender.
- Incorporate PRA techniques (e.g. matrix ranking).

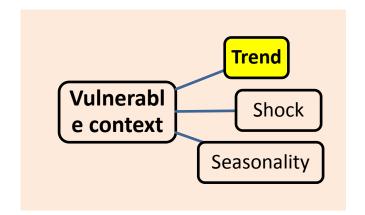
RRA & PRA

Natures	RRA	PRA
Mode	Extractive-elicitive	Sharing-empowering
Outsiders' role	Investigator	Facilitator
Information owed, analysis and used by	Outsiders	Local people
Concerns	Local people's knowledge	Local people's capabilities
Main innovation	Methods	New knowledge, behavior
Ideal objectives	Learning by outsiders	Empowerment of local people
Long term outcomes	Plans, projects, publication	Sustainable local action and institution

Sustainable livelihood framework (SLF)

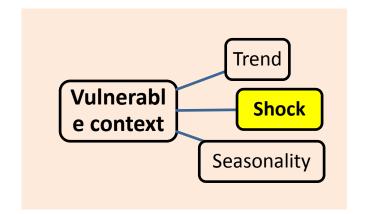


Source: DFID 1999



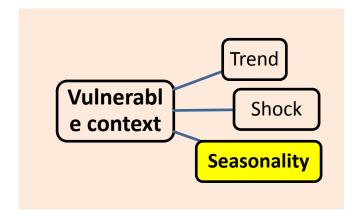
Trend

- Population trends
- Resource trends (including conflict)
- National/international
- economic trends
- Trends in governance (including politics)
- Technological trends
- Trends of climate change



Shock

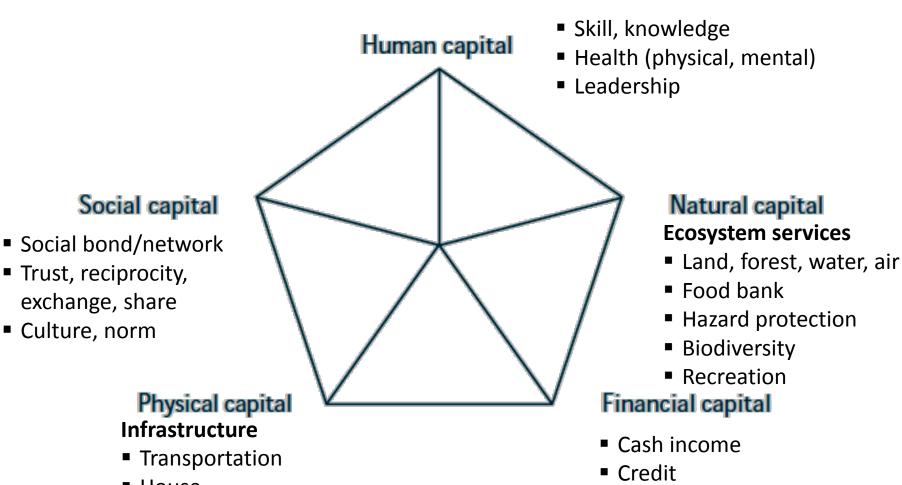
- Human health shocks
- Natural shocks
- Economic shocks
- Conflict
- Crop/livestock health shocks



Seasonality

- Of prices
- Of production
- Of health
- Of employment opportunities

Livelihoods assets/capital



Other household capitals,

liquid assets

Trust, reciprocity,

exchange, share

House

Pipe system

Electricity

Culture, norm

Livelihoods assets/capital

- Sequencing → change or improve one of subset of assets may strengthen the whole, hence pinning intervention point.
- Substitution → One asset may be substitute by others, e.g. providing skill may compensate lacking of financial capital ("teaching them how to fish instead of giving them the fish")

Transforming structure & process

Structures -> Organizations (public & private) - that set and implement policy and legislation to deliver services, purchase, trade, other functions that can support or constraint livelihood

Process \rightarrow the way in which structure and individuals operate and interact.

- Provide incentive, support
- Provide/constraint access to such asset
- Allow transforming between assets
- Influence inter-personal relations

Livelihood strategies

Access, combine chosen available asset, and operate an/set of action(s) through the TSP, in order to achieve desirable outcomes:

- To respond to the threat,
- To reduce vulnerability,
- To improve individual livelihood e.g. food security, happiness
- To sustain livelihood and natural resource

Sustainable livelihood framework (SLF)

SLF enhances understanding of livelihoods context.

- Provides a checklist of important issues and sketches out the way these link to each other;
- Draws attention to core influences and processes; and
- Emphasizes the multiple interactions between the various factors which affect livelihoods.
- → Facilitate co-construction of such common livelihoods representation.
- → Guide identifying relevant/effective intervention.

Sustainable livelihood framework (SLF)

- SLF has no absolute starting point.
- Non-linear and evolving components .
- Feed back mechanism.

"The sustainable livelihoods framework continues to develop. Use it as a flexible tool and adapt it as necessary. You can focus on any part of the framework, but it is important to keep the wider picture in mind."

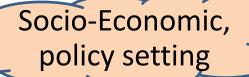
Exercise: Livelihood system analysis

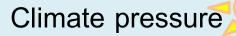
- 4 working groups
- Bring in your "livelihood context"
- Choosing one case / group
- Case owner brief the case "context"
- Collective analyze the livelihood system:
 - How people make their livin, utilizing the assets
 - Under/within institutional & policy setting
 - Facing what kind of vulnerability context (pressure/threats)

SL analysis

Explore livelihoods context/setting

- How people make their living, utilizing the assets
 - Agriculture:- crops, livestock
 - Off-farm :- Permanent job, trading, labor waging, remittance, etc.
 - Ecosystem services
 - Innovation, knowledge, skill
 - Social bond/support :- food sharing, ...
- Under/within institutional & policy setting
- And uncontrollable environment (e.g. climate, threats)







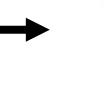
































Participatory method & tool



Field survey & observation

- Topics

 things / phenomena to observe
- Walk/car visual + interview (talk)
- Use maps
- Observe, say hello and talk to some people
- Observe and link to the topic (interpretation and interlinkage)
- Record (note, photo, location, map, local term)
- May invite local people to accompany



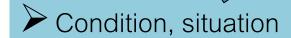




Field survey & observation

- Road / condition
- Landscape
- Resource...
- Agricutlure
- Housing
- Land mark

• ...



- ➤ Meaning?
- Relevant to the topic
- Relationship/linkage with the others
- Seasonal, time dimension
- **>**....



