



RESEARCH
PROGRAM ON
Water, Land and
Ecosystems

Led
by:



Report from 'WLE Indus and Ganges Focal Region Meeting'

WLE Indus and Ganges Focal Region Meeting

August 21-22, 2013, Kathmandu, Nepal

This initial WLE Indus-Ganges Focal Region Meeting had as overall purpose to bring together contributing partners of the WLE consortium, particularly their regional representations, in order to plan and provide recommendations for the design and implementation of the WLE regional focal program in Indus and Ganges.

Specific objectives of the planning meeting were to introduce WLE and equip participants with sufficient understanding of WLE and the focal region process to be able to promote the initiative with research-and boundary partners in the region, as well as identify the initial scope of the regional program and initiate its roll out process.

The meeting was convened by Michael Victor, Nicoline de Haan en Martin van Brakel of the WLE operations team, in close cooperation with Luna Bharati, head of the IWMI Nepal office. Michael Victor also facilitated the meeting. Logistic support was provided by Mala Ranawake at IWMI HQ in Colombo and Nitesh Parwat, IWMI Nepal.

The meeting venue was Hotel Yak & Yeti, Senate Room. An agenda of the meeting and list of participants are annexed.

Day 1 Part 1: Setting the stage

9:00 – 9:15 Introduction/expectations

The meeting started with a brief overview of the agenda provided by Michael Victor. Participants introduced themselves and were asked to express their expectations for the meeting. Participants wanted to understand the basics of WLE, i.e. whose lives we are going to help, understand what activities are on-going in the region, and how current activities contribute to WLE and vice-versa. Arif Anwar gave an example how IWMI's Pakistan office already cooperates bilaterally with IFPRI on an incidental basis, which does not necessarily require a WLE framework. This also raises the question how to coordinate and differentiate between bilateral activities and WLE at the regional level, and how to coordinate and allocate resources. Suhas Wani noted that ICRISAT 's activities in the region, for example, are all Windows 3 and bilaterally funded. ICRISAT is working with 9 Centers in Karnataka. How can such activities be synergized?

For some participants this was the first interaction with WLE. Bhuwon Sthapit observed that Bioversity's ground level work in South Asia matches very well with WLE principles. He therefore expected to get a better understanding on how to contribute to these principles and the WLE portfolio, and how to work as a team. Also, different CRPs are working at the national level, and the same partners are approached by different actors. This can lead to confusion and duplication of efforts, hence there is a need to prioritize issues and what we want to focus on - Where we can realistically work, what we are trying to do, and what are the milestones? Where do people fit in? (livelihoods / gender). A list of 4-5 things could help the prioritization. There was also some expectation that different aspects of variability (social / biophysical) that have not been considered before would be highlighted.

In terms of process we need to learn from design process in other regions. Vladimir Smakthin noted that the actual pre-meeting for the Indo-Gangetic and forthcoming Nile pre-meeting were conceived to help the larger design meetings, but that there are already too many meetings. These pre-meetings might not be necessary for all regions if a better format and structure could be worked out in the current meeting, which would be a good contribution.

9:15 – 9:45 Introduction and update of WLE and the regional focal program design & roll out strategy

Nicoline de Haan explained the structure and functioning of WLE. She emphasized that whatever is discussed at the basin level comes down to community level needs. The pre-meetings are meant for clarification amongst partners on how to work on the ground, and talk with partners before the larger design meetings. It is meant to be an ongoing, iterative process.

9:45 – 10:15 Presentation on activity clusters that are relevant to the Indus/Ganges Region

Martin van Brakel gave an overview of existing activity clusters within WLE that might be of particular relevance to an emerging Indo-Gangetic regional focus. This generated some discussion and SRP leaders provided additional clarification on the focus of particular clusters. Sanmugam Prathapar explained for example that the activity cluster on combating irrigation induced salinity does specifically focus on freshwater areas and not on tidal seawater intrusion in coastal areas. It was observed that non-conventional irrigation is currently missing within the irrigation portfolio. One question raised again was who are we targeting and how to define the type of irrigation systems to be addressed. It was also observed that improving productivity is a cross-cutting objective between rainfed and irrigation, which emphasizes the need for some integration across these SRPs.

10:45 – 12:15 Presentations from various countries on what is being done within WLE partner organizations

IFPRI Pakistan/Bangladesh – Policy, Institutions & Markets (CRP2)

Stephen Davies explained IFPRI's Pakistan Strategy Support Program (PSSP) which has 4 thematic areas; (1) water resources; (2) macro-economics, markets and trade; (3) agricultural productivity and (4) poverty & social safety. Modelling and data collection are the core activities of IFPRI in the region. A lot of effort goes into household surveys and a lot of these data will be public. Much of it has not yet been analyzed. In Bangladesh IFPRI is involved in work on women empowerment indicators.

Two economic models are used at the basin scale. The World Bank designed Indus basin model, which was revised and updated in 2008, is used for modeling climate change scenarios and the CGE, used to model trade-offs between hydropower and irrigation (water, food, energy nexus) which is used by the Pakistan Water and Power Development Authority (WAPDA). Its system of allocating water to regions is however pretty constraining in terms of water use optimization. Some discussion ensued on the possibilities of using proprietary models and whether or not there is need for more modeling, i.e. how much modeling is enough? IFPRI Pakistan analyzes also governance issues such as the ongoing irrigation reform, using netmap, and plays a role in the coordination of Donor priorities in the country.

IFPRI and IWMI work together on linkages between surface water & groundwater. Arif Anwar referred to the work on a special issue in Water International, entirely focused on Pakistan water issues, and the use of experimental economic games to help farmers make rational decisions on agricultural water use. The possibility of working together with Policies, Institutions & Markets (CRP2) was discussed given that most of IWMI's work in the region is in the policy arena.

ICRISAT

Suhas Wani explained that ICRISAT's work in the region is focused on watershed management at community level, generally smaller than 5000 ha. All aspects of watershed management are explained in terms of biophysical, social and institutional factors. ICRISAT in its approach does not make the distinction between rainfed and irrigated agriculture. Rainwater is i.e used for irrigation and groundwater recharge. ICRISAT uses constraints analysis in which the central question is why watershed investments did not produce the expected benefits. Analysis of the Indian Governments watershed programs shows that only 32% of these programs resulted in benefits, and ICRISAT's

recommendations have led to the implementation of new policy guidelines in 2008. ICRISAT's R4D approach has helped to get buy-in / funding from the Government of India. It is running a large program with the Karnataka government and 9 CG Centers collaborating. The objective is to have 5 million ha. of increased production in 4 years, through inclusive market oriented development benefiting small and marginal farmers and improved backward linkages for supply of inputs. These experiences can be brought into the IGP. The work that ICRISAT currently does in the region is on rice fallow management. ICRISAT is developing new science tools for groundwater and run-off modeling for on-site and off-site impacts. It was also noted that there is potential for linkages between work by CCAFS, WLE & CRP1.1 in the region.

WorldFish – CPWF & AAS (CRP1.3) Bangladesh

Craig Meisner represented the CPWF Ganges Basin Development Challenge and CRP1.3, Aquatic Agricultural Systems. These programs both focus on coastal zone water management in southern Bangladesh, where production, salinity and poverty low are major problems. Considerable impact has already been achieved in the area, which has attracted Donor interest. Close to USD 1 billion investment is foreseen in the coming 1 to 3 years. The “magic” to this success is in teams and bringing people together to work on a particular challenge, building on the CPWF work.

Water management within the polders in southern Bangladesh is based on division of the polder in smaller hydrological units through the use of rural roads as hydrological boundaries. Local social funds are used to create even smaller boundaries, at the community level. Key in the saline area is drawing out saline water from Ghers in July.

IWMI-South Asia

Luna Bharati explained that Nepal is characterized by large temporal and spatial variations in availability of water. Only 15% of the water is used. The work of the IWMI Nepal office focuses on two regions; in the highlands it focuses on development, in the lowlands / plains (Terai) the focus is on improving efficiency. Key priorities for improved watershed management are better planning and technologies (storage). There is a need for bridging the policy – implementation gap and supporting farming under climate uncertainty and reducing vulnerability to political instability, as well as managing water resources variability and risks from extreme events.

Tushaar Shah explained that IWMI's work in India has a socio-economic emphasis, with focus on institutional issues, particularly related to groundwater and the complexity around irrigation wells, through the IWMI – TATA cooperation. The main thrust of interest is in research for policy related to water and energy uses in irrigation. Power subsidies in western India amount to USD 6 – 7 billion per year. Groundwater is overdeveloped and there is no solution to that given the political conundrum. Intelligent rationing has provided some solution to the issue, as for example the rewiring in Gujarat. Big subsidies are given for solar power, but potential problems with this approach have not been given consideration. This calls for changing the focus to improving management.

