

The Challenge Program on Water and Food: Volta Basin Development Challenge Inception Workshop Report



**May 30 – June 1, 2011
M-PLAZA Hotel, Accra, Ghana**

Table of Contents

List of Acronyms and Abbreviations	4
1 Background	5
1.1 Workshop Specific Objectives and Expected Outputs	5
2 Workshop proceedings.....	5
2.1 Day 1	6
2.1.1 Session 1: Setting the scene	6
2.1.2 Session 2: Project updates.....	7
V1: Targeting and Scaling Out	7
V2: Integrated management of rainwater for crop-livestock agroecosