



SAWA ToT Lecture Series

Report

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SaciWATERS
SOUTH ASIA CONSORTIUM FOR INTERDISCIPLINARY
WATER RESOURCES STUDIES

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Overview

SaciWATERs with its research has identified a few gaps in IWRM training in South Asia, like- lack of interdisciplinarity (specifically the issues like human development, gender, ecology, climate change etc.), lack of field knowledge and an entirely lecture-based pedagogy in the IWRM studies. To fulfil these gaps SaciWATERs introduced two courses i.e. (1) IFRM and (2) Gender and Water in 2006-07 for the four universities in Bangladesh, India, Nepal and Sri Lanka. However, it was further identified that ensuring satisfactory interdisciplinarity in the research work has been a challenge even after incorporation of new courses and it also requires to incorporate new aspects of IWRM to the existing curriculum after a certain interval. The challenges are as follows: First, the social science courses at the institutions are being taught by in-situ faculty who have exposure to these courses but are not trained in them. Second, the thesis supervisors are those trained in natural sciences. Third, there is also a lack of gender lens in student's research, in spite of the training. Therefore, there was a need for the involvement of experts from social science in modifying the existing course curriculum and providing handholding support to ensure a greater degree of interdisciplinary element in the student's research. Therefore the training was designed for the engineering faculties.

Objectives and expected Outcomes

The aim of the training program was to provide multidisciplinary insights to the engineering faculty and post-graduate students (SAWA Awardees) from universities to ensure a greater degree of interdisciplinary element in the IWRM research.

Course Profile

INTER-DISCIPLINARY FIELD RESEARCH METHODOLOGY

Thinking about water in an inter-disciplinary way: some approaches and frameworks

This session provided participants an exposure to frameworks that link the social and natural sciences. Inter-disciplinarity needs to go beyond the cliché of seeing water in a “holistic” way. This requires getting out of our disciplinary comfort zones. A move to inter-disciplinarity needs to be reflected in the nature of research and enquiry surrounding water.

Paradigms in social science research

How we see what constitutes reality has a fundamental influence on the nature of enquiry and research design. Our paradigmatic orientation is fundamental to how we approach research. However, it is seldom made explicit. We explore positivism and interpretivism as alternative ways of developing research designs.

Qualitative Research: ethnography, semi-structured interviews, key informant meetings and Focus Group Discussions

In this session, we explore some basics of qualitative research. We become familiar with some qualitative research methods. We also explore how they are different from each other and when they can be used. We look at some applications in inter-disciplinary water resources research.

Collecting and analysing qualitative data: case study and grounded theory

Field research often entails a prolonged immersion into a research setting. In this session we will learn how to draw generalizations from a specific research setting and how to theorise based on the research findings. We learn practical tips to record our field notes and make memos; we learn how to develop codes and concepts and write analytic memos to analyse qualitative data.


Appreciative inquiry and Participatory Rural Appraisal

Appreciative inquiry is a paradigm that emphasises learning from people and their contexts. PRA uses visual techniques to engage communities with whom we are working. We explore the philosophy, tools, applications and limitations; we also learn how not to do a PRA!

Gender and water

Conceptual groundwork for the analysis of gender-water relationships

In this section we develop a conceptual understanding of gender. We distinguish it from sex; we understand the concept of the sex-gender system. We examine the value of taking a gender relations perspective



in water by exploring the concept of equity, contrasting it with equality. We explore the idea of inter-sectionality.

Rationale for a gendered analysis of water

We will look at why water needs to be studied using a gendered lens. We try to understand how different aspects of water access, control, allocation and distribution are gendered. Households are sustained by a gender-based division of labour around water collection. Women and men even express themselves differently in environmental struggles around water and water infrastructure.

Approaches to engendering the water sector: a review of the experience

Engendering the water sector involves two components: making the water sector more gender balanced and making it more gender sensitive. We explore different approaches to engendering the water sector in South Asia in particular and globally more broadly. We understand the actual experiences with such initiatives. We also review recent efforts at bringing in more women in the water sector in South Asia.

Ecofeminism and feminist environmentalism; feminist political ecology

In this session, we will understand the basics of some conceptual approaches and frameworks that inform our analysis of gender and water relations. We understand their genesis, relevance and application to water research, and engage with some criticisms. We examine why it is necessary to be informed of these approaches.

Bringing a gender perspective to our research

In this session, we will bring together some of the key learnings from the previous four sessions to see how they influence our analysis of gender – water relations. This could be in the form of framing key questions to ask. This session will rely more on involvement from the participants in integrating the learnings from the workshop with their proposed research or areas of interest.

Lecture Sessions Summary

The lecture series was held online for almost a month or 5 weeks from September 29th till October 29th. There were a total of 10 two hours long lecture sessions held and majorly two topics covered each week. Each Tuesday's lecture session was taken up on the topic, '**Interdisciplinary Field Research Methodology**' and each Thursday's topic was '**Gender and Water**'. This section gives a brief description of each lecture session taken by Dr Vishal.

I. Day 1: September 29th, Tuesday: IFRM - Thinking about water in an interdisciplinary way, some approaches and frameworks

INTRODUCTION

The executive director of SaciWATERs, **Dr Mansee Bal Bhargava** and **Dr Sreenita Mondal**, Research Fellow and SAWA Coordinator launched the **South Asian Water Leadership Programme on Climate Change** with an introductory note. Dr Sreenita introduced programme to the general audience and the broad objectives of the SAWA Training of Trainers (ToT) programme. She also mentioned about the reasons behind conducting online training programme in place of face-to-face training programme and in-house rules to be followed during the lecture sessions.

After that, all the participants, attendees, SAWA fellows, professors, and hosts introduced themselves through the **Zoom online platform** whose link was shared each day via e-mail to all the registered attendees and participants. After the introductory session, Dr Mansee introduced **Dr Vishal** who was going to conduct all the ten lecture sessions with a brief about the programme's background, aim and vision.

First day of the lecture series started with the discussion on some conceptual lenses, approaches and frameworks towards thinking about water in an interdisciplinary way and was attended by participants.

Dr Vishal raised the very preliminary and important question of '**why, first of all the research fellows should take on an interdisciplinary approach**' and later discussed the various lenses through which one could look into that direction and spoke about general pedagogical issues in building an interdisciplinary perspective.

He structured the whole lecture series in such a way that it benefits not only the SAWA fellows with the learnings but also the professors with certain tips to improve their teaching methods.

WHAT IS PERSPECTIVE?

He started the lecture with a very interesting question of 'What is Perspective?' and encouraged the fellows to interact. All the participants came up with very fascinating answers and keywords. He explained that in real life, there is always a relationship between the natural and the social worlds but this view is usually fragmented by the disciplinary orientation of academic life and thus, an interdisciplinary research approach is needed to understand these relationships beyond any limitations.

He quoted several examples of floods, water scarcity, etc. to explain that all these events are looked upon differently by different age and gender groups and even the degree of their impact varies drastically at different locations. He suggested the teachers to look beyond the rhetoric of **'holistic'**, **'balanced'**, **'integrated'** approaches and demonstrated more examples of relationships between natural and social sciences to their students with comparative examples of research done with the older approach and this newer approach. He also suggested certain other captivating ways of engaging the students towards the interdisciplinary approach, for example by inviting the alumni who took this approach and benefitted.

CONCEPTUAL ENTRY POINTS

Two conceptual entry points suggested by him for this research were:

- Socio-technical approach to water management, and
- Hydro-social lens or political ecology.