Bioversity

Bhuwon Sthapit provided an overview of Bioversity's work in the region, which focuses on integrating traditional crop genetic diversity into technology, through community based management and local institutions (community seed banks). Variability = diversity – farming diversity (agrobiodiversity). In the hills, seed supply is well networked and as a result vulnerability is low, whereas in the Terai seed supply is less networked, resulting in higher vulnerability.

Research Needs Assessment for the Eastern Gangetic Plains

Sanmugam Prathapar presented the outcomes of the workshop titled “Moving from Water Problems to Water Solutions: Research Needs Assessment for the Eastern Gangetic Plains” which was organized jointly by WLE and its lead institution IWMI, CCAFS and ACIAR, held earlier this year May

7-8, in New Delhi, India. In that workshop seven concept notes for future projects were developed. Three of these were combined into one proposal to ACIAR.

Part 2: Discussing entry points for integrated work in Indus and Ganges

1.15 – 1.45 Gender, Poverty, Institutions considerations

Nicoline de Haan introduced the afternoon session by emphasizing the requirement from the Consortium Office for the CRPs explicitly to address gender in their programs. The focal landscape for gender in WLE is the feminization of agriculture. Home gardens, for example, are important assets for rural women but what is the real research question? Craig Meisner mentioned that within rural families in Bangladesh, the differential access to food is a glaring gap. Stephen Davies mentioned that IFPRI has been doing studies of aspirations, looking at access, control and decision making, and the role that community institutions can play. He noted that there is no clear definition of who is an 'institutional specialist' in the context of local community-based institutions. In government departments such a person would be a public administration specialist. The issue of social scientists is also apparent in WLE – only one SRP co-leader is a social scientist.

1.45 - 4.30 Entry points and areas of integration

The discussion on entry points and areas of integration revolved around the three focal WLE criteria: 1) efficient use; 2) restore productive capacity; 3) reduce risk & uncertainty. Participants were asked to discuss:

- What are elements from current partner activities to focus on?
- What are key development challenges / opportunities in Indus / Ganges to focus on – what can we change? (8 – 10 years)
- What do we see as WLE added value

1 Efficient use:

- IFPRI's analysis at household / farm level.
- WLE Activity Cluster 4.4 can provide data to point to efficiency or measure efficiency.
- Land size, energy and microfinance are issues to consider for increased efficiency.
- Increase land lease / ownership & its regulation
- Irrigation service markets
- Better access to knowledge for infrastructure

2 Restore productive capacity

- Decreasing farm labor available – what are the implications?
- Better understanding of the effects of efficient use and restoring productive capacity on gender as intervention opportunity
- Improving productivity of small water bodies / water sources & its protection
- Recognize where land degradation occurs & address this

3 Reduce risk & uncertainty

- Erosion, siltation, salinization, aquifer mining, traditional irrigation systems lying in disrepair, loss of wetlands & forests providing ecosystem services, watershed treatments; the challenge is how to create incentives to allow restoration of above, both private or public or knowledge driven

Focal areas for reducing risk and increasing resilience

- Flood monsoon prediction
- Weather insurance
- Resilience to climate shocks
- Alleviation of poverty (measure!)
- Demonstrate how diversity, both ecosystem & livelihood, can increase resilience
- Rethinking water storage (think integrative)

Development challenges for change; one pertinent challenge in the IGB is the low income from agricultural systems.

- Integration of gender in every intervention (sensitivity, transformation)
- Explore interventions that change income & focus on those
- Concentrate on energy, production efficiency & labor availability
- Integration of all participating institutions to work for change
- Shorten value chain for increased household profitability
- Land issue & models that may work
- Land fragmentation & erosion degradation in hills

Added value of WLE

- Focusing on landscape level changes
- Documenting local knowledge systems for 'outsiders'
- Ability to integrate at higher level & maintaining resource base
- Ability to look at complex issues and consider trade-offs
- Help to leverage funding & HR
- Help to bring in outside resources that centers might not know of
- Bring people aspect to ecosystem services & NRM
- Bring in learning and cross fertilization

Challenges

- Depleting groundwater levels in Indus & Ganges
- No institution responsible for maintaining groundwater levels
- Short-term motive of farmers
- Strengthening of local institutions

Development challenges & opportunities

- Providing sustainable groundwater resources & management
- Creating tenure & ownership to facilitate investment and conservation of land resources
- Understanding demand for research
- Reversing land degradation by public & private solutions
- Allocating water resources among competing demands
- Building resilience of ecosystems & eco-services shocks amongst those who are more vulnerable
- Address effect of WLE research & interventions on gender by encouraging equality

Day 2 Part 3: Putting it together and next steps

9:00 – 10:00 Report back and discussion

During this discussion some critical questions were asked. Suhas Wani questioned whether we are not getting back into our own silos, e.g. what about rainwater use efficiency and providing sustainable water resources in the region? How to operationalize solutions on the ground? There was some discussion on whether or not a focus on groundwater is really justified. Bhuwon Shtapit noted that biodiversity is not addressed in the list of grand challenges.

Participants agreed on the following issues and gaps in the 'grand challenges' that should shape the regional focus

1. Shocks are wider than climate – they include economic and political shocks
2. There should be attention to non-conventional irrigation, such as new technologies for smallholders in the hills
3. A basin focus on energy, benefit sharing, and cross-boundary aspects
 - a. Water allocation
 - b. Institutions
4. There is a need to add in energy
5. Water reuse & recycling and wider water management issues – providing sustainable water resources in a given area; efficient use of water (rainfed / groundwater)
6. There is 'nothing' on ecosystems (shrinking biodiversity / non-irrigated areas)
7. Storage and water management

Ganges

- 1) Outcomes of AWM workshop
- 2) What are gaps
 - a. Topics
 - b. Partners
- 3) How to move forward
 - 1) There was agreement that the concept notes that were outputs of Water Management Workshop for the Eastern Gangetic Plains, were good starting points but needed to be complemented with a wider focus on watershed management and ESS to make them more attractive to Donors. Bioversity expressed interest in joining CN1: role of institutions in AWM, led by K Palanisami. It was suggested to combine this concept note with CN2, Gender and labor migration in the EGP, and CN4, Water- energy nexus in the EGP, and to include a mountain watershed too. It was also suggested to combine CN3, Water resources assessment and information systems for the EGP, with CN6, 'Ganges Water Machine'.
 - 2) The gaps were perceived to be in ESS and rainfed areas. In India 60% of agriculture is still rainfed, areas which are hotspots of poverty. Transforming rainfed agriculture in the plains has high potential. The conjunctive management of groundwater and rainwater is of high relevance but does not show up in the concept notes. Increasing biodiversity, e.g through integrated trees, crop, livestock systems, is one way of better managing rainfed areas. It was recommended to include particularly the following topics;
 - a. Agrobiodiversity
 - b. Watershed management
 - c. Non-conventional irrigation in hills
 - 3) Agreement was reached on a basin-scale approach with action sites along a 'transect' from upland, lowland, to coastal. Such an approach will allow addressing everything from upstream – downstream interactions to ESS to AWM.

The significant decision made on the basis of this discussion was that a “follow-up” Ganges workshop will not be held. Instead there was agreement on the following actions:

Actions:

- 1) Upland meeting to be convened by Luna, Suhas, Bhuwon, Tushaar, Amir Khan, near end of the year
- 2) Lowland; WLE with AAS could initiate a new phase in the coastal zone. Craig Meisner to take this forward at CPWF Ganges meeting (Nov 14)
- 3) Follow-up on concept notes (Prathapar lead)
- 4) Concept note of Ganges focal strategy to illustrate the overall approach (Martin lead)
- 5) Send out call for Expressions of Interest on coordination of focal regions

Indus

For the Indus it was decided that the scope will be initially focused on the western Indus.

Actions:

- 1) Initial meeting In Islamabad, to be hosted possibly by Pakistan Agricultural Research Council (PARC) – Nov 4-8 / Nov 11-14 (Steve lead); Preparation by September 15: Topic(s), list of participants, location, partners, dates
- 2) Follow up with partners – Prathapar to follow up with ICARDA; other partners to follow-up with: ICIMOD, CSIRO, States, Ministries, Private sector, research / university, NGOs, Donors, World Bank, Gender institution

Materials: gender (IFPRI)

Coordination:

- WG & AC separate or one group?
- Ganges & Indus two separate focal points with cross-pollination

Annexes

Potential / identified partners in Indus & Ganges

Indus partners:

Research	Next / boundary
Punjab Agriculture University	Growers Association
Soil science Kanand	Pakistan Agr. Council
International Committee Research Women ICRW	Aga Khan
Policy think tanks	PPAF
Gender department of universities	Women advocacy groups
National University	Pak EPA interested in environmental issues
Lahore university of management sciences	IRSA
USAID	Irrigation + Power Department ¹
Centre or excellence	PIDAs + farmer organization ¹
NGOs	Member water, planning commission
Pakistan Agricultural Research Council	Ministry of water & power ²
Provincial Agricultural Research Council	PCRWR

Ganges partners

Partners	Next users
Institute of Water Management (Bangladesh)	Jain Irrigation
Barrind water management board	Central Groundwater Board
IDE	Bihar Rural Livelihoods Project
NARES – ICAR, BADC	Care
Central Water Commission	Oxfam
Institute of Water Modelling	Indian Tobacco Foundation
Universiyt of Southern Queensland	State universities India
BCKV	MOAC, DOA, Nepal
PRADAN	ICAR, India
UNKV	IOF, Nepal
Sakhi Bihar	Forward, NGO Nepal
CSIRO	NABARD
National University of Singapore	Grameen Bank
Bangladesh Institute of Development studies	BRAC
Department of Irrigation Nepal	ILC
LI-BIRD/Nepal	ADB
Cnetral Soil and Water Research and Training Institute, Dehradun	PROSHIKA
Central Soil Salinity Resaerch Institute, Karnal	Watershed development departments
CPWF/Ganges	TATA Foundation
AKSRP-Bihar – strong water presence in two districts	IFAD,
ICAR Waterscape center in Patna	Government of Finland
Srijan Bundelkhamd – orissa	DFID
NARC – Nepal	SDC
Dhan Founation India	ACIAR
Policy Think tanks	USAID
Gender departments of universities	GIZ
Intenrational Committee of Research on Women	Development Fund Norway
	Deaaprtment of Irrigation, Nepal

¹ These are two main organizations managing surface water distribution + Energy(?)

² Includes WAPDA & has interest in hydro / irrigation trade-offs; Main national ministry focused on water (Federal Flood Commission)



ICIMOD TERY Practical Action CCAFS UBNINLE – Bangladesh CRPs- AAS Humana NGO India People Science Institute - Dehra Dun IUCN Eco-Agriculture	WECS – Nepal
--	--------------

WLE Indus and Ganges Focal Region Meeting

August 21-22, 2013

Kathmandu, Nepal

Short overview of the WLE Focal Region approach

WLE works in six focal regions where more than 1 billion of the world's poor live and where persistent problems of poverty persist, aggravated by environmental degradation and low productivity. WLE is developing a regional focal program to address key issues, opportunities and challenges identified in these regions.

WLE regional focal programs work according to the following principles:

- Addressing one or more key global problems, contextualizing these at the regional level with the commitment to move science results to desired outcomes and impacts.
- Focus on integration around a paradigm shift that envisages the recognition that agricultural production systems are “a wholly owned subsidiary of the ecosystems and natural capital” they are dependent upon.
- Working at multiple scales (farm, landscape, basin, region) regional focal programs integrate the work of at least 3 Strategic Research Portfolios (SRPs)
- Building on the work of partners, implementation by partners and share ownership with partners
- Long-term commitment to partnerships and working with and through local research partners and boundary partners (those entities whom WLE seeks to influence) for greatest possible impact
- Addressing gender specific issues within the regions to enhance the ability of men and women to create vibrant communities, through increased access and control over resources.

The overall objectives of the focal region programs are:

- Ensure the relevance of WLE research within the regional context, giving active recognition to the role of region-based actors in informing and identifying development priorities;
- Link research outputs and outcomes to relevant development processes in regions and so establish integrated Theories of Change (ToC) at the regional or landscape scale;
- Define the contribution of WLE to broader regional development trajectories and outcomes;
- Define targets where change is expected to come about, who can assist in this process and how;
- Establish a dynamic environment where a wide range of partners are involved in the proposed research for development from the outset, respecting the fluid nature of region-based networks, decision making process and power relationships

Initial Indus-Ganges Focal Region Meeting

The overall purpose of this meeting is to discuss how to best design and implement the Focal Region process. As a first step in initiating the WLE regional focal program in the Indus Ganges a planning meeting is being organized to bring together contributing partners of the WLE consortium, particularly their regional representations.

The specific objectives of the planning meeting are:

- Introduce WLE, regional focal programs and the roll out process
- Equip participants with sufficient understanding of WLE and the focal region process to be able to promote the initiative with partners in the region.
- Identify initial scope of regional program (where we are thinking of working, issues and opportunities to tackle, how to ensure integration, who are strategic partners to engage)

We will also discuss the stakeholder workshop planned tentatively for 23 & 24 October this year, during which we will aim to reach agreement and foster common understanding between WLE and partners / next users about the major development challenges that WLE is best placed to address in the Indus and Ganges, and impact pathways that WLE will seek to follow, linking research to envisaged outcomes.

The specific outputs of the planning meeting are:

- Draft strategy and action plan for workshop and beyond (focus of workshop, who will do what, partners to include, how to strategically engage different partners, etc.)
- Workshop agenda
- List of invitees



RESEARCH
PROGRAM ON
Water, Land and
Ecosystems

Led
by:



Agenda

Day 1: August 21, 2013

Time	What	Who
Part 1: Setting the stage		
9:00 – 9:15	Introduction/expectations	Michael
9:15 – 9:45	Introduction and update of WLE and the regional focal program design & roll out strategy (15 minute presentation + Discussion/clarification)	Nicoline & Michael
9:45 – 10:15	Presentation on activity clusters that are relevant to the Indus/Ganges Region (15 minute presentation + Discussion/clarification)	Martin
10:15 – 10:45	Coffee Break	
10:45 – 12:15	Presentations from various countries on what is being done within WLE partner organizations <ul style="list-style-type: none"> - PIM – IFPRI Pakistan/Bangladesh - ICRISAT – Suhas - WorldFish – CPWF/Bangladesh - IWMI/South Asia – Luna/Tushaar - Bioversity – Bhuwon - Results of Water Solutions Workshop – Prathapar) - 	10 minute presentation 5 minute questions
Lunch		
Part 2: Discussing entry points for integrated work in Indus and Ganges		
1.15 – 1.45	Gender, Poverty, Institutions Considerations	Nicoline
1.45 - 4.30	Entry points and areas of integration	
	1) Review criteria for regional focal activities 2) Brainstorm around: <ul style="list-style-type: none"> - What is WLE's Value added in the region and how can WLE and partners tackle these issues/opportunities - Key issues/opportunities that WLE would tackle in an integrated manner - 	Most likely together maybe some group work.
4.30 – 4.45	Wrap up and closing	
7pm	Group Dinner	

Day 2: August 22, 2013

Time	What	Who
Part 3: Putting it together and next steps		
8.30 – 8.45	Key points from the morning	Michael
8.45 – 9.00	Overview of Regional Focal Process	Nicoline

9:00 - 10:00	Discussion and analysis of partners and next users	Michael
	<ul style="list-style-type: none"> - Who are key partners and next users we need to engage with to achieve impact - Who are the key door openers Who do we need to talk with before the workshop	
10:00 – 11:30	Workshop preparation <ul style="list-style-type: none"> - Agenda outline for design workshop - List of invitees design workshop - Who do we need to engage with for the next workshop - Where/when - 	Michael
11.30 -12.00	Discussion on potential leads/champions for taking things forward <ul style="list-style-type: none"> - Criteria/TOR for regional focal leads - Nominations for potential regional focal leads 	Michael
12.00 – 12.30	Review of action and who is in charge of what	Michael
12.30	Closing and Lunch	

Participants

	Name	Position	Organization
1.	Dr. Vladmir Smakthin	SRP Leader - River Basins	IWMI
2.	Dr. Suhas Wani	SRP Leader - Rainfed	ICRISAT
3.	Dr. Stephen Davies	Senior Research Fellow & Program Leader	IFPRI
4.	Mr. Michael Victor	Comms and KM Coordinator	WLE
5.	Dr. Tushaar Shah	Senior Fellow	IWMI
6.	Dr. Sanmugam Prathapar	SRP Leader - Irrigation	IWMI
7.	Dr. Bhuwon Sthapit	Regional Project Coordinator and In Situ Conservation Specialist	Bioversity
8.	Dr. Martin van Brakel	Research Coordination	WLE
9.	Dr. Nicoline de Haan	Gender, Poverty & Institutions Coordinator	WLE
10.	Dr. Craig Meisner	South Asia Coordinator	World Fish
11.	Dr. Arif Anwar	Head of Office Pakistan	IWMI
12.	Dr. Luna Bharati	Head of Office Nepal	IWMI



RESEARCH PROGRAM ON
Water, Land and
Ecosystems

Led by:



Led by



CGIAR Challenge Program on
WATER & FOOD
Andes • Bangkok • Lima • Mexico • Nile • Volta

