Overview Workshop Report

Action Planning and Research

India, China, Vietnam, March 2010

Pilgrim, S., Punch, S., Lund, S., Bimbao, M. and Sugden, F.

Workshop Participants

- Sarah Pilgrim, Research Fellow, Interdisciplinary Centre for Environment & Society (iCES), University of Essex, England, UK
- Samantha Punch, Senior Lecturer in Sociology, Department of Applied Social Science (DASS), University of Stirling, Scotland, UK
- Søren Lund, Associate Professor, Department of Environmental, Social and Spatial Change (ENSPAC), University of Roskilde, Denmark
- Maan Bimbao, Executive Director of FishBase Information and Research Group (FIN), Philippines
- Fraser Sugden, Research Fellow, Department of Applied Social Science (DASS), University of Stirling, Scotland, UK

Local Research Teams

Vietnam

Nguyen Thi Dieu Phuong, Applied Biology, Part-time, Vice Head of Department
Nguyen Thi Hanh Tien, Applied Biology, Fulltime, Field Team Leader
Nguyen Thi Trang, Applied Biology, Fulltime
Do Van Thinh, Applied Biology, Fulltime
Nguyen Hai Dang, Applied Biology, Fulltime

China

Luo Shiming – agro-ecology, China project co-ordinator
Cai Kunzheng – agro-ecology, crops, ecoservices, assistant project co-ordinator
Zhang Jia'en – agro-ecology, geology, assistant project co-ordinator
Chen Fengbo – household behaviour analysis, economics, livelihoods
Gao Min – environmental law
Liu Yiming – resource economics, economic modelling
Fu Jinghua – molluscs
Wang Quandian – environmental law
Ye Yanqiong – GIS, geology
He Hongzhi – phytoplankton
Li Huashou – agro-ecology, pollution
Tong Xiaoli – aquatic insects, odonata
Zhao Zhuihong – f/w fish
Jiang Baoguo – international law
Zhuang Xueying – plant taxonomy
Gan Lian – FW (fresh water) crab and shrimp
Cui Ke – FW fish

India

CDHI, Jalpaiguri, WB, India
Rajeshwar Mishra, coordinator
Mitali Ghosh
Dhananjoy Roy
Subrata Majumdar
Benu Kanta Dey
Subrata Majumdar
Prasun Deb Kanungide
Somankar Mukherjee

IESWM, WB, India
Nitai Kundu, coordinator
Sharmistha Mondal

CEMPD, WB, India
Mausumi Pal, coordinator
Asim Kumar Pani
Jayanti Dutta

Workshop Programme and objective:
Sharing of experience and capacity-building within country partner teams to enable field teams to select and design appropriate methodologies and tools to employ at the HighARCS study sites. Please note that workshop organisers will not be instructing field teams what to use at the sites, but instead will be combining sessions of giving feedback to the existing experiences of the in-country teams with sessions training them in the different tools that exist and the skills to develop these tools in order to enable researchers to plan and develop their own fieldwork strategies. At the end of the 3 workshops, we will be compiling a standard set of methodological tools for use in the HighARCS project. These tools will be based upon information we receive from the in-country teams, and we will try to select the best tools, methods and ideas for cross-country application.

Day	Session	Length in days	Person(s) responsible
1	Progress to date and planning of next phase (including TASK 1)	0.3	Teams
	Workshop introduction	0.2	Sarah
	Communication (including TASK 2)	0.25	Maan
	Quantitative versus qualitative data	0.25	Soren
2	TASK 3: Focus group: access, design and piloting in field (inc field notes/diary)	0.3	Teams
	Focus group design: pros, cons, types of data		Samantha/Fraser
	Methodological tools: PRA and other participatory tools/methods inc pros, cons, types of data	0.2	Samantha/Fraser
	TASK 4: Interviews: design and planning	0.3	Teams
	Interview design (open and semi-structured): pros, cons, types of data, pilots		Sarah
	Sampling methods: inc sample size and snowball sampling	0.2	Sarah
3	TASK 5: Qualitative analysis of focus group data	0.2	Teams
	Qualitative analysis, data management, storage and access	0.3	Samantha/Fraser
	Ecosystem services methods: valuation techniques and local knowledge (including teams to present TASK 6)	0.3	Sarah & Teams
	Village level entry and negotiation: inc PIC and IPR	0.2	Soren
4	WP5 and stakeholder analysis inc Delphi (including teams to present TASK 7)	0.15	Soren & Teams
	Action planning	0.45	Soren
	Wrapping up and issues – including developing timelines for methodological planning, fieldwork and data analysis	0.4	Soren/Samantha/Fraser/ Maan/Sarah with Teams
5	Writing up	1	Soren/Samantha/Fraser/ Maan/Sarah

Action Planning and Research

Key issues raised in relation to methods, tools, communication and planning

This section considers the key issues and questions that the research teams should consider whilst planning their field research for Phase 2 of the HighARCS project. These questions and priorities are based on the discussions held throughout the 3 workshops and present a compilation of the some of the most vital considerations for HighARCS. These issues should be incorporated into fieldwork plans and data collection:

Methodological tools and standardisation

Sampling methods and wealth ranking

Focus groups and interviews

PRA tools

Stakeholder meetings and the Delphi approach

Data recording and field notes

Qualitative data analysis

Site selection and entry

Ecosystem services evaluation

Action planning

Reporting

Annex 1: Research questions by country

Methodological tools and standardisation

HighARCS requires standardisation across all research teams in terms of methodological approaches, sampling, data collection and analysis. This will be essential for inter-country comparisons and broader scale generations to be made. In addition to standardising methodological tools, overarching research questions should be unified across all sites. See Annex 1 for full list of HighARCS research questions divided into themes.

For each area of research question, we need to consider:

1) what? – describe in detail the diversity and complexity of the current situation
2) why? – try to explain why things happen in this way
3) how? – consider how the situation can be improved and ways forward

A number of methodological tools and schedules will be drawn up as an output of workshop discussions and will be used to ensure inter-country standardisation. These schedules will include:

Sampling framework
Household interview schedule
Focus group schedule
Ecosystem services ranking schedule

These will contain the minimum data to be collected at all sites.

Sampling methods and wealth ranking

HighARCS sampling framework for household interviews will comprise:
Study site >> 3 communities >> 30 households within community (10 poor/10 medium/10 rich) for one-off in-depth household interviews>>10 households within each community (selected from the 30) for longitudinal studies of resource use

Revised sampling framework: In-depth household interviews to be conducted with 30 households in each community (10 poor, 10 medium, 10 rich) – stratified random sampling. From these, 10 will be selected from each community (using purposive sampling) to carry out longitudinal research over a year long period. Therefore a total of 4 site visits will be made – the 1st visit to carry out lengthy livelihood interviews (with 90 households per site), then the next 3 visits to carry out longitudinal household interviews (with 30 households per site). However it is important to note that extra households will need to be selected for the longitudinal surveys in case any drop out during the year-long monitoring period (to ensure we still have 30 households from each site by the end of the year). This proposal culminates in 4 visits in one year at 4 month intervals (e.g. Apr / Aug / Dec / Apr). Snowball sampling will be useful to identify key stakeholders and case studies for additional qualitative research.

The 10 households for the longitudinal studies will be selected according to purposive sampling (households representing interesting situations, different livelihood strategies etc). If there are groups that are particularly different or deviate from the norm, we may want to include these as a case study. Must be flexible in approach; who is most important and who is of interest to us? Consider how to include the poorest of the poor amongst the willing population? - Importance of being really aware the poorest most marginalised groups who are notoriously difficult to reach. Think how can we bring them on board? - develop rapport with them and need to make extra effort not to impinge on their time.

In making the selection of 10 households (for longitudinal study), it is important to consider 3 issues:

- the households have some degree of aquatic resource dependence, direct or indirect
- the most marginal and vulnerable households are represented
- the households are willing to participate in HighARCS and work with us over a long-term period

Value of longitudinal household studies:

- captures seasonal (e.g. variations resource dependence, migration, change in livelihood activities, change in fish catch/crop harvest, species consumption)
- seeks different perspectives of different household members
- use PRA tools to create diversity
- build up case studies of each household
- household story of their past, present and future

Household logbooks:
- Livelihood dependence upon highland aquatic resources will still be occurring in the intervening months
- Households could complete logbooks so we can understand how their fish catch and income change throughout the intervening months when researchers are not in the field
- Need to be specific as to what data we need to collect in monthly logbooks; they should not be too lengthy
- Could provide households selected for longitudinal study with a notebook each; then could draw a simple picture of a fish or similar illustration to record monthly fish catch, etc.
- Consider what do we want the logbooks to look like and what data do we want collected on a monthly basis?

Wealth ranking: Speak to head of communities/elder knowledgeable members to understand how they define wealth and differentiate between different households. Key questions:

- How can we differentiate between poor/medium/rich fishers at the study site?
- How can we divide the households into these 3 categories and who might we need to consult during this process?

How can we determine different groupings based on wealth?

- ask community leaders to identify the 3 categories (rich/medium/poor) using PRA ranking exercise
- then during the household interviews may need to adjust some of the households if they seem to be in the ‘wrong’ category of wealth
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Issues to consider:

What is community definition of wealth?
Wealth is about security as well as material assets
What do local people value as indicators of wealth and status?
The important thing is to ensure that we clearly find out the local community’s criteria for identifying the different categories of wealth
These issues will be explored qualitatively during focus groups and interviews as well as during initial consultation with village leaders for wealth ranking.

Focus groups and interviews

Focus groups: 10 men, 10 women, 10 boys, 10 girls across 3 sites – minimum 40 in total for each site (2 sites in India, 1 in China, 2 in Vietnam) – could hold different focus groups with different livelihood groups, or with young children and older children. May also want to hold extra focus groups if additional stakeholders of interest (for example farmers living upstream who use aquatic resources indirectly; market traders who buy or sell aquatic produce). These will be used to compliment household interviews – to fill in gaps and to understand different groups, and do not need to be organised by gender or age.
Focus group schedule to be used at all sites:
At each site (comprising 3 communities), focus groups to be carried out:
10 with men
10 with women
10 with girls comprising:
    5 groups with middle childhood (9-13 years approx)
    5 groups with youth (14/15 – 18/20 years approx)
10 with boys comprising:
    5 groups with middle childhood (9-13 years approx)
    5 groups with youth (14/15 – 18/20 years approx)
As a guide, each focus group should comprise approx 8-10 people, but this number is flexible
The focus group sessions should be seen as additional data to be added to the household interviews which are being selected according to statistical requirements – flexible approach to supplement household interview data
Some of the focus groups should be done during the first visits, but it is suggested to wait with making the others until follow-up issues have been identified
Find out different community groups – perhaps carry out activities with farmer's group or with women's group as focus groups – flexibility is key
Focus groups should centre on different topics depending on what you think is important or any gaps in your knowledge
Importance of piloting – so clear about goals of focus group

- clear checklist and make sure all the issues are covered

Some questions will just be asked to specific groups, other questions will be asked to all focus groups so we can compare between men, women, girls, boys

Issues to consider when holding focus groups:
Strong dominance (where dominant person is quieter and everyone is watching what they say) versus elite dominance (where one person talking)
What to do if one person dominates? How do you manage discussion?
    Start by setting scene that you want everyone's views
    Ask: and what do you think? Do you agree? Any other views?
    Could ask the dominant person to write down his/her opinions
    Also important to consider why one person dominates and why others do not speak?
    Perhaps alter the communication strategy – to walking and telling stories, or mapping
    Ice-breaking games useful
    Sometimes no matter what tactic you try it can be impossible to encourage the quieter people to speak and the dominant voice to let others' speak
    Use of eye contact and invite the quieter people to speak
    But it can be a difficult and common issue to cope with

Preparation before the interview is important:

- Preparing interview guide or checklist
- Doing a pilot before going to the field
- Composition of the research team
- Make time plan according to the checklist of topics to be covered

Easy to get the basic information but much harder to get the more detailed, more specific information: some questions are easy to ask and easy to answer. To get meanings, interpretations, processes and beyond the 'obvious' can be hard. Can be frustrating when feel getting the same answers but not what people really think or feel about the issues. Useful tools:

- spending periods of time observing: worth trying to spend longer periods in the three sample communities – just hanging out and chatting to people, participating in village activities such as fishing and farming, attending community meetings
- using PRA tools with households: using humour and having fun
- participate in social activities or community festivities
- staying in households beyond the interview – having tea, accepting invites to stay a bit longer and spend informal time with people

Follow-up questions to explore from this emerging analysis:

- Diversification of livelihood strategies
- Mapping of the fishers territory. Any conflicts? If so, how resolved?
- Technologies used and how vary?
- Action plans: new technologies, nets, techniques, develop skills
- Diversify or focus on certain species
- Local knowledge of ecosystems?
- Role of children and young people? Do children contribute? What tasks do they do? – Household chores, help transporting the fish or selling, or only homework?
- What are children's views about their parents being fishers and their own futures? What are parents and children's aspirations for children's futures? If not going to be fishers then what and how?
- If children cannot get another job and return to fishing, will they have the sufficient knowledge and the skills?
- Are they ok about being the last generation of fishers? What would they like to happen?
- What support do they require from others to improve their situation?
- What is the policy of the government? Do they not want to give more licenses and why? What is the government's goal with respect to fishers? Do they want to keep fishers or move towards fish raising only? Do they want fishers to modernise? Or does the government not care about them?

Translation of terms – e.g. term livelihood difficult to explain if not a direct translation – instead may ask people what they do during the day. If certain terms are used in local language that cannot be directly translated – we should use this term in our reporting and make sure we provide an explanation as a footnote (perhaps in a few sentences) – may need glossary of local terms in livelihoods report which can not be directly translated

PRA tools

Tools: mapping, livelihood activities ranking, constraints and risk management strategies, transect walks, brains storming, Venn diagrams, timelines

Materials: large sheets of paper (as large as possible) and thick marker pens (not thin pens). Ideally the paper is placed in the middle of the floor and everyone sits around it. Everyone is given a pen

Consider literacy levels in community – how comfortable are people with reading and writing – does mapping or PRA approach exclude any community groups? What materials are appropriate? Could draw pictures in the sand/mud – important to use local materials which people feel comfortable with – useful for ethnic minority groups where literacy may not be so strong

Timelines:
Monthly/annual timeline useful for understanding seasonality
Daily timeline can be used identifying daily livelihood activities – income and non-income generating – can do with men, women, boys and girls – can ask: what do you do when you get up from morning to evening?
Historical timelines – some may have problems knowing the exact year (e.g. 1980) – may be useful to map timeline by events (e.g. big flood) and not years if the local people can not remember
Can use props and pictures to demonstrate different activities instead of words
Timelines can be drawn up over days, weeks, months and years – to capture seasonal differences and temporal trajectories
Seasonal information is key – much variability in use, activities and consumption – timelines useful as well as repeat visit to households
Tools should be used to stimulate good discussion and make people feel at ease

Data recording: important to record the discussions around each task. They do not all have to agree on the final result and it is okay for them to disagree about which is most important. The value of these tools is the discussion that centres around them – key to record all of the discussions and disagreements that occur during the activity. Use 2 or 3 facilitators (minimum 2) – one records discussions, one records interactions/observations, one facilitates to ensure everyone speaks

5 stages:
(i) Brainstorming – range of livelihoods and issues
(ii) Ranking – which are most and least important
(iii) Chart – take a key issue and explore the opportunities and benefits as well as the problems and constraints
(iv) Explore the problems in more detail: how are they currently coping with these issues? What are their suggested solutions for improvement?
(v) Follow up questions and issues which have not been raised.

Stakeholder meetings and the Delphi approach

Two roles of stakeholder meetings in HighARCS; (i) to include local people in research process and to identify common ground, (ii) to check data, understanding and conclusions coming from project

As an input to the stakeholder meetings, the Delphi Stakeholder technique is proposed. This technique is used to facilitate the interactive participation of varied and conceivably hierarchical and antagonistic stakeholder groups and in capitalising on their knowledge and opinions as valid input to research in capitalising on their knowledge and opinions as valid input to research.

Delphi is particularly appropriate when decision-making is required in a political or emotional environment, or when the decisions affect strong factions with opposing references. Moreover, it is considered good for giving more equal attention to minority view points.

Steps of Delphi stakeholder approach:
- Select and instruction of panel of experts
- Questionnaire formulation and pilot
- Round 1 – send out questionnaires and when received replies begin to code responses into themes – group into respondent's positions (i.e. group different stakeholders together if they have similar viewpoint) – possibly peer review to ensure correct interpretation of views
- Round 2 – then send out again in order to reject or accept the different viewpoints suggested on how to address the issue – then collect written responses and code again – look for ways to integrate opposing solutions (do not mention how many members are behind each option)
- Round 3 – send out again for responses – collect responses – try to reach consensus
- Conclusion and results

Issues to consider:
Formulation of questionnaire – can be semi-structured or open questions. Focus on action research issue or problem characterised by a high degree of opposing viewpoints and / or factions with opposing references identified amongst authorities and influential stakeholders through the first phase (situational analysis). A pilot should be conducted. Stuart to look at drafts. When send out, attach a short explanatory letter – not too detailed – include deadline for response. The whole exercise should be completed before November 2010, possibly earlier.
Aim is to remove extreme views and explain others' views and come to compromise in centre – reduce the distribution of views in order to come to a consensus
Conclusion is the total analysis of the situation which represents all viewpoints – can be used as input for stakeholder meetings

Data recording and field notes

The practicalities of managing focus groups and note taking:

- Decide who will facilitate the interview and ask the questions (that person should not be responsible for note taking – they may note down the odd point that the wish to follow up on, but they should concentrate on facilitating the discussion and encouraging the group to discuss). Their role should be to maintain eye contact with the group and try to enable all the participants to speak and share their views. Where possible it should be a group discussion amongst the participants with the facilitator asking a few questions.
- Decide who writes the answers to the questions:
    - where possible capture exact words of the participants and distinguish between when you have got their exact words (use quotation marks) and when you have slightly summarised or paraphrased their responses. This is important so that afterwards you can use exact quotations from the participants themselves to illustrate their perspectives on the issues rather than only summarising their words. Reports can be richer if some direct quotes are used so that the reader can hear the participants' voices.
    - decide who will write most of the observational field notes (such as type of housing, interview setting, reactions of participants, interactions and body language, emotions of the group etc). Importance of observing versus interviewing – e.g. if commune leader says local people are not dependent on aquatic resources but observations showed that people do fish, and have nets hanging outside their houses

- Language: people do feel more comfortable in speaking in their own language – where possible we should try to interview people in the dialect they feel most comfortable with.
- Photos: maybe just one person takes the photos so that not everyone is snapping photos all the time. Always ask permission beforehand. It can be nice to capture the focus group in action and PRA tools being completed. It is also useful to take a photo of the final result of a PRA exercise.
- Managing the different voices in the group: starting the group by saying that you would like to hear everybody's views and give all the participants a chance to speak. If one or two people dominate the discussion and some are much quieter try to give opportunities for the others to speak. Thank the dominant speakers for their views and ask the others what they think. Also use PRA tools to enable other people to speak. If someone has been very quiet you might ask them afterwards to have a separate follow up individual interview.
- Field diary notes: after the interview each person should record their individual reflections of how the interview went – any difficulties or challenges? How did people react to you or to the team or to the questions?
- After the interview: one person should compile all the notes together. Each person of the team present at the interview should immediately type up their notes and their reflections of the interview and pass on to the person who will compile all the notes. Ideally this is best if it can be done immediately afterwards whilst the interview is still fresh in everyone's minds. Some notes should also be made at the end of questions or issues to follow up next time.
- Field briefing sessions – daily team meetings would be useful to discuss key observations, ideas and findings at the end of each day. These discussions could also include some field diary reflections which members of the team are happy sharing together. Then take it in turns to type up what is discussed after these sessions.

Organisation of interview notes:

It can be helpful to standardise the format of the final presentation of all the notes

- Start: basic information on the interview: interview location, date, time, characteristics of the participants (gender, age, livelihood etc)
- Main content: responses to the questions and all the discussions, including direct quotations where possible (indicated by using quotation marks)
- Field notes and observations of the interview setting, interactions and reactions of the group, other things happening
- Field diary reflections: how did the interview go? Any difficulties? Any thoughts about how the team influenced the data that was generated? Did you feel that people were at ease and presenting their full views?
- At the end of the interview notes, add any issues to check or follow-up next time. Any questions that you would like to ask more about in the next interview. It is then helpful to read through these again before doing the next focus group interview.

Data sharing within the team:

- Exchange notes within the team while in the field to cross-check and ensure clarification.
- It is also important to clarify with respondents themselves while in an interview situation. Stakeholder workshops can also be used to cross-check.
- Useful to have one person recording and another focussing on the discussion.
- Importance of regular team meetings. Compile notes each evening. One person digitally types up the notes.

- The team had can share data by email also.

Field diary to record the process of generating the data:

- How do we as researchers impact the data we generate?
- How does our background and social status (gender, age, class, ethnicity etc) affect the data?
- What is the nature of the relationship between the researcher and the researched?
- How does this relationship change over time?

Reflexivity is about being critically aware of our role as a researcher and how we affect the data Furthermore, what is it like working in such a large inter-disciplinary, multi-partner research team?

- How can we all work together across countries and cultures?
- How do we all participate in HighARCS and how is this affected by our gender and age?

The benefit of this kind of reflection is that there is scope to write methodological papers about the process of HighARCS. These papers involve being critical about the weaknesses, limitations and difficulties of implementing HighARCS throughout the research process from design, data generation, analysis and writing up. In order to do this effectively it would be useful for us to keep field diaries to record how the process changes over time. How did the sample communities react to HighARCS at the beginning, during and end of the project? Is there research fatigue over time and do some people start to tire with our constant questions and repeated household visits? Or do relationships with our participants develop and become richer as we build up trust and rapport which encourages shared ownership of HighARCS? Are different members of the research team treated differently by the research participants? (e.g. on the basis of gender and age?). Possible papers may include:

1) In-country methods papers about the benefits and limitations of applying a participatory approach to HighARCS. What worked and what did not work? What lessons can be learnt for future projects?

2) Comparative paper: in what ways was HighARCS implemented differently across the three countries and five research sites. What are the challenges associated with trying to conduct a comparative project across three countries?

3) Working in a multi-disciplinary and multi-partner research team: how do we participate in HighARCS? How do we combine natural and social sciences? What is the process of being an inter-disciplinary teams (workshops, training, sharing ideas, learning from each other, problems and challenges, issues of language, hierarchies within and across teams, disciplinary boundaries/perspectives). What have some of the biggest challenges been and how have they been overcome? What issues have remain unresolved? What lessons can be learnt? What would we do differently next time? For this paper it would be interesting if all team members shared their views – perhaps towards the end of next year Could conduct short-interviews with each team member about their personal reflections of working on HighARCS? Or possibly a short questionnaire could be completed anonymously and analysed? We could even use the evaluation forms from the workshops to begin this analysis as well as analysis of the discussions of the researcher forum.

Qualitative data analysis

Different types of notes:

Field notes – research content – based on observations on what is happening
Field diary – research process – how data was collected and influence of researcher – includes personal challenges and the limitations/weaknesses of research

Data analysis:

Sorting and coding the data
Organise the data into different case studies/groups
Then organise into key themes
The process of building explanations – an inductive approach
Exploratory – have no pre-conceived idea/theory – but theory comes out of data/findings
Identify sub-themes that exist within larger themes
Develop ideas and theories
Aim: to producing a convincing argument based on your qualitative data
3 stages of analysis and reading the data –
Literally (literal reading)
Explanation (interpretation – comparative, linking wider literature, developing theories)
Reflection (reflexivity – influence of data)

Issue of translation – what data/notes do we translate? Themes ideally should be translated into English – and any important messages under each theme will be translated into a sentence or two of English – to facilitate transparency and data sharing between teams. The web forum, accessible only to HighARCS partners, is one tool which can facilitate this.

Site selection and entry

Focus on highland sites with aquatic resource dependence (direct of indirect) – justification of choices is key. Key issue to consider: what are we comparing and contrasting across the 3 countries/5 sites? And the 15 communities?
- what is common between them?
- what are the limitations of our comparisons?

Need justification of choices and some degree of homogeneity to compare between countries – e.g. within limited geographic areas but at different places along water source/river – with some level of (direct or indirect) aquatic resource dependence to differing degrees – i.e. more seasonal upstream so lower dependence

At all sites/countries – select 3 communities at different stages along river (within restricted area) – communities should have degree of aquatic resource dependence (and be highland – not lowland or alluvial plain) – dependence can be direct or indirect
In all countries teams have observed that there is more indirect dependence on aquatic resources in highland areas on the whole – probably due to seasonality and other resources available such as forests or land areas for cropping – but important to consider the impact of these communities' activities downstream

Possible ways to enter community:

- guided by government office
- use contacts from first year as first step, and then snowball methods to expand the contacts
- business like methods: write a letter or phone to make appointment
- hang out and spend time there: worth investing a few days to build up rapport and become a familiar sight in the village – can be invaluable in terms of future work

Ecosystem services evaluation

How can we find out what services people use?

- by an integrated approach – combining methods
- asking people about the benefits they get/what they would lose if wetland not there?
- ranking the list of services produced
- comparing lists and ranking with other stakeholders

For HighARCS, we are interested in capturing the value that local communities and stakeholders place on different ecosystem services. This may vary from group to group. We can compare this with the types of services identified by scientists (including any economic valuation carried out). This enables us to qualify the knowledge base and authorize the uses, values and stakeholder concerns that planning and management decisions are based upon.

Consider the scale of study:
The scale of ecosystems can be defined locally or globally depending on the object of the study. In HighARCS, it was suggested to apply the scale as the upper part of the watershed (although Payment for Ecosystem Services schemes may require consideration of the entire watershed, i.e. to include downstream users)
Ask people what area of the ecosystem they use? Different stakeholders may be interested in and use different parts of the watershed and ecosystem. Note: importance of mapping: to help develop action plans
What is the unit of study? What is the boundary?
Is it a watershed or more or less than that?
Do we have to have a standardised answer?
From the local team's view: the upland region of the watershed (the highland part not the river bed and alluvial plains)
From the local people's view: only the part they use
Fishers may use a different part from industry
There may be some overlap in areas used
The government often has an interest in managing the whole watershed
What is the physical boundary of the ecosystem?

In assessing the services used and their importance, think about:
Seasonality – maybe important only during one period
Different groups – woman value and men value differently
Value chains – what is important to the one selling the fish and one who is buying the fish?
Mapping – e.g. where catch and sell fish (for the action plan)
Species – note which species are caught for instance
Baseline services – compare value of each service with a service that has an economic value, e.g. price of fish

Action planning

The HighARCS project is designed partially as an action-research project. Research is done in order to bring about real life transformation/change wanted by specified groups of people or organisations, and not just to provide new knowledge for its own sake. In action-research, the research process and the nature of the social relations (power, trust, equal mastery of the process) between researchers and partners, are key. This includes two-way communication, generation & sharing of timely and relevant knowledge

General steps –

1) Choosing partner – who working with? Who goals do you want to support/represent? Also who contacts you to request collaboration?

2) Establish rapport and agree on collaboration – using interview techniques and holding stakeholder meetings

3) Joint problem analysis and target setting – PRA, focus groups, Delphi, future stakeholder workshops

4) Joint strategic planning – identify actions and measures to be taken to reach goals – planning meetings and workshops

5) Joint planning and organisation of activities – translating tasks into actions and outputs – organisation key as is monitoring and evaluation – also consider resources to be mobilised

6) Joint implementation – management and action, monitoring, feedback, problem-solving and mitigation measures

7) Joint evaluation – have goals been reached? Are results sustainable (institutionalised without project support)?

Importance of understanding resources of implementers – e.g. local government resources available to put action planning into practice. Resource understanding is key prior to developing action plans. And all the way through these steps, our methodological reflexivity about the process itself is very important. Are we living up to our objectives of practicing participatory research, creating social rapport, partnership relations rather than expert-client relations, etc.?

What does a conservation action plan, a livelihood action plan, or a policy action plan look like? There is no a priori standard or template required from the HighARCS project. We agreed to exchange examples of such plans that we have come across earlier, using the “Forum”.

How do we know if project is a success? Key to create good policy environment as well as building local community’s own capacity so that they can defend their own interests and deal with their own problems more effectively – empower marginalised group. What if at the end of the project we carry out great research but no action plans are implemented? If action plans are not implemented or accepted, then just by documenting why they are not, this will contribute to future plans and ensure that the project is not a ‘failure’. It is important to be realistic about action plans within resources and with bodies we are working with. It is key to explain reasons for action plans we choose – what cannot be done and what is more attainable? And if what we view as attainable plans cannot be achieved, it is crucial to document why.

Reporting

- There are 3 interest groups for the reports: (i) the EC, (ii) the academic communities we need to publish within, and (iii) the stakeholders we want to support. Publications and reports will need to be adapted accordingly
- It is crucial to reference every source of data used in reports
- Importance of integrating gender and age – in particular including children and young people's voices; this is a key gap in the literature in terms of children's and young people's use of aquatic resources – a gap that we could fill and would enable us to have something new to say and a growing area to contribute to. However, to some extent children and young people are still fairly marginalised in HighARCS.
- Gender/Age framework due from all teams – teams can combine some of their insights into gender/age issues, and combine it with the framework which was put together after the October meeting. They can begin by outlining current knowledge of gender/age based upon what they have done so far in the field, then they can specify that more needs to be known and identify key questions to be answered in the field. Fraser is happy to help any of the teams put this together or go over what exactly is required – contact him directly if you would like him to look through an initial draft.
- To be submitted in latter half of Phase 2:
    - WP3 report – due for all 5 sites
    - WP4 report (see Livelihoods Report Framework) – due for all 5 sites
    - WP5 reports x 2 – due for all 5 sites
    - Action Plans: format of the LAP, CAP and PAP to be decided – due for all 5 sites
    - Peer-reviewed papers x 2 – due between sites/partners
- Final deadlines for the deliverables listed above are to be agreed between WP leaders and country teams based on Phase 2 work plans submitted during or after the workshops.
- Furthermore, online/e-mail consultations of methodological tools developed by the teams will be ongoing and workshop organisers are happy to give feedback to questionnaires, field notes, PRA tools and focus group agendas.

Annex 1

Research Questions by Country

From workshop organisers:

Overarching question: How can highland aquatic resources be sustainably managed and conserved while accommodating for the livelihoods of poor and food insecure communities?

This will be approached through answering four sub-questions:

1) **Conservation:**
   1 a) What is the existing aquatic biodiversity in the selected field sites?
   1b) How can these aquatic ecosystems be managed to secure the sustainable provision of ecosystem services, to ensure water quality and the conservation of biodiversity?
2) **Livelihoods:**
   2a) What are the dynamics of the multiple livelihood strategies according to gender and age in the selected field sites and how do these strategies utilise resources derived from aquatic ecosystems?
   2b) How can resource dependent livelihoods be ecologically sustainable and at the same time permit equitable local development opportunities?
3) **Policies and Institutions:**
   3a) In each selected field site, what are the existing institutions and legislations which mediate access to aquatic resources at multiple scales and levels of government? How do conflicts evolve and relate to decision-making processes?
   3b) What policies and institutional frameworks are needed to resolve conflicts between multiple stakeholders and ensure sustainable resource management whilst maximising local income generating activities?
4) **Planning:**
   4a) What is the best approach to facilitating interactive participation in assessment, decision-making and planning with respect to aquatic biodiversity conservation and wise-use? Is this the best approach? What lessons can be learnt about the research process of HighARCS?
   4b) Can social, economic and biological indicators be identified that are appropriate for local communities to assess change? What are the limitations and advantages to such an approach?
   4c) How can monitoring of aquatic ecosystems, livelihoods, institutions be established and sustained locally? Who should be responsible? What to do if something changes? Is HighARCS sustainable in the long-term and what does it depend on?

From Indian teams:

a. To what extent the local people are dependent upon these ecosystems
b. What are the environmental and livelihood linkages in these areas

c. How the aquatic resources of the proposed sites can be optimally utilised without affecting the environment
d. What impacts have taken place in the habitat occupancy of major fauna and flora and what are the local extinction possibilities of selected species?
e. How these wetlands (or ecosystems) can be managed and conserved?

From Chinese team:

（1） **Research on the protection and increase of aquatic resources**: the conservation zone related legislation, implementation, technique, management, especially related to the expansion of the conservation area, the financial resources for the release of aquatic species, the coordination of the activity under different administration department related to conservation area, the compensation fee collected from the sand mining and hydropower station.

（2） **Research on the improvement of the livelihood of fishmen:** government policy related to the housing, fishmen's organization, medical supply, social security, training for job transfer, the policy for the release of fishing permit licence and the compensation for diesel price.

（3） **Research on the evaluation of upland ecosystem service provided by the North River** including the measure to improve it such as management, legislation, policy, economic and education.

（4） **Research on the environmental protection for the North River:** the policy, legislation and environmental assessment for projects related to sand mining, dam building, and fishing rising in reservoir, the environmental protection action taken by steel industry, mining industry, restaurant, hydropower station, and sand mining company.

（5） **Research on the eco-agriculture and cycling agriculture practice in the region**: the method on the reuse of straw, animal waste and garbage, the use of biodiversity and its effect on the reduction of chemical fertilizer, pesticide, and non-point pollution.

From Vietnamese team:

1. How is the status of aquatic biodiversity in Son La and Quang Tri?
2. How are the ecosystem services and biodiversity values in these provinces?
3. How people in these provinces depend on aquatic resources?
4. Who should involve in aquatic conservation?
5. How to sustainable develop aquatic resources and wise use?