One could think of research questions around technology and institutions, how water technologies affect social relations and gender dimensions, water governance and rights, political relationship with the environmental issues, power differences between the stakeholders and how it affects the flow of water, inequity in water access and control, etc. A SAWA fellow might be coming from an engineering background but can try and look into the research from a social perspective.

CONCLUSION

He recommended Kloezen and Mollinga 1992 as a reading material related to SCOT (Social Construction of Technology) literature. In the end a video titled, **'Waste of the city is the Taste of the city, Gurgaon, India'** was shown which showcased how the various institutions, livelihoods of people involved, flow of water, practices, technologies, etc. were inter-related. Dr Vishal states that as a researcher one needs to scientifically ground the work somewhere.

A very engaging way of involving all the participants was used in the end by asking all to write on the commonly shared screen, what they understood from the lecture and the video shown.

II. Day 2, October 1st, Thursday: Gender & Water - Conceptual groundwork for the analysis of gender-water relationships

The Second session on **"Gender and Water"** was attended by 69 participants. The session began with a recap and summarisation of the paper shared with SAWA fellows. The concepts of Equity and Equality; Gender and Sex were explained.

GENDER & SEX

Various definitions, socially defined norms and constructions on Gender and Sex and social differentiations on Religion, Caste, Class, Age, Marital Status and Social Status located in various time, space and communities were discussed. Concepts and basis of social stratification and biological differentiations were explained with anecdotes of **PINK-BLUE Gender Game**.

PINK-BLUE Gender Game

The Pink-Blue Gender game is created by the social structure and it was not the choice made by the babies. It's about the **SEX** of the baby while in its mother's womb but its about **GENDER** the moment it arrives into the world. Man's domain and woman's domain vary from each social structure. Dr Vishal quoted **"Other than bearing a child and breastfeeding there is no task defined biologically which can be done only by a man or a woman in specific"**.

MISLED NOTION

There has been a misled notion existing in the society that Gender issues are mostly women issues which is not true. The issues are not about women but its about the differences between men and women.

CASE EXAMPLES

Dr. Vishal brought into picture several case examples to explain the various social differentiations prevailing most prominently in South-Asian Countries. Examples in the sectors of Agriculture, Fishery, Water Porting were explained with cases of Paddy transplantation; Fishing by men, Selling of fish by women, etc. In the case of carrying water, its women who carry water from the source to homes whereas its men who climb up the water tanker to connect. He quoted **“If women could climb Mt. Everest, Why not the water tankers?”**

GENDER STUDIES

Various aspects of **Gender & Equity**, Gender & Water Relationship were explained. Dr. Vishal shared various courses on Gender and Equity available. He explained the gender relation transformation over time with the cases of Urbanisation & land use changes, Acquisition of the commons and Migration & Feminisation of agriculture (agriculture labor). He emphasised the significance of questioning “Who does what” as it varies with occupation.

CONCLUSION

The session was concluded with sharing of resources, research papers and references for the participants to tap. He specified the significance of developing competencies as gender researcher through extensive reading, summarising literature and contextualising the work as abstract. During the concluding session, interaction & discussion with the participants on various topics of Intersection of multiple identities of gender, caste, social and economic status; Vulnerability of gender/women; Feminism and Ecofeminism; etc. were done.

Key takeaways of the session:

- Mainstreaming other sectors also water centric
- Gender & Water is about power relations
- Decision making powers begins in the household/ family
- Gender is a form of power relation

- Can't make assumptions without visiting the field and understanding the ground realities e.g. in many upper caste or richer families, women do not go out to collect water.
- Intersectionalities - caste, class, religion, gender, local or migrant, owner or tenant
- Climate change, water and gender nexus
- Men and women are equally responsible for the relation with water
- Advocacy work is needed to solve the issues, sustained discussion forums, community involvement, dialogues, self help groups.

III. Day 3, October 6th, Tuesday: IFRM - Paradigms in social science research

Every lecture by Dr Vishal used to start with the takeaways from the previous lecture and he made sure that all the fellows understood the topics clearly. This second lecture on IFRM was on the topic of 'Paradigms in social science research' and was attended by 59 participants. He posed a question to the teachers asking them how can they explain the value of paradigms in research to the students?

The session covered the following topics majorly:

- Paradigm,
- Understanding significance of research paradigm,
- Different paradigms in social science research;
- Positivism, Interpretivism & Critical social Science
 - Assumptions about what constitutes reality
 - Influence on approaches to data collection & analysis
 - Limitations & criticism

Dr Vishal explained the difference between 'Positivism' and 'Interpretivism' through examples.

- **Positivism:** For some questions there are the same answers world wide which are universal based on one objective truth unravelled by science e.g. 'what is $2 + 2$?'
- **Interpretivism:** For some other questions, there are different perceptions/ perspectives based on people's thinking, experience, feeling at that point of time, etc. e.g. 'what should one do to find peace in life?'

Thomas Samuel Kuhn was an American philosopher of science whose 1962 book *The Structure of Scientific Revolutions* was influential in both academic and popular circles, introducing the term *paradigm shift*, which has since become an English-language idiom.

PARADIGMS IN SOCIAL SCIENCE RESEARCH

Different paradigm and different approaches to Social Science Research:

- They are never explicitly stated but can be cause of much confusion & anxiety
- Influence choice of research tools & techniques of data collection
- Different elements / definitions of rigot
- Confirm to different definitions of scientific

POSITIVISM

- It starts with hypothesis and later through assumptions and observations, hypothesis is proved.
- Approach of Natural sciences such as, Physics, Chemistry, Biology and Zoology.
- Highly accurate and reliable, but on the contrary it is very rigid and lacks flexibility.
- Social Science:
 - Organized method for combining deductive logic with precise empirical observations of individual behaviour
 - To discover & confirm a set of probabilistic causal laws to understand human behaviour e.g. relationship between water & society.
 - Interdisciplinary

Characteristics & tools of positivist research:

- Quantitative data, surveys, experiments, statistics
- Relies on rigorous exact measurements and objective research
- Tests hypothesis by carefully analyzing numbers from measures

Limitations & Criticisms:

- Positivism reduces people to numbers and is instrumental in orientation
- Concerns with abstract laws / formulas are not relevant to actual lives of people
- For many people this is only the way of doing research
- A positivist is too narrow & non- humanist in its use of reason

- Fails to deal with meanings of real people & their capacity to feel and think

INTERPRETIVISM

- At perspective of people
- Allows more room and richness of findings but always subject to question in terms of validity of method and thus findings
- Systematic analysis of socially meaningful action
- Through direct detailed observation of people in natural settings in order to arrive at interpretations of how people create & maintain their social worlds
- Builds on criticisms of positivism
- Involves investigation of the social meaning that people attach to their lives
- Emphasizes value of context
- A rigorous approach where rigor is measured differently- How much time spent, level of emergence, immersion, kind of association with people, kind of relationship developed, level of close observations, etc.
- Data is usually qualitative in form of events, interviews, texts, quotations, picture, anecdotes, etc. which are interpreted by the researcher
- Involves research questions which are:
 - Story like
 - Too subjective - "loose"
 - Easier than positivist research

Policy makers always like numbers. Dr Vishal suggested that if one needs to have an impact, its definitely better to work with numbers and statistics.

CONCLUSION

Some fellows wanted to know if it was possible to combine the two research methods and he explained the possibilities with limitations. He warned the fellow to be very clear why they want to combine the two, first of all and to understand deeply and clearly, the value addition it will do. **The logic of combining must be based upon the expected outcome and aim of the research.** Combination can be sequential where qualitative research is done first to find and understand the issues and contextualise and then to test the hypothesis quantitative research can be done. Both can even be used parallel and also as cross checks.

IV. Day 4, October 8th, Thursday : G&W - Rationale for a Gendered Analysis of Water

The fourth session on “**Rationale for a Gendered Analysis of Water**” was attended by 50 participants. The session began with a recap of the concepts of Gender-Social Construct; Gender and Sex; Intersectionalities and summarisation of the papers shared with SAWA fellows were explained. The significance of understanding key concepts and familiarising the discourse for developing oneself as a gender and water professional was emphasised. The key takeaways of the previous session were discussed in brief.

ROLE OF DECISION MAKERS

Dr. Vishal explained the significance of the role of decision makers with the case example of Pranita Bhushan Udas in Nepal. In this case men were the decision makers regarding household expenditures. They realized that when water could be collected freely from public water sources, why unnecessarily they had to pay for piped water supply connections! And thus, piped connections were cut. So its the power differences in gender & water which depend on the water and gender issues and not just about women.

RATIONALE FOR A GENDER PERSPECTIVE IN WATER RESOURCE MANAGEMENT

Challenging households as homogeneous decision making was discussed with reference from “**Access to resources is gendered - Means(1995) work on fuelwood in Africa**”. The key facts on Water collection shaped by a gender-based division of labour such as women primarily collect water for domestic purposes, Women scarcity increases women’s drudgery in water collection were discussed.

GENDERED DIMENSIONS & INTERSECTIONALITY OF WATER ACCESS

Dr Vishal elaborated on gendered dimensions of water access with examples of references of:

- Water supply interventions have gendered impacts e.g. in Morni Shivalik Hills (Narain 2014). Affect men and women in different ways. Focus on gender relations is important rather than on women alone.

- Gender dimensions of environmental protest movements (Drew 2014). Men and women have different ways of expressing themselves in environmental struggles and they have different grounds for opposition.
- Caste, class & gender intersect to shape access to water (Joshi 2014).

Gender & Intersectionality was discussed with examples of Domestic and international, Native and Foreigner, Owner and tenant, and other such differences.

GENDER RELATIONS ARE NOT STATIC

The concept of dynamic gender relations was explained with the cases of Feminization of agriculture; Changing gender relations around water and acquisition of common property resources.

CONCLUSION

The session was concluded with sharing of resources, research papers and references for the participants to tap. During the concluding session interaction & discussion with the participants on various topics of the session was done.

V. Day 5, October 13th, Tuesday : IFRM - Qualitative research: ethnography, semi-structured interviews, key informant meetings and Focus group discussions

The third module on the topic of IFRM was about qualitative research and the major topics covered were the following and this session was attended by 38 participants:

- Comparison of Positivist & Interpretive Research
- Combination of Qualitative & Quantitative Data, which should be done only if it adds value to the research
- Both are scientific research methods

QUALITATIVE RESEARCH

Reviewing characteristics of qualitative research:

- Data is qualitative
- Reliance on interview texts, anecdotes, quotations, thick descriptions
- Researcher immerses herself in the context
- Uses different sources of evidence to build a narrative to take a position
- Often written out like a novel or story book
- Structures & Semi-structured questionnaires

Key informant interviews:

- Key interviewer is a person who knows the context well and is able to relate to an outsider
- As trust deepens, the quality of data improves
- Develop rapport with people like the school's headmaster, road Side dhabas, Barber, village postman, Govt. functionaries, etc.

Focus Group Discussions:

- Selecting Respondent
- Sampling in Qualitative Research

Sampling approaches:

- Convenience sampling
- Theoretical
- Snowball Sampling (leads to connection/networking)
- Basis is relevance not representativeness as in quantitative research

CONCLUSION

One cannot rely on only positivism or only interpretivism. **To solve any problem, one needs to have a blend of both.** Positivism is an approach to solving problems with the help of quantitative data, formulas and equations and interpretivism focuses on qualitative reasoning to solve a problem.

Semi structured questions are more flexible and open ended and thus, respondents can share more insights as per their thought process whereas structured ones are more rigid.

VI. Day 6, October 15th, Thursday : Gender & Water - Approaches to engendering the water sector: a review of the experience

The sixth session on “**Gender & Water - Engendering the water sector**” was attended by 10 participants. The session began with a recap of the previous session and summarisation of the papers shared with SAWA fellows . Dr. Vishal suggested effective ways to enrich the knowledge in the sector of Gender & Water. The key takeaways of the previous session were discussed in brief.

SESSION OVERVIEW

Understanding the concept of engendering water sector; Identifying approaches to engendering; Making water sector more gender balanced and gender sensitive and Identifying constraints to mainstreaming gender in collective institutions were discussed in the session.

GENDER BALANCE

Dr Vishal mentioned that in South Asia, it is often seen that men have been sitting in the offices of PHED, PWD, GWB, etc. but it's time that women should also be part of it professionally. He added that women should also have equal or relevant say in water related decisions. He emphasised on the need for separate and safe toilets in the offices.

MAINSTREAMING GENDER IN WATER POLICY & PLANNING

The two types of mainstreaming of Gender in Water Policy and Planning are:

1. Decentralization & Collective Action, and
2. Gender & Collective Action.

DECENTRALISATION & COLLECTIVE ACTION

Emphasis on Creation of local level organisations e.g. water use associations, pani samitis, farmers' organisations for irrigation; PIM, IMT, WUAS; Basis of mythic view of the community; Local accountability is still shaped by social process and Hijack of Local structures by rural elites were discussed for the concept of Decentralization and Collective Action.

GENDER & COLLECTIVE ACTION

Dr Vishal emphasised on the fact of **Poor presence of women in water sector in South Asia**. He elaborated key facts with the reference from “**Masculine nature of water sector (Zwarteveen 2014)**”. The key facts of Focus on engineering & civil works; Infrastructural constraints faced by Women; Bias in favour of male engineers; Sexual undertones at work and Status of women water professionals in South Asia (SaciWATERs) were discussed.

CHANGE

Dr Vishal envisaged that change could be brought from various mediums and he quoted the examples of ongoing SAWA programme Initiatives; Interdisciplinary WRM programs; MDPs sensitizing male engineers to issues of gender and equity. **He emphasised the need for more male teachers & researchers on gender studies.**

CONCLUSION

The session was concluded with sharing of resources, research papers and references for the participants to ponder on.

VII. Day 7, October 20th, Tuesday: IFRM - Collecting and analyzing qualitative data: case study and grounded theory

Dr Vishal had shared certain reading material with fellows to be read and understood by them before attending this session. He started the lecture by asking the fellows what they learnt from the papers they read. This session was attended by 42 participants.

ETHNOGRAPHY

He explained ‘**Ethnography**’ that it is an approach towards data collection, when you directly need to see and observe what's happening in a particular situation. Sometimes community people might say that they all live in harmony and are

peace-loving people but the actual data can be collected only by emerging oneself into the community by building relationships and immersing deep into the context.

Engaging oneself with a particular community or a village enables one to determine what's going on within that community, and collection of data becomes easier. It develops a microscopic understanding of the people of the community i.e. their interests, beliefs, etc.

Ethnography helps us to get a holistic outlook of the culture, religion and everything falls in line with the community which invariably needs a lot of time.

And in order to impart a behaviour change model on a particular subject, say climate change, it's important to immerse deeply into the community to have a better impact on ground.

FIELD WORK

- Dr Vishal suggested all to always carry a notebook and pen to keep jotting down and make field notes. One should fair out those notes immediately before those notes fade away. One should have a very well typed text. One must never forget to write the date on top. The notes can include anecdotes, interview texts, detailed field notes, etc.
- The process of data collection and analysis must go parallel, he recommends. One should keep looking back to the field notes and keep doing some analysis on a regular basis.
- One must code the interview or field text with some keywords for categorising them and making later work simpler e.g. climate change, gender, agriculture, etc. All data sets with similar keywords can later be juxtaposed and used together to understand the pattern and relationship.

GROUNDED THEORY

- One should start bottom-up
- First understand what's on ground, make notes, and then theorise upon the observations.
- Empirics guide the theory building.

CONCLUSION

Hosts had shared a research done on '**Replacement or displacement? Periurbanisation and changing water access in the Kumaon Himalaya, India**' by Dr Vishal Narain and Aditya Kumar Singh and had asked the fellows to read and understand. Dr Vishal openly answered all the varying queries from the participants.

VIII. Day 8, October 22nd , Thursday : Gender & Water - Engendering the water sector

The eighth session on "**Gender & Water - Engendering the water sector**" was attended by 39 participants. The session began with a recap of the previous session and summarisation of the papers shared with SAWA fellows . The key takeaways of the previous session were discussed in brief. Several reference research materials for various topics and concepts were shared to the participants.

OVERVIEW OF THE SESSION

The session of Engendering the water sector was explained with the concepts of feminism, politics, ecology, Political Ecology, Feminist Political Ecology Ecofeminism, Cultural Feminism and Constructive Feminism.

FEMINISM

Dr Vishal explained the concept of Feminism and also gave a piece of thought for the students to think on "**Why do some people not want themselves to be called feminists?**" He specified that during the 20th century, the first wave of feminism was civil & political rights with the example of women wanting equal right to vote and during the second wave, it was personal - sexual and personal rights. He also mentioned that feminism lost its meaning and true purpose.

FEMINIST POLITICAL ECOLOGY

The concept of Feminist Political Ecology was elaborated by explaining the various subconcepts of **Politics , Ecology and Political Ecology** . He mentioned that **Politics** was Shaped by power differences and Environmental issues were being deeply politicized; He emphasised that Resources are to be appropriated by those who

are socially & politically powerful. He supported his quotes with some examples of **Power Relationships** such as, Landlord & Tenant, Husband & Wife, etc.

He explained the term **Ecology** as a Web of Interrelated Relations and **Political Ecology** as the study of the relationship of Political, Ecology & Environmental in the society. He elaborated with the case of Rajasthan and mentioned that **“Never in Rajasthan (a water scarce state) one would ever find in any hotel or a train that they would not be able to provide water to their customers.”**

He emphasised the need of a powerful conceptual lens for interdisciplinary water research, linking social & Natural sciences. He also specified that the relationship between physical/ environmental process and social relations are relations of power.

He mentioned that Gender Relations was the point of focus for understanding Political Ecology of natural resources. He specified that Environmental issues are politicised & unequal power relations between men & women were used as centre point of this analysis.

ECOFEMINISM, CULTURAL ECOFEMINISM, CONSTRUCTIVE ECOFEMINISM

The concepts of Ecofeminism, Cultural Ecofeminism and Constructive Ecofeminism was explained. He mentioned that the link between nature & women was socially constructed. He emphasised on the fact that both men & Women have both masculine and feminine qualities with the classic example of '**Ardhanareeshwara**' (a beautiful blend of shiva and shakti).

VEDAS & ECOFEMINISM

The concept of Ecofeminism and its interlinage with Vedas was explained with **“VEDAS & Ecofeminism - In conversation with Vandana Shiva - Video by Infinity Foundation”**. The video emphasised the key facts that men and women are biologically different but not unequal; The contradictory fact of Shakti as the soul of nature But in practice we never find a woman conducting the prayers and hawans in temples and other places, which are usually conducted by male priests.

Ecofeminism against three Apartheids:

1. Separation of Men and Women from Nature;
2. Artificial hierarchy between men and women;
3. Economic disparity between peasants and capitalists, was discussed.

CONCLUSION

Dr Vishal concluded the session with the explanation of the need of Research to make theoretical choices; Ways of structuring analysis of gender & water (Natural resources - broadly); theoretical approaches; and the need of engagement with the theme, based on one's research.

IX. Day 9, October 27th Tuesday : IFRM - Appreciative inquiry and Participatory Rural Appraisal

Dr Vishal asked the fellows what they understood about writing field notes. He suggested everyone to write the Date, Place, Name of Interviewee at the top of the note. He suggested adding local contextual details in the context of the conversation and developing keywords. He asked the fellows to suggest 8-10 keywords they could extract from the field notes. The practical knowledge shared by him even during this virtual session was commendable. This session was attended by 36 participants.

PARTICIPATORY RURAL APPRAISAL

He explained about PRA tools that they are very pictorial and can be drawn even on ground using any stick, chalk, etc. He described how using these tools is an approach towards direct learning from the people in their own way of communicating and thus it would be even better to handle the stick to them. One needs to shed all their technical background and sit down with them, make them feel comfortable to share their information. Lots of ice breaking, sharing needs to be done and one needs to be very humble.

He showed a village map drawn on a chart paper using various colors given to the local people. He shared many other examples where information from the people was used analytically for the research:

- **Wealth ranking** in a village by different social groups using the data of cattle, tractor, livestock, land in the city, instruments, etc. owned by the groups.
- **Seasonality Analysis** through information such as what crops, festivals in which season, and what migrant laborers when, and demand for water,

etc. and then finding the relationship between cropping pattern and demand for water and migrant laborers.

- **Village timeline** through information on major happenings in the village timewise. This can be constructed through people's memory.

These trendlines from people's memories are very interesting to also know how people perceive climate change and even gender wise perception may change.

Process of analysing and collecting qualitative data is circular and not linear and it goes parallel.

PARTICIPATORY RURAL APPRAISAL- CONCEPT, APPROACHES & TOOLS

Overview:

- Philosophy & Rationale
- Genesis
- Principles of Conducting
- Basic Approach
- Specific PRA tools
- Limitations & dangers
- How not to do PRAs

Principles of PRA:

- Paradigm shift in the social sciences
- Learn from the community
- Question of attitude
- We are the facilitator
- Direct learning from local people
- Handing over the stick
- Plurality of methods
- Optimal ignorance
- Information shared & owned by local people against being extracted by outsiders

Modes of Analysis:

- Done by local people in groups

- Visual - Creative & Imaginative (use of pebbles, toys, marbles , rubber bands)
 - Seasonality analysis - split calendar across 4 diff seasons - migrant labourers, demand for water - idea is to compare - Cropping , irrigation pattern over the year, labour availability, etc ; relationship between various components ;
 - Village map ;
 - Village timeline - History ;
 - Trendlines - Men & Women's perception of climate change ;
 - Distribution of Wealth & resources- Resource map, Village Models on field with stones, sand heaps, twigs , leaves, etc
 - Time-Budget Exercise (Time- Works , work responsibilities of women in home, field for various activities
- Comparisons
- Interactive - Sharing anecdotes
- Iterative - Happens spontaneously

Interactions with Participants:

- Ways these tools could be used,
- Application of PRA tools
 - Programs on Natural Resource Management
 - Village Development Plans
 - Programmes for women and poor
 - Agriculture and food security
 - Used by NGOs students & universities - MYRADA , Action kid, AKRSP in India promoted it extensively
 - SWOT analysis -development plans, watershed management
- Strength - Comforting local people's- platform to express their experiences ; Identification of priority of target groups, use of local resources
- Limitations & Shortcomings- Time consuming

Benefits:

- Rapport building,
- Shared learning atmosphere,
- Ice-breaking,
- interactive
- Cost effective and quicker than questionnaires
- Present aggregate picture
- Fun, interest

- Time and resource efficient way

Practical points:

- How long ?
 - Depends on time and resource (2-3 days 1 PRA 2-3 pppl)
 - Not done hurriedly
- Who does it
 - Interdisciplinary teams
 - Groups of people
- Consistency checks - Diversity approaches
 - Triangulation
- Sequencing
 - No rigid ; broader, general broader - village map, resources map, infrastructure, and then specific
 - Maps, graphs, move to sensitive subjects- caste, ownership, religion, politics
 - Improve , look at what the situation demands
 - Have a basic knowledge & then combine different tools
 - Use triangulation liberally - lot of cross-check; juxtaposed with other PRAs

Dangers of PRA, How not to do a PRA:

- Who participates - Dealing with unequal power relations
- Instant Fashion
- Often hurriedly done to impress donors & get finding
- Pitfalls of rural tourism
- Formalism ; emphasis on manuals and procedures
- Routinisation : loss of spontaneity

CONCLUSION

Professors and fellows had many queries regarding the PRA tools and wanted to know how best can they utilize these tools especially in this pandemic time. Dr Vishal explained that there is no thumb rule and one needs to judge on the field. He shared that a brief informal meeting can start with just 10 people at a tea stall and can exceed from there. If there are disparities, different social group PRAs have to be done, at least FGDs to understand the diversity and variations within

the groups. Dr Vishal explained that on field, usually the field people become the teachers and the researchers become their students.

X. Day 10, October 29th, Thursday : Gender & Water - Engendering the water sector

The tenth session on “**Gender & Water - Engendering the water sector**” was attended by 40 participants. It was the concluding session of the Series 3 - SAWA Workshop. The session began with a recap of the previous session and summarisation of the papers shared with SAWA fellows. This session was an overview of the entire course series with assessment of the learnings of the course; reflections in taking a gender perspective in research and Way Forward.

INTERACTION

Dr Vishal interacted with the participants to get their responses on ‘**How would they integrate the learnings from the course with their research on gender & water**’ and ‘**What concepts & ideas did they find most relevant in the course**’.

SUMMARY OF THE COURSE LEARNINGS

The Course learning were:

- Gender and water relationships
- Gender as a social construct; how is the social construction legitimized
- Who question
- Intersectionalities
- How water access and control are gendered (How do men & women (Diff categories of them) experience the water world in different ways
- Distinguishing gender & women
- Feminist political ecology
- Feminism
- Ecofeminism
- Cultural ecofeminism
- Constructive Ecofeminism

SIGNIFICANCE OF THEORETICALLY & POLICY RELEVANT RESEARCH

He mentioned that research has to be contextualised with regards to the literature (PhD research locates contextualised research to the existing literature) while newspaper articles would be an article. We must locate how our work might support the findings of other scholars in one's country/region/globally. We must question oneself as to What new knowledge have we created and we must reflect on prominent positions on gender & water/environment.

THEORETICAL FRAMEWORKS & INFORMING POLICY

Dr Vishal mentioned that the research must use these frameworks to inform/structure one's research; Need of coming back to the frameworks after your research (agree/ disagree with these positions) and letting one's data interact with theory & concepts (sex-gender system, masculinity, inter-sectionality, social construction, feminist political ecology).

POLICY RELEVANCE

He mentioned that our research work would need to have policy relevance and there should be learnings for policy-makers. He emphasised on several policy related topics of Women's water burdens; Building women's adaptive capacities; Engendering local governance structures; Making the water sector more gendered balanced and Increasing women's representation on local bodies.

WATER & CLIMATE CHANGE/ VARIABILITY THROUGH A GENDERED LENS

He specified the necessity to become familiar with the discourse on climate change/variability with Vocabulary of CCA, vulnerability, hazard, risk, coping capacity, resilience, adaptive capacity, adaptation (autonomous/planned). He emphasised that the above terms must be deconstructed using a gendered lens and the need for "**A gendered approach to climate change- water nexus**".

THE GENDERED NATURE OF VULNERABILITY

He explained the gendered nature of vulnerability with its subcomponents of:

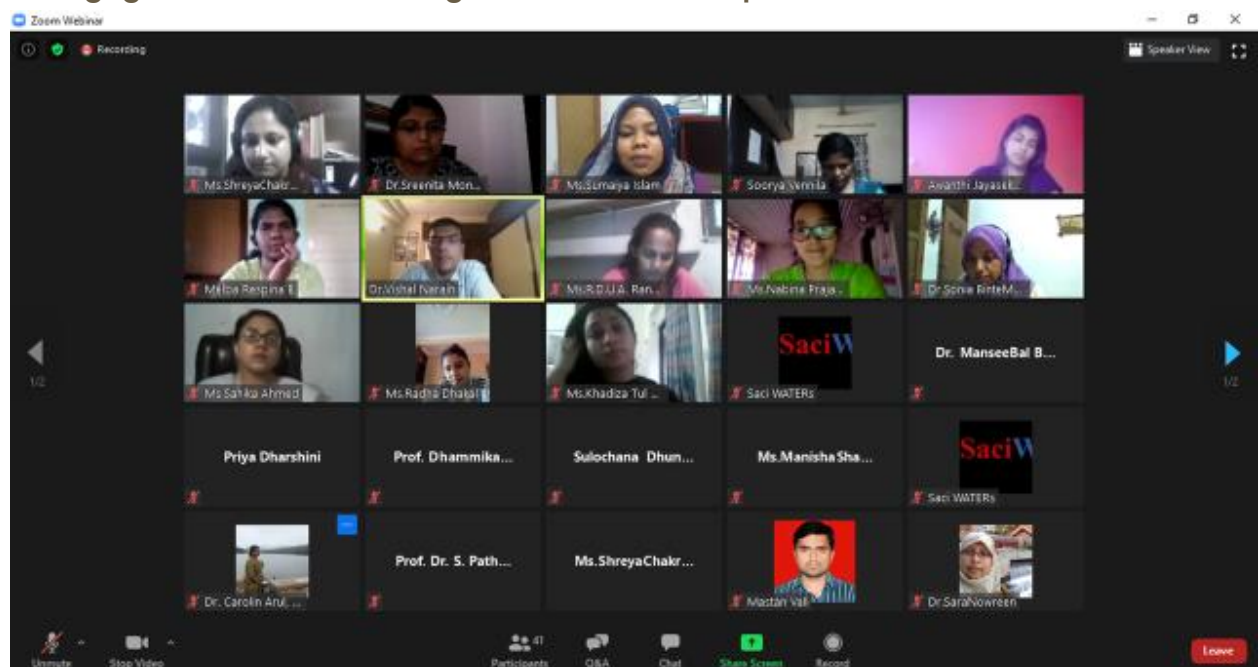
- Vulnerability: Susceptibility to harm
- Exposure (men and women differ because of gender- shaped roles and responsibilities)
- Sensitivity

- Coping capacity is gendered
 - Physical capital (assets)
 - Natural capital (access to natural resources)
 - Social capital (social relationships and networks)
 - Financial capital (finance, loans)
 - Human Capital (human skills)

THOUGHTS FOR TEACHERS

He emphasised the need for interdisciplinary teaching of social science and natural sciences to the teachers. He specified that teaching has to be Integrated with their own research; Significance of Encouragement of peer and cross-learning; Creating a culture of faculty student collaborative research, target high quality journal publications (they are possible); Giving a head start to the students in their career that would promote mentoring & capacity development and finally that could Draw parallels between natural & social sciences between model & prototype.