Not so clear

Talk/Ask people













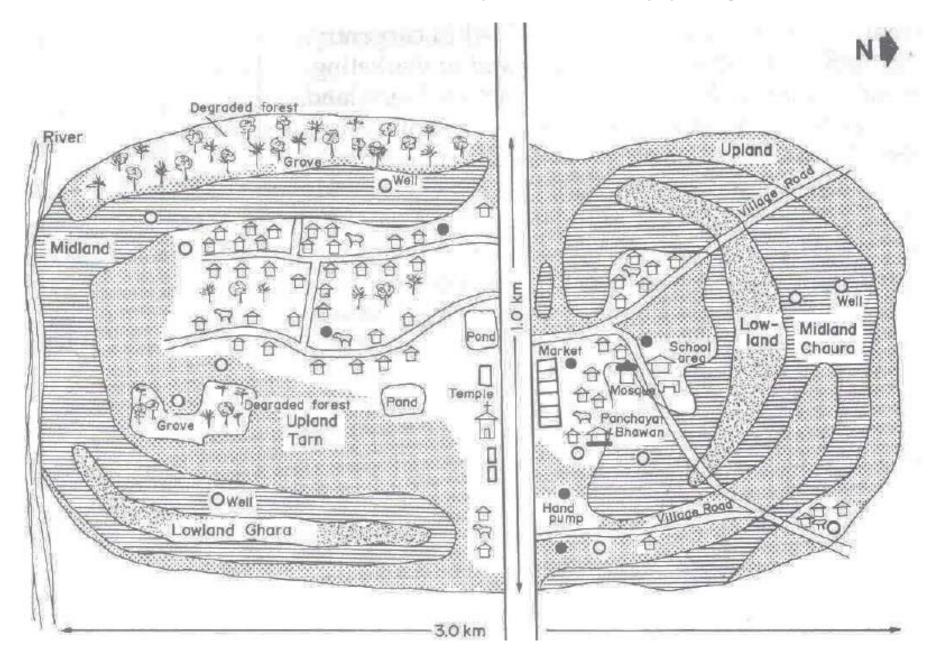
Participatory method & tools

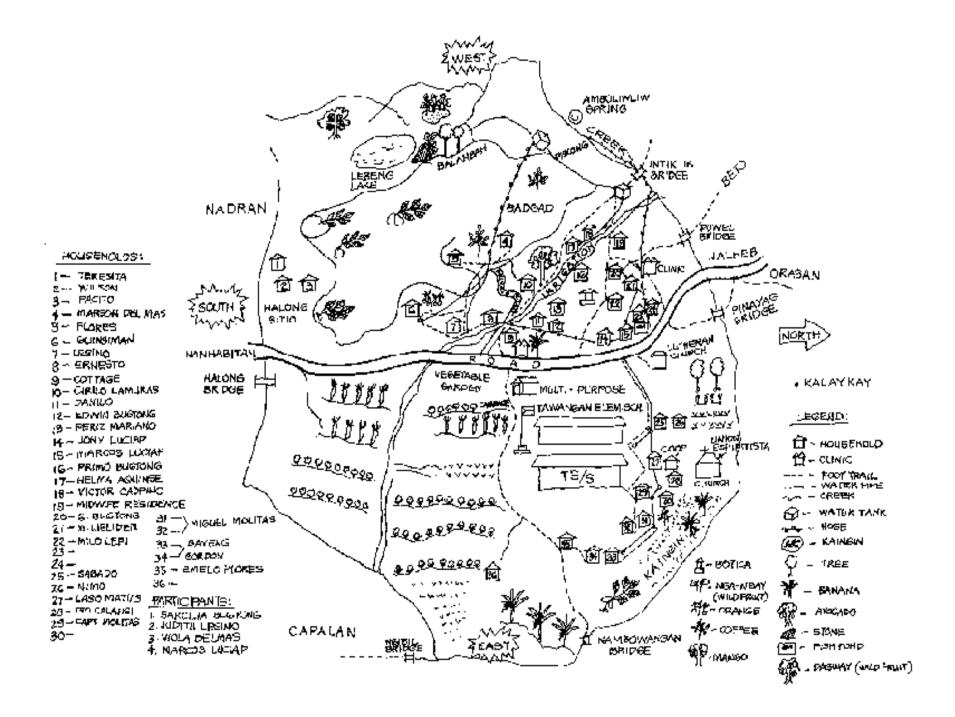
- Resource mapping
- Historical profile
- Wealth ranking
- Agricultural and activity calendar
- Venn diagram
- Risk/problem ranking
- System diagnostic diagram
- Focus group meeting/discussion
- Semi-structure interview

Mapping: transect walk

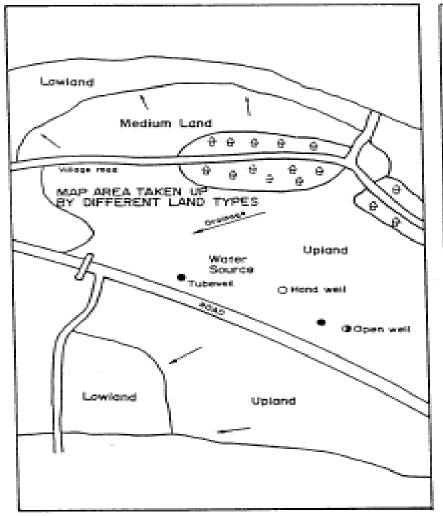
- Review secondary sources :- aerial photo, map, landscape observation
- Determine the transect line that cut across the most diverse landscape and land use types.
- Walk with locals, draw map + interview + record information.

Resource & enterprises mapping



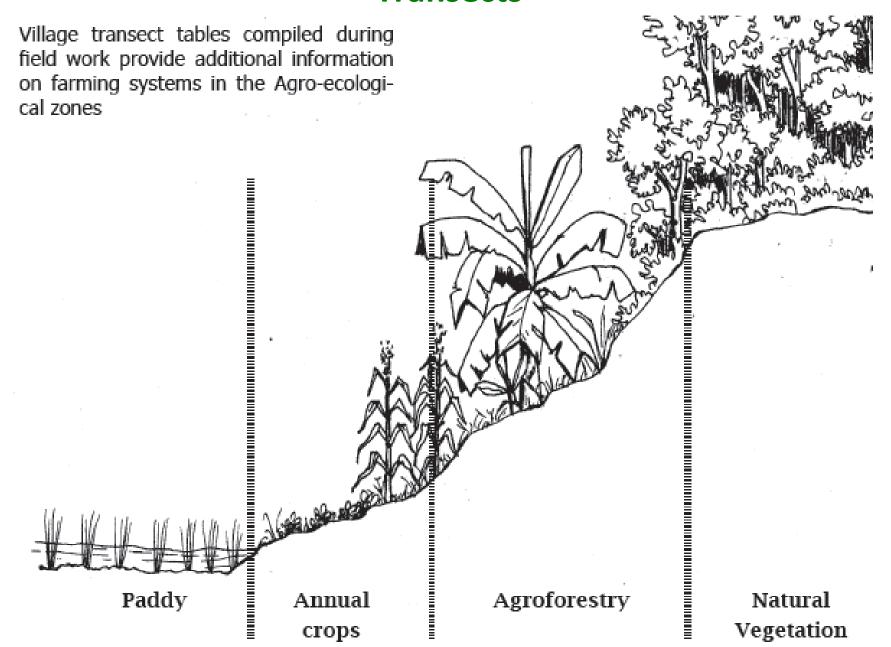


Transects



S		1411 14 1000	
LAND TYPE	UPLAND	MIDLAND	"CHAUR"
90IL		Silty loam	
CROPS		Rice Wheat Mungbean	
TREES	Mango Litai Citrus		
LIVE - STOCK 8 FISH	Bullocks Goers Cattle		Fish
PROB- LEM	Soil Fertility		Oroinage
OPPOR- TUNITIE		High quality seeds	

Transects



Transects

9	PART TO PRESENT	Transects	
		A CLUB ALL MAN ALL MAN AND MAN	We all like
LAND TYPE	UPLAND TARN	MEDIUM LAND (DON)	LOWLAND (DON)
SOIL	Sandy Loam 5-15% slope	Sandy loam-Silty loam 1.5% slope	Sandy clay loam Flat
WATER TABLE	2-8.0 m	0-5 m	0-4 m Occational water stagnation
CROPS	KHARIF: ragi, pigeon pea vegetables RABI: wheat, vegetables (only in irrigated areas)	Rice Wheat (in 5% area) Lentil	Rice
TREES	neem, bargad, peepal bamboo, karang eucalyptus, mango, jackfruit, tamarind, banana, jamund, lichi		
LIVESTOCK	Cattle, goat, pigs	Cattle grazing	
FISH	Poultry, ducks, fish		Fish
PROBLEMS	Inadequate Irrigation facilities Soll erosion Poor soll fertility High intensity of weeds Shortage of draft cattle Shortage of green fodder Stray cattle	Under utilization of land Manpower shortage during rabl season Drought Weed problem Poor water retention capacity Lack of green fodder Cattle damage rabl crops	Moderate water retention Stray cattle Inadequate use of land resources Flooding



Wealth ranking & Social mapping

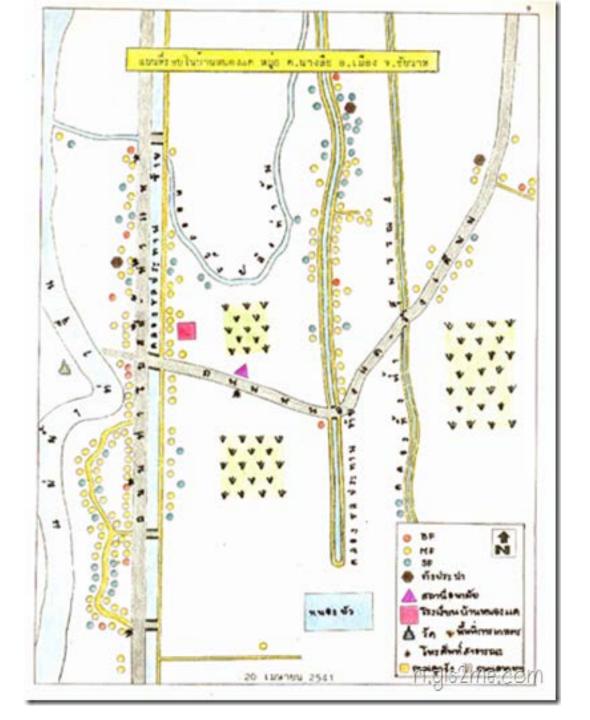
- Interview key informant (KI), group interview
- Define wealth classes using the locals view point.
- Determine the common indicators and criteria
- Draw social mapping:
 - Sketch out the village map residential area + main road and landmarks
 - Allocate houses on the map
 - Identify the wealth of each house using different symbol

Wealth ranking

	Rich	Medium	Poor
Land holding size	> 20 rai	5-20 rai	< 5 rai
Crops	Rice, potato, maize,	Rice, potato, maize,	Rice, maize,
	cassava, rubber tree,		
	bamboo		
Labor waging	never	some	reguary
Grocery store	possible	never	never
Vehicle	Yes	Motorbike	No
Housing	Permanent, tile roof	Semi-permanent, tin	None
		roof	permanent
Auxiliaries	Air conditioner,	TV, Fan, stereo set	None
	satellite dish,		
	computer, stereo set		

Wealth ranking



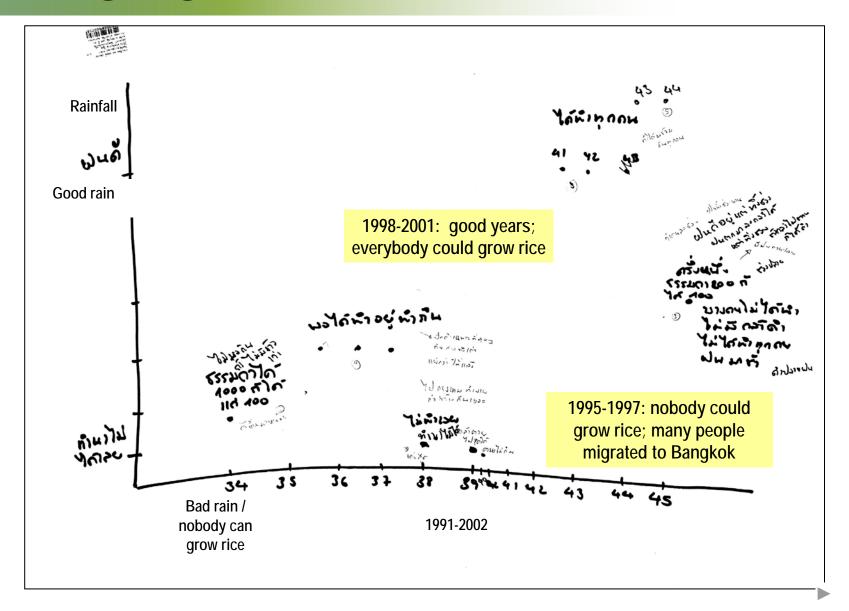


Social mapping

Timeline

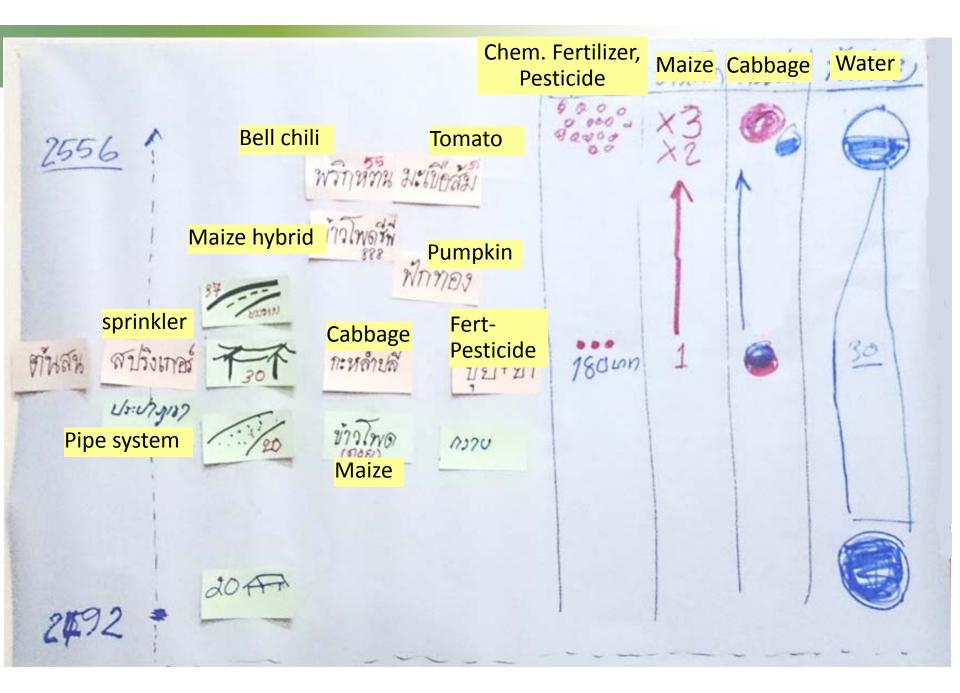
- to explore the temporal dimension from a historical perspective.
- Time line captures the chronology of events as recalled by local people. (...)
- It is not history as such but <u>events</u> of the past as perceived and recalled by the people themselves

Timeline

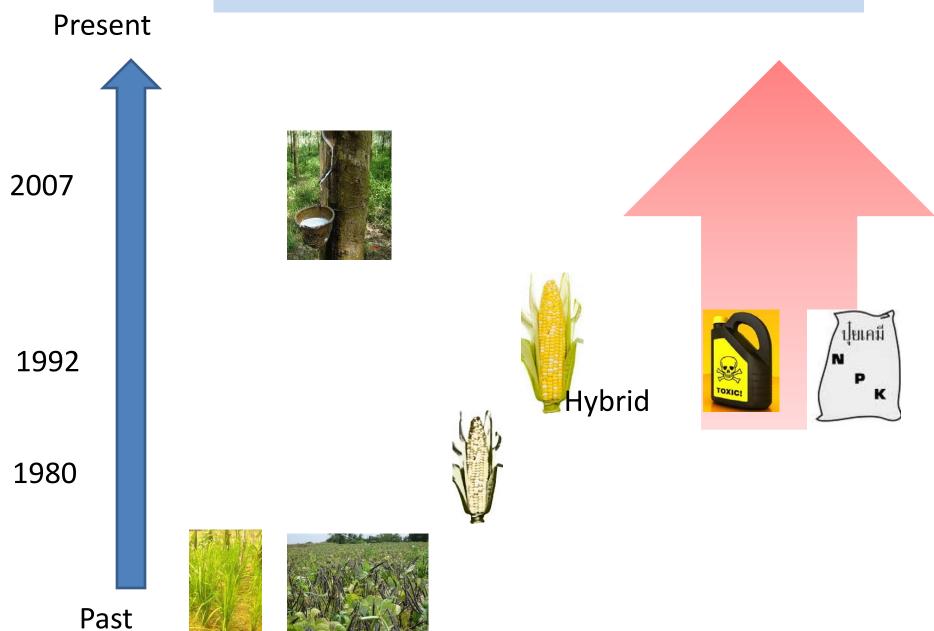


Trend analysis

YEAR	FOREST	AGRI LANDS	WATER	LIVE- STOCK	YIELDS
1940			13 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	当年	
1950		4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		雄雄	四回回回回
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1985		14 4 4 4 4 4 4 4		3000	图图
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Change of agricultural context



Year (Thai)	Key events
2443	Village settlement
2507-08	Lumber logging concessionaire
2510	The first motorcycle
2514	The first car
2523	Paved road
2533	Electricity
2537	Hybrid maize
2542-44	NGO came
2550–54	Commercial crops (Cassava, sugarcane, papaya, bamboo)
2550	Weather change observed, unusual warmer during winter
2553	Heavy rainfall and storm
2554	Early rainfall onset, and long period
	Crop diseases & yield lost
	Flood, road and reservoir damages

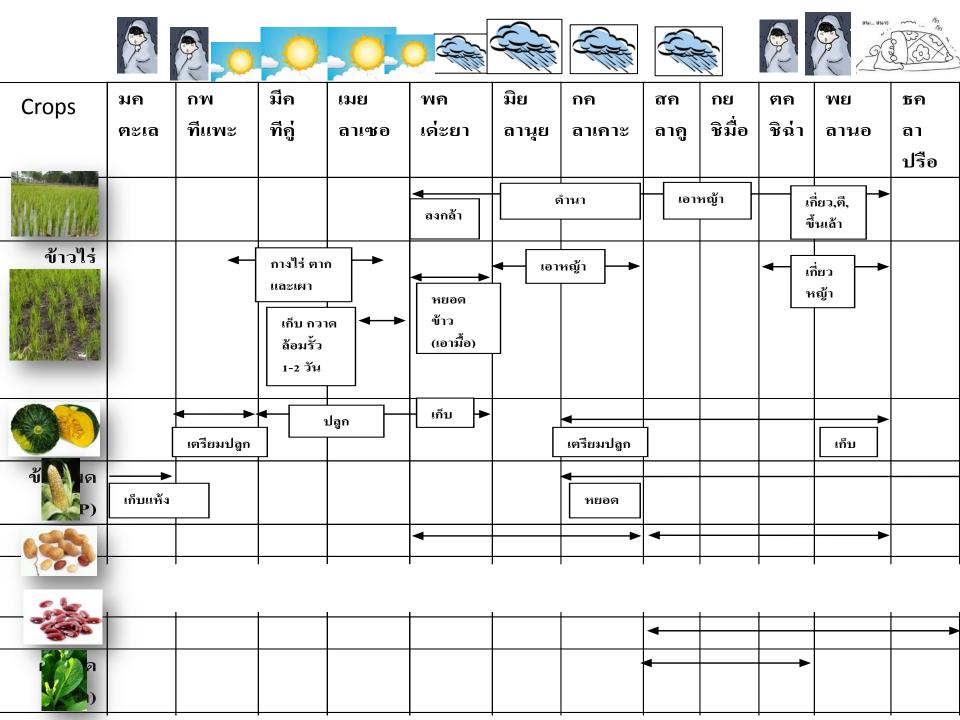
Seasonal calendar

- Temporal analysis across annual cycles,
- with months and seasons at the basic unit of analysis.
- It reflects the perceptions of the local people regarding seasonal variations on a wide range of items
- Relationship between the items could be analyzed

	Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Ot	Nov	Dec
Period	Food / Employment	Į	簽	iĝi	Ž.	澿	Qby	83	(CB)	E	Ž	Ï	
ation	Food Available	•••		•	••••	• • • •	• • •	•	•	x	x	х	х
Present situation	Employment / Income	• • • •	• • • •	x	• • •	• •		••••	• • • • •	• • • •	• • • • •		• • • • • •
p formation	Food Available	• • • •	• • • • •	• • • •	•	• •	•	x	×	X	×	x	x
Before group formation	Employment / Income	• • • • •	х	x	х	х	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •		• • • •	• • • • • •	• • • • •	•

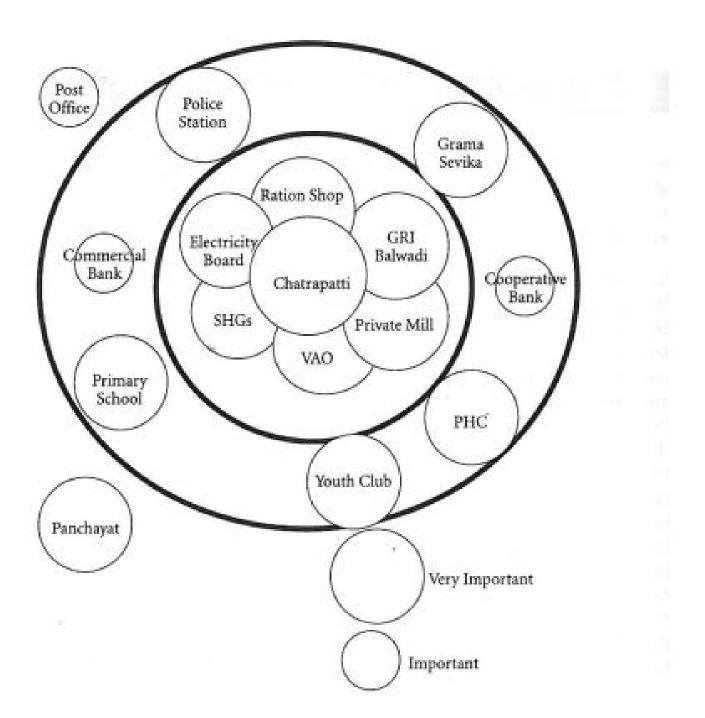
Seasonal calendar

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Venn diagram

- A visual depiction of key institutions, organizations and individuals and their relationship with the local community or other groups.
- The key players in decision making are shown.
 Places of important social significance and interchange can also be included



Venn diagram: livelihood supporting sectors



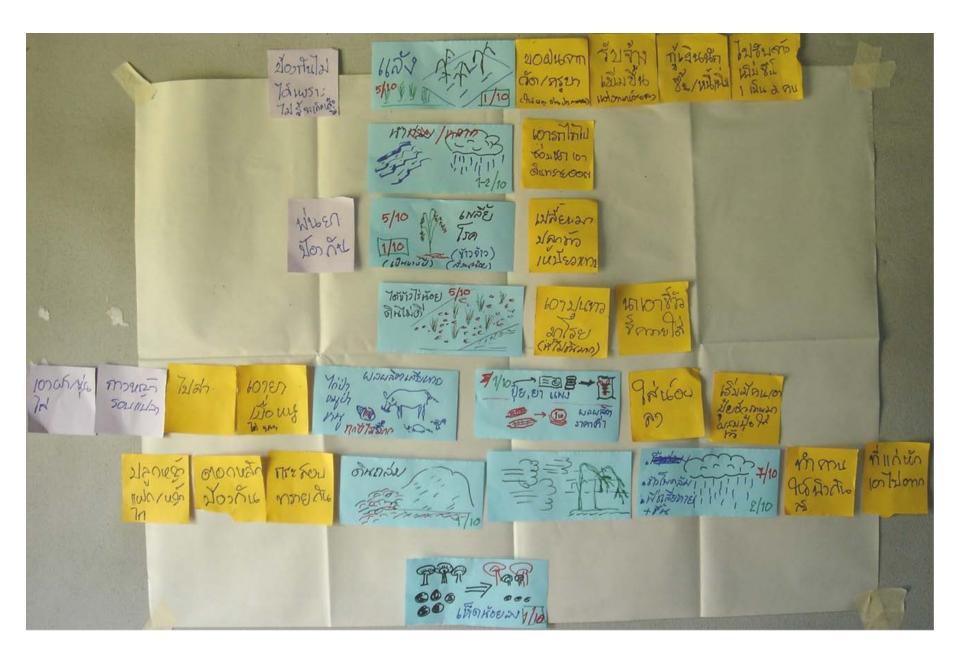
Ranking problems

- 1. The distribution of the problems.
- The importance of the particular enterprise to the farming system.
- 3. Severity of the problems.
- 4. Overall ranking of the problems.

A problem ranking table

Problem	Distribution of Problem	Importance of Enterprise	Seriousness of problem	Relative importance of problem
Upland			·	
Insufficient irrigation	xxx	xxx	xxx	ı
Weed	XXX	xx	l xx	2
Soil erotion	XXX	XX	! ĝ^	3
Pest and disease in crop	xx	×	×	2 3 5
Low soil fertility	xx	xx	×	- 4
Soil Acidity	X	XX	X	6
Poor input delivery	x	×	. ×	6 7
Animal	XXX	XX	XX	2
disease	xxx	000		
Shortage of fodder	^^^	XXX	xxx	1
Midland			4	
Insufficient irrigation	XXX	xxx	xx	ı
Soil erosion	xxx	l xx	x	2
Pest in rice	XX	l x	XX	3
Low soil fertility	.X.X	×	X	2 3 4 5
Soil acidity	×). X		5
Poor input delivery	×	×	XX	6
Lowland				
Insufficient	××	xx	x	2
irrigation	1			_
Weed Pest in rice	XXX	Х×	ХX	<u>!</u>
Poor input	××	X	X	3 4
delivery		1 "	^	4
Flooding	xx	l xx	XXX	
-				١ '
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Problem ranking



Problem diagnosis diagram

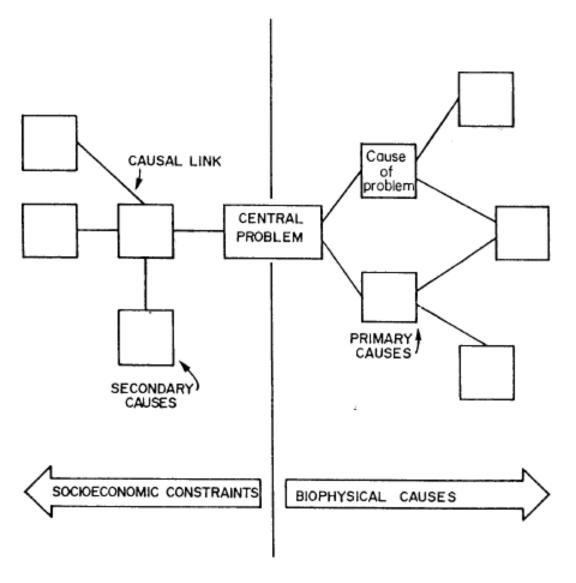
Informal interview

- Identify a target group of farmers.
- Encourage respondents to draw out their problem trees.
- Order of questions is determined by the flow of conversation not by topic listings.
- Ask questions in the field.

- Questions should cover
 - Farm typology
 - Description of processes
 - Rationale or difficulties
 - Estimations of key socio-economic and biophysical parameters.

Systems diagnosis diagramming.

- Place farmer's problem in the center.
- Assign each primary biophysical cause of the problem.
- Assign each secondary cause and link with the primary cause.
- Follow the same procedure for each socioeconomic constraint.

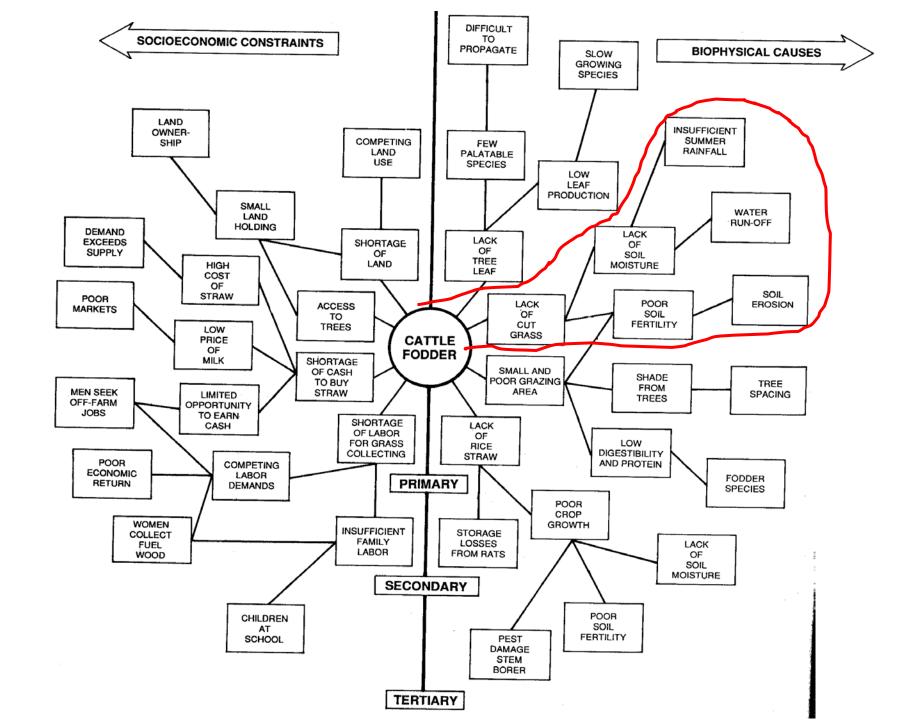


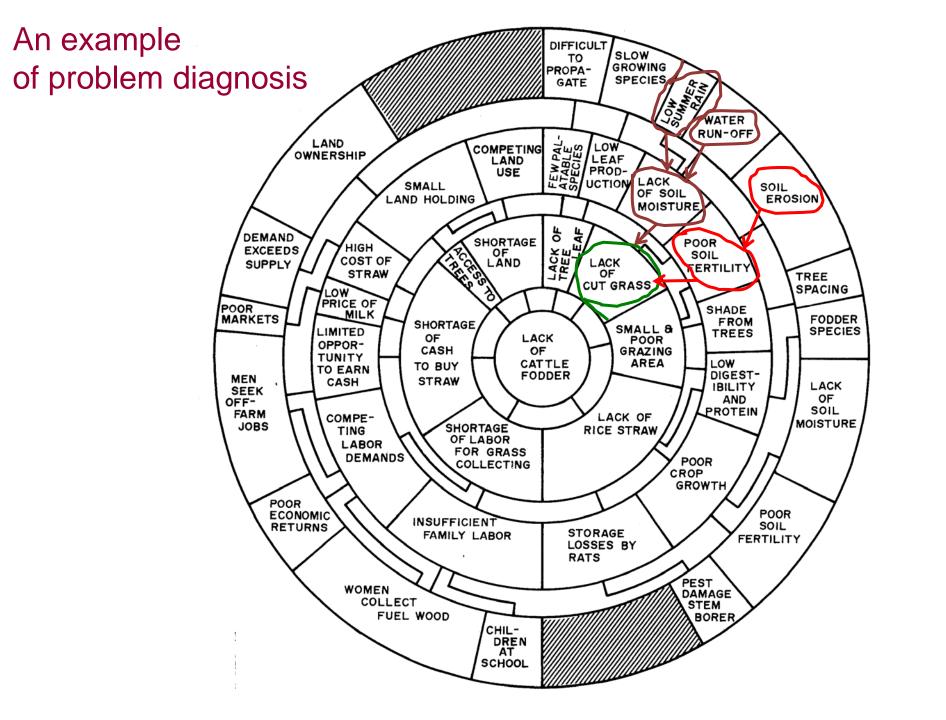
Farmers problem tree

- Arrange primary and secondary causes and constraints into a circle.
- The size of each segment is determined by the number of responses.

Using the system diagnositic diagram

- Find out what experiments, ideas, or experimental knowledge farmers have to offer.
- Find out what technologies are available from agricultural research and extension services.





Focus group discussion

- Aims at exploring/investigating a specific issue.
- Among key informants.
- Mostly based on participants' knowledge.
- Sharing, not confronting point of views.
- Not lecturing, researcher plays facilitator role.
- Stimulate all participants to equally express their views.
- Main objective is for mutual and collective learning for better understanding the issue.
- Problem identification and/or solving solution may emerge.
- Social learning, collective plan and actions are the most desirable outcomes.

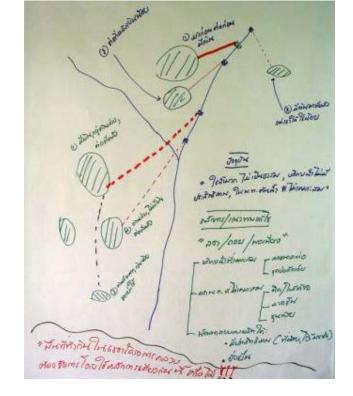
Focus group discussion

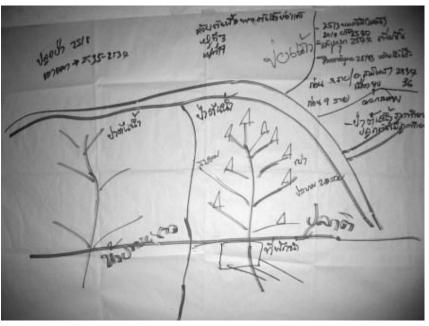
- Define participants
- Set up a topic of discussion
- Select place, date and time
- Prepare materials.
- Set task distribution & protocol.
- Inform the participants the topic and objectives.
- Urge and stimulate shared-discussion.
- Take note, record, photos (after asking permission and allowed.

Focus group meeting











Factors & indicators of happy livelihood











Semi-structured interview

- SSI → guided conversation in which only the topics are predetermined and new questions or insights arise as a result of the discussion and visualized analyses." (Pretty et al, 1995)
 - Use research theme/issue as a focal point
 - the interviewer could phrase and rephrase questions,
 - and follow-up interesting and unexpected responses.
 - use of open rather than closed questions
 - avoid using leading questions

Semi-structured interview

- Based on specific topic to be investigate
- Make sure/clear, what information needed.
- Community & individual levels
- Prepare main and sub-topics and open questions.
- Employ "W helpers" (What, when, where, how, who, why, why much/often)
- Share task within group
 - By bullets, by order
 - While one is interviewing, the others take notes and fill up 'blank space'

Semi-structured interview

- Date, time, number and sex of participants, etc
- Take notes using the language that one feels most comfortable with (it is recommended to take notes in the language spoken by participants)
- Try to capture as much as possible
- Do not try to edit notes during the process
- Try to distinguish between general arguments and individual opinions in notes
- Try to write the notes in a clear way
- Share and consolidate notes (> 1 note takers)
- Write up your notes on a computer at the same day

SSI- Exploring livelihoods context

- How people make their living, utilizing the assets
 - Agriculture:- crops, livestock
 - Off-farm :- Permanent job, trading, labor waging, remittance, etc.
 - Ecosystem services
 - Innovation, knowledge, skill
 - Social bond/support :- food sharing, ...
- Under/within institutional & policy setting
- The risks, pressures faced
- Etc.

SSI: example

"Good morning/afternoon/evening. How are you doing today.......
You may have been informed by your village headman that we (tell people that who are you, why do come here, what you would like to talk/discuss with people, for what purposes)... We would like to talk/ask/discuss with you on Topic. Please feel free to answer/talk, and do not hesitate to tell us if you don't want to talk/respond to any question...."

- I can observe along the way coming here, some crop, and
 What are the main crops people are growing? How much household involve.
- When and how do the farmers grow those crops?
- What are constraints/problem (growing, marketing, ..)
- Etc.

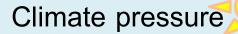
Semi-structured interview

A highland agricultural system

- General
 - Population (HHs, #Pop, HH members), Ethnicities
 - Infrastructures (road, electricity, water source)
 - Services (school, health)
- Main livelihood activities
 - Agricultures
 - Crops
 - Livestocks
 - Non agriculture
 - Labor waging
 - NTFP gathering
- Livelihood risk
 - (Open)

- A crop
 - Area, proportion
 - Where
 - #HH grow this crop, who?
 - When
 - How (to grow, harvest, sale)
 - How much (inputs, yield)
 - Problem!































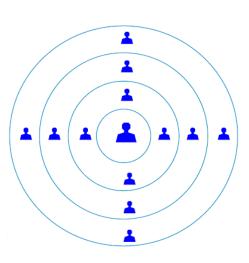




Stakeholders analysis







Stakeholder analysis (SA)

- SA is an approach/procedure of identifying the <u>key</u> stakeholders and their interest in the system.
- Stakeholders \rightarrow those who affect and/or are affected by policy, decision, action (both human & nature) imposed/emerge onto the system.
- Stakeholders → individual, community, social group or institution in any level. (<u>Actors</u>)
- SA here is to improve the understanding of, and design better project and strategies for OH & natural resource management.

Common objectives of the SA

- To improve the effectiveness of polices/projects:
 - their interest -> prepare how to approach them
 - anticipate conflicts
 prepare for managing conflict of interest and seek for cooperation and compromise.
- To better address the distribution of social and ecological impacts; as well as trade offs between different objectives and priorities.

Focuses of the SA

- Ensuring that the interests of disadvantage and less powerful groups are better articulated and addressed.
- Thus, not only the "beneficiaries" are targeted, but the whole range of stakeholders who can influenced or be influenced by the project/plan.

SA procedures

- Define the NRM/OH issue and problem (bottom up is preferable).
- Define objective of analysis, e.g. understanding vs effectiveness of the project/policy.
- Identify potential stakeholders.
- Investigate stakeholder profile (interests, roles, characteristics, interaction and circumstances)
- Analyze relationship, power, influence and impact of stakeholders.
- Plan for further management method & tool: stakeholder engagement, conflict management, engagement

Identifying the stakeholders: Method & tools

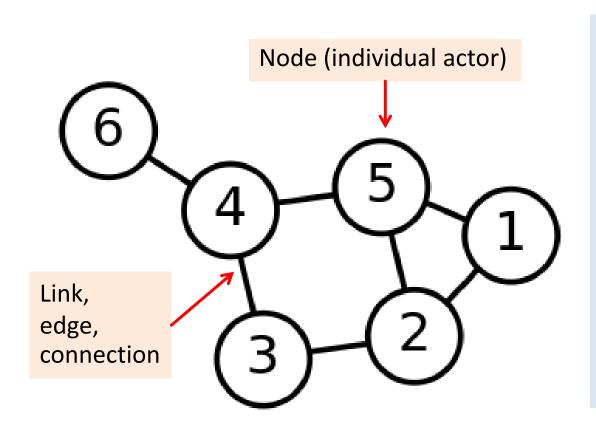
- 'reputation'; interview key informant for particular <u>distinct group</u> (ethnic, economic, caste, gender, administrative, elites, etc.
- 'focal group'; by identification of individuals or groups who play important <u>role or</u> <u>relationship</u> with the <u>issue/problem</u>.
- 'demographic'; gender, age, occupation, religion, etc.

Identifying the stakeholders: Method & tools

- Focus group discussion
- Semi-structure interviews
- Snow-ball sampling (one recommends other potential stakeholders, Stakeholder-led stakeholder categorization)
- Social network analysis.
- Important-influence matrices
- Types and number of stakeholders is based on the objective & issue.
- Verification / cross check the information (probe & triangulation).

Social network analysis.