Pedagogical issues on teaching the issues on this topic was also discussed.





CONCLUSION

The session was concluded with sharing of resources, research papers and references for the participants to tap. During the concluding session interaction & discussion with the participants on various topics of the session was held. Feedback from the participants was taken through online polling.

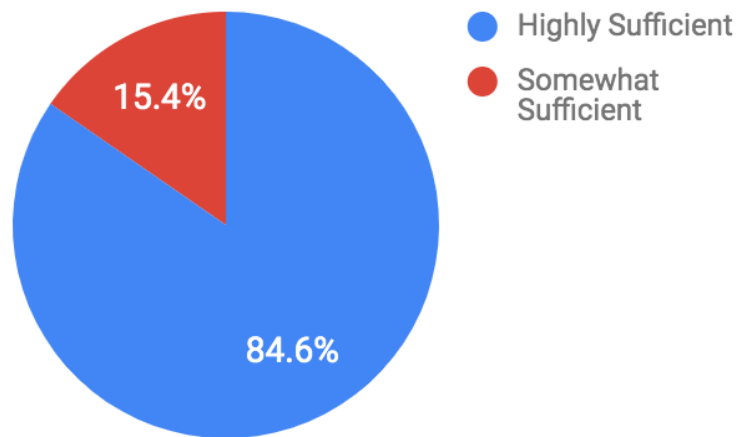
Feedback Poll

At the end of the last lecture a polling was conducted for feedback and following are the results.

Did the presentations and teaching methods help your learning process?

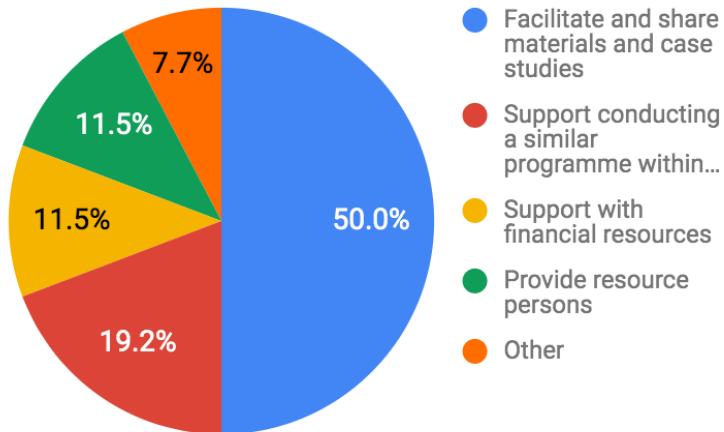
100% participants gave the feedback that the method and the presentations very much helped them.

Was the information/content sufficient to improve your present work performance?



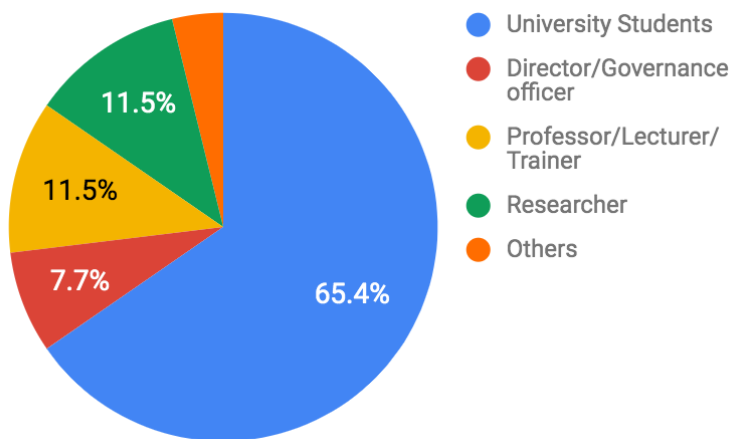
Almost 85 % of the participants said that the content was highly sufficient and rest found it somewhat sufficient.

What support would you require from Cap-Net to implement the knowledge you gained?



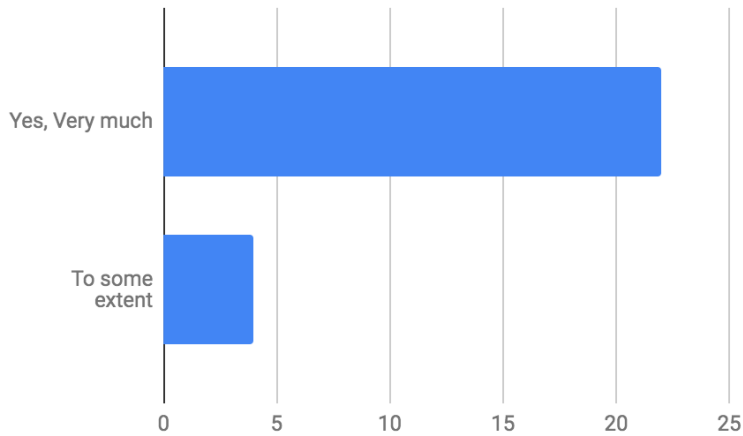
Almost 50 % participants suggested sharing of the study material and case studies and almost 20 % wanted more of such programmes to be conducted within their groups or institutions. It was useful to discover the potential to improve through these insights.

Profession



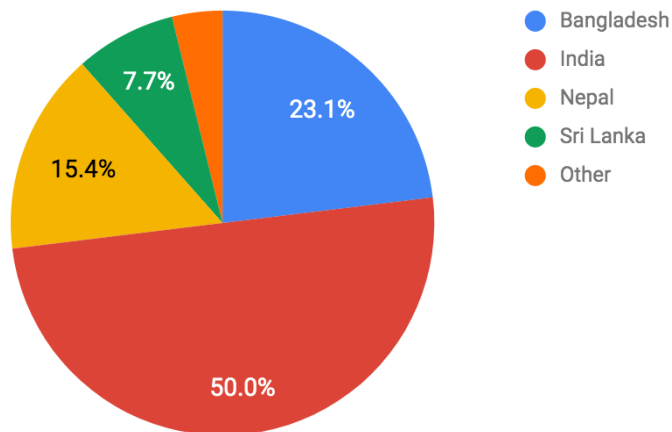
Almost 65 % of the participants were students, 8 % related to governance and administration, 12 % professors or trainers, and 12 % researchers.

Was the course interactive, timely and engaging?



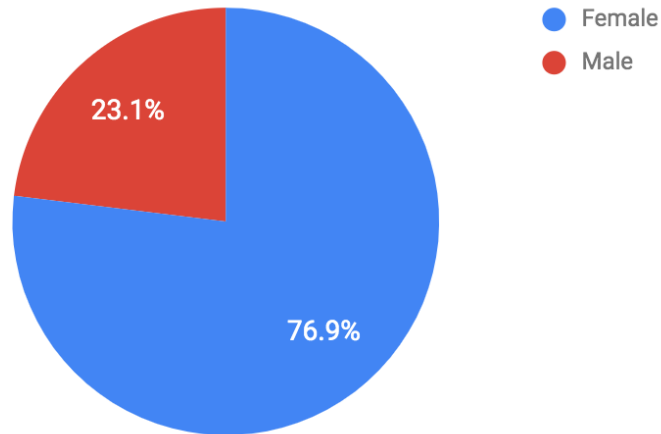
Almost 85 % participants said that the course was interactive, timely and engaging and seemed to be quite satisfied with the lecture series.