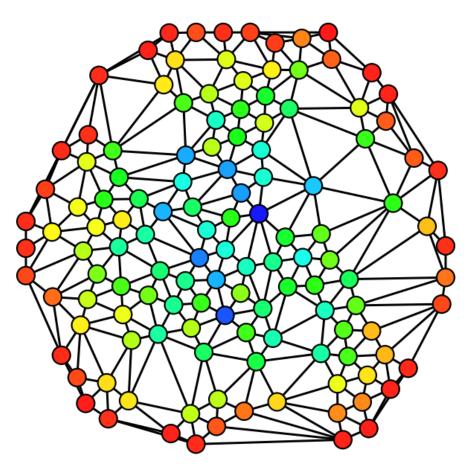
To explore and view a social relationship between actors



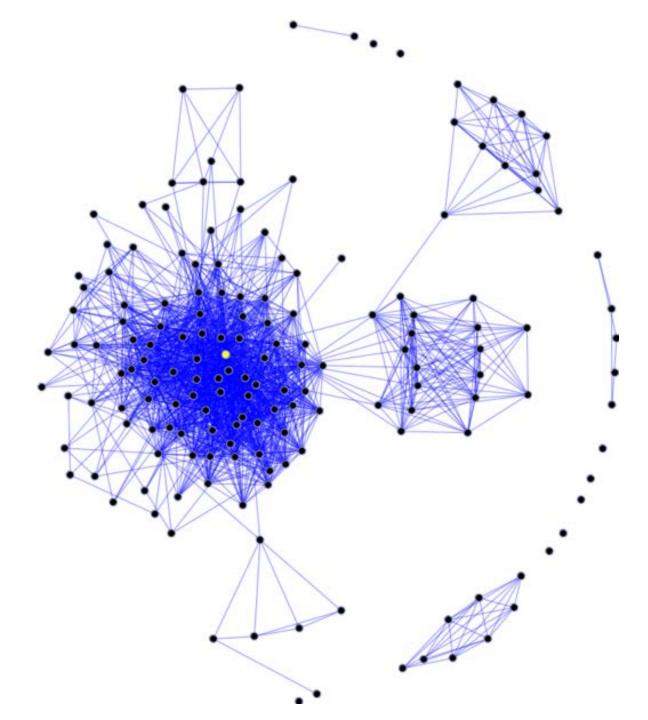
Relationship aspects

- Friendship
- Kinship
- Common interest
- Belief
- Knowledge
- Dislike
- Etc.

Social network analysis.



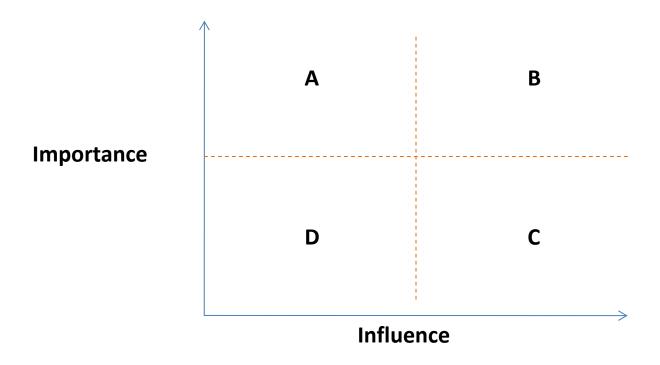
Hue (from red=0 to blue=max) shows the node betweenness (centrality measurement).



Stakeholders analysis matrix

	Main interest(s)	Influence	Importance	Impact
Stakeholder A				
Stakeholder B				
Stakeholder C				
Stakeholder D				
Stakeholder E				

Importance and influence matric.



Importance → those whose needs and interests are the priorities of a project.

Influence → the power certain stakeholders have over the success of a project.

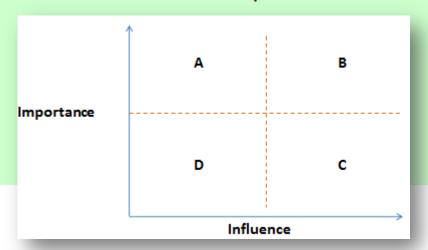
Importance and influence of stakeholders.

Boxes A, B, and C

 Key stakeholders –have significant influence or are most important to meeting project's objectives

Box A

 High importance, low influence – require special initiatives if their interests are to be protected



Box B

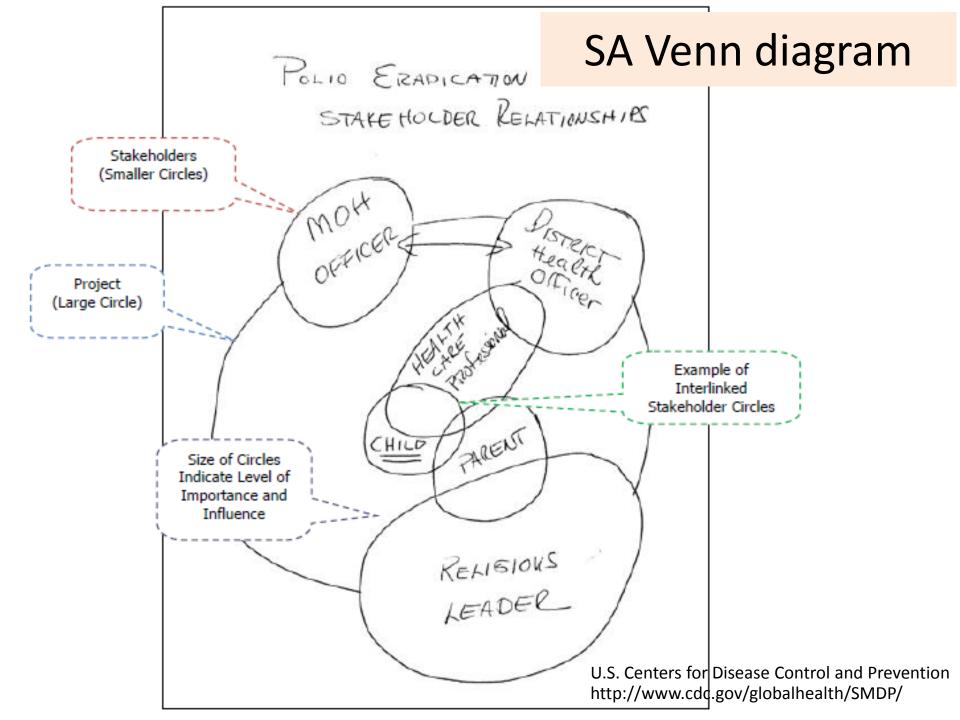
 High importance, high influence
 programme managers need to develop close relationships to ensure strong support

Box C

 High influence, but interests not target of project. May 'block' activities and could be risk to project's success.

Box D

 Low priority – but may need monitoring. Unlikely to be focus of programme





Venn Diagram on Institutions: An Example from a Participatory Household Food Security and Nutrition Project in Ethiopia.