Country of the participants



Maximum participation was found to be from India with almost 50 % participants from India. Almost 20 % were from Bangladesh, 15 % from Nepal and 8 % from Sri Lanka.

Gender of the participants

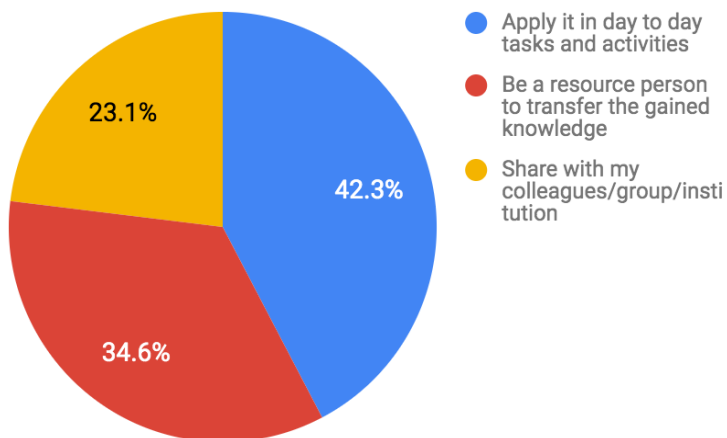


Maximum participation i.e. around 75 % was from females and it was overwhelming to have even male participants with enthusiastic participation during the lectures through questions asked by them and otherwise response.

Did the course meet your expectations/objectives?


Totally 100 % result was towards the fact that the course 'highly met' everyone's expectations.

What would you do after the training with the knowledge you gained?



This result shows that the course was not only useful for the students who are willing to apply the learnings to their research but also for the trainers who gained the knowledge and are very much willing to share it further.

Was the course relevant to the area of your work?



Almost 100 % of the participants said that the course was highly relevant to their area of work and the SAWA organizers believe that everyone's research outcomes will be enhanced with the learnings from this series.

List of Participants

No.	Title	First and middle names	Last name/ Surname	Gender	Country (based on the person's nationality)	Name of the institution
1	Prof.	N K	Ambujam	Female	India	CWR, Anna University
2	Prof.	B V	Mudgal	Male	India	CWR, Anna University
3	Dr.	Soorya	Vennila	Female	India	CWR, Anna University
4	Dr.	Carolin	Arul	Female	India	CWR, Anna University
5	Prof.	Shahjahan	Mandal	Male	Bangladesh	BUET
6	Prof.	Dhammika	Dayawansa	Female	Sri Lanka	PGIA
7	Dr.	Robert	Dongol	Male	Nepal	NEC
8	Ms.	Meena	S	Female	India	CWR, Anna University
9	Ms.	Melba Respina	B	Female	India	CWR, Anna University
10	Ms.	Priyadarshini R	C	Female	India	CWR, Anna University
11	Ms.	Sumaiya	Islam	Female	Bangladesh	BUET
12	Ms.	Sahika	Ahmed	Female	Bangladesh	BUET
13	Ms.	Khadiza Tul Kobra	Nahin	Female	Bangladesh	BUET
14	Ms.	Radha	Dhakal	Female	Nepal	NEC
15	Ms.	Sulochana	Dhungana	Female	Nepal	NEC
16	Ms.	Nabina	Prajapati	Female	Nepal	NEC
17	Ms.	W.C.S.	Wanasinghe	Female	Sri Lanka	PGIA
18	Ms.	R.D.U.A.	Ranasinghe	Female	Sri Lanka	PGIA
19	Ms.	J.M.A.U.	Jayasekera	Female	Sri Lanka	PGIA
20	Prof.	Dr. S.	Pathmarajah	Male	Sri Lanka	PGIA
21	Dr.	Aditya	Bastola	Male	Nepal	NEC
22	Dr.	Ashutosh	Shukla	Male	Nepal	NEC
23	Dr.	Sujit Kumar	Bala	Male	Bangladesh	BUET
24	Dr.	Sonia Binta	Murshed	Female	Bangladesh	BUET
25	Dr.	Sara	Nowreen	Female	Bangladesh	BUET
26	Dr.	Ahmed Ishtiaque Amin	Chowdhury	Male	Bangladesh	BUET

Inter-disciplinary Field Research Methodology and Gender & Water

SUPPORTERS

IDRC | CRDI

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PARTNERS

AIM

The SAWA leadership program aims to increase the number of women occupying leadership roles in the water sector and also aims to foster an interdisciplinary approach linking climate change and water insecurity by awarding fellowships to 36 women enrolled in master's-level Integrated Water Resources Management (IWRM) programs in Bangladesh, India, Nepal and Sri Lanka.



OVERVIEW

The South Asian Water (SAWA) Leadership Programme on Climate Change is a fellowship program that awards fellowship to women enrolled in master's level Interdisciplinary Water Resources Management (IWRM) program across four universities in South Asia. The SAWA programme was started in 2017 and is funded by the International Development Research Centre (IDRC, <https://www.idrc.ca/en>) vide grant no 108441-001. The programme has evolved as a continuation to the Crossing Boundaries (2005-2012) and SAWA Fellowship (2012-2016). The current fellowship program aims at facilitating the creation of a group of interdisciplinary women leaders in south Asia, having a common understanding of the crosscutting scientific and societal issues of water resource management. Since this programme lays emphasis on leadership and intensive trainings, the number of awards is less in comparison to the earlier phase. More info on the project can be found at <http://www.saciwaters.org/sawaleadershipprogram/>.

VISION

The project envisions creating a research network across four South Asian countries by supporting research on water and climate change. It focuses on Capacity building of women scholars who would be potential water leaders in future. The fellowship is awarded to students that come from a technical background and the vision is to train them about societal complexities with specific focus on gender. The long-term vision of the project is to have a common understanding about the way South Asian water challenges can be dealt with while paying adequate attention to the regional nuances.



Dr. Vishal Narain is Professor, Public Policy and Governance at MDI, Management Development Institute, Gurgaon. He holds a PhD from Wageningen University, the Netherlands. His teaching and research interests are in the inter-disciplinary analyses of public policy processes and institutions, water governance, vulnerability and adaptation to environmental change and periurban issues. His research has been published in several international peer-reviewed journals like Water Policy, Water International, Environment and Urbanization, Local Environment: the International Journal of Justice and Sustainability and Mountain Research and Development. He is the author of Public Policy, A view from the South (Cambridge University Press, 2018). He was lead author for a chapter on human vulnerability to environmental change for GEO-4 (Global Environment outlook) 4, the flagship publication of UNEP, the United Nations Environment Programme. He received the SR Sen Prize for the Best Book on Agricultural Economics and Rural Development conferred by the Indian Society of Agricultural Economics (2002-03) for his book 'Institutions, technology and water control: water users' associations and irrigation management reform in two large-scale systems in India (Orient onman, 2003). He has been a consultant to several organizations such as IWMI, International Water Management Institute, Colombo; STEPS Center, University of Sussex, U.K; FAO, Bangkok and the Asia Foundation, New Delhi. E-mail id: vishalnarain@mdi.ac.in

Inter-disciplinary Field Research Methodology

Thinking about water in an inter-disciplinary way: some approaches and frameworks

This session will provide participants an exposure to frameworks that link the social and natural sciences. Inter-disciplinary needs to go beyond the dichotomy of seeing water as a 'holistic' way. This requires getting out of our disciplinary comfort zones. A move to inter-disciplinary needs to be reflected in the nature of research and enquiry surrounding water.

Paradigms in social science research

How we see what constitutes reality has a fundamental influence on the nature of enquiry and research design. Our paradigmatic orientation is fundamental to how we approach research. However, it is seldom made explicit. We explore position and interpretation as alternative ways of developing research designs.

Qualitative Research: Ethnography, semi-structured interviews, key informant meetings and Focus Group Discussions

In this session, we explore some basics of qualitative research. We become familiar with some qualitative research methods. We also explore how they are different from each other and when they can be used. We look at some applications in inter-disciplinary water resources research.

Collecting and analysing qualitative data: case study and grounded theory

Field research often entails a prolonged immersion into a research setting. In this session we will learn how to draw generalizations from a specific research setting and how to theorise based on the research findings. We learn practical tips to record our field notes and make memos; we learn how to develop codes and concepts and write analytic memos to analyse qualitative data.

Appreciative Inquiry and Participatory Rural Appraisal

Appreciative inquiry is a paradigm that emphasizes learning from people and their contexts. PRA uses visual techniques to engage communities with whom we are working. We explore the philosophy, tools, applications and limitations; we also learn how not to do a PRA!

Conceptual groundwork for the analysis of gender-water relationships

In this section we develop a conceptual understanding of gender. We distinguish it from sex; we understand the concept of the sex-gender system. We examine the value of taking a gender relations perspective in water by exploring the concept of equity, contrasting it with equality. We explore the idea of intersectionality.

Rationale for a gendered analysis of water

We will look at why water needs to be studied using a gendered lens. We try to understand how different aspects of water access, control, allocation and distribution are gendered. Households are sustained by a gender-based division of labour around water collection. Women and men even express themselves differently in environmental struggles around water and water infrastructure.

Approaches to engendering the water sector: a review of the experience

Engendering the water sector involves two components: making the water sector more gender balanced and making it more gender sensitive. We explore different approaches to engendering the water sector in South Asia in particular and globally more broadly. We understand the actual experiences with such initiatives. We also review recent efforts at bringing in more women in the water sector in South Asia.

Ecofeminism and feminist environmentalism; feminist political ecology

In this session, we will understand the basics of some conceptual approaches and frameworks that inform our analysis of gender and water relations. We understand their genesis, relevance and application to water research, and engage with some criticisms. We examine why it is necessary to be informed of these approaches.

Bringing a gender perspective to our research

In this session, we will bring together some of the key learnings from the previous four sessions to see how they influence our analysis of gender-water relations. This could be in the form of framing key questions to ask. This session will rely more on involvement from the participants in integrating the learnings from the workshop with their proposed research or areas of interest.

TRAINING OF TRAINERS

COURSE PROFILE

Date	Time	Modules
29.09.2020	3.00-3.05 pm	Welcome Note by Dr Sreenita Mondal/Ms Shreya Chakraborty
	3.05- 3.20 pm	Introduction with facilitators and participants
	3.20 - 3.25 pm	Introduction to the program by Dr Mansee Bal Bhargava
	3.25 - 3.30 pm	Key Note Address by Dr Melanie Robertson
01.10.2020	3.30 - 4.30 pm	IFRM: Module 1 (Lecture): Thinking about water in an inter-disciplinary way: some approaches and frameworks by Prof. Vishal Narain
	4.30 - 5.00 pm	Discussion
	3.00 - 4.00 pm	Gender and Water: Module 1 (Lecture): Conceptual groundwork for the analysis of gender-water relationships by Prof. Vishal Narain
	4.15 - 4.30 pm	Discussion
06.10.2020	3.00 - 4.00 pm	IFRM: Module 2 (Lecture): Paradigms in social science research by Prof. Vishal Narain
	4.00 - 4.30 pm	Discussion
08.10.2020	3.00 - 4.00 pm	Gender and Water: Module 2 (Lecture): Rationale for a gendered analysis of water by Prof. Vishal Narain
	4.00 - 4.30 pm	Discussion
13.10.2020	3.00 - 4.00 pm	IFRM: Module 3 (Lecture): Qualitative Research: ethnography, semi-structured interviews, key informant meetings and Focus Group Discussions by Prof. Vishal Narain
	4.00 - 4.30 pm	Discussion
15.10.2020	3.00 - 4.00 pm	Gender and Water: Module 3 (Lecture): Approaches to engendering the water sector: a review of the experience by Prof. Vishal Narain
	4.00 - 4.30 pm	Discussion
20.10.2020	3.00 - 4.00 pm	IFRM: Module 4 (Lecture): Collecting and analysing qualitative data: case study and grounded theory by Prof. Vishal Narain
	4.00 - 4.30 pm	Discussion
22.10.2020	3.00 - 4.00 pm	Gender and Water: Module 4 (Lecture): Ecofeminism and feminist environmentalism; feminist political ecology by Prof. Vishal Narain
	4.00 - 4.30 pm	Discussion
27.10.2020	3.00 - 4.00 pm	IFRM: Module 5 (Lecture): Appreciative Inquiry and Participatory Rural Appraisal by Prof. Vishal Narain
	4.00 - 4.30 pm	Discussion

This training program aims to provide multidisciplinary insights to the engineering faculty and post-graduate students (SAWA Awardees) from universities to ensure a greater degree of inter-disciplinary element in the IWRM research.

TRAINING DELIVERY AND METHODOLOGY

This workshop will be delivered in online mode using zoom platform. We recommend that you sign-in to the session 5-10 minutes early to download the Zoom app (if needed). All online workshop registrations require a valid email address. This is how the links (invitations) to the training are sent to registered participants.

The workshop will primarily be interactive in nature with the provision of presentation through case studies; dissemination of documentaries; group work; assignments e.t.c.

FEEDBACK

Participants are requested to complete an online survey at the end of the training.

E-CERTIFICATES

On completion of the training program, an E-certificate will be sent to your email address.

COORDINATORS

Dr Mansee Bal Bhargava (manseebb@sacivaters.org)
 Dr Sreenita Mondal (sreenita@sacivaters.org)
 Ms Shreya Chakraborty (shreya@sacivaters.org)
 Ms Judith Darcus Christiana (judith@sacivaters.org)

TECHNICAL SUPPORT

Mr Mastan Vali

For any ENQUIRIES, write to:

Dr Sreenita Mondal (sreenita@sacivaters.org)
 Ms Judith Darcus Christiana (judith@sacivaters.org)

REGISTRATION

In order to receive the zoom link please fill-up the registration form sent to your email address. Each person must be registered with their own email address.

TECHNICAL RECOMMENDATIONS

Those enrolling in the programme should have access to internet and laptop/desktop /smart phone with audio-visual facilities. We recommend using a headset or speakers with your computer. You also need a microphone for this class. You can type your questions and comments to the course instructors and Coordinators in the training if you choose.

PARTICIPATION LEVEL

Engineering faculty and students pursuing M.Sc. in IWRM from 4 engineering institutes are expected to participate in this programme.

DATE AND DURATION

This programme is scheduled from 29th September to 29th October, 2020. On each day, there will be an online lecture by the instructor, followed by discussion. Apart from that offline assignments will also be provided to the participants during, after or prior to each online classes.

LANGUAGE

Participants should have working knowledge of English Language.

India:
3 pm to 4.30 pm

Sri Lanka:
3 pm to 4.30 pm

Nepal:
3:15 pm to 4:45 pm

Bangladesh:
3.30 pm to 5 pm

PARTICIPATION DETAILS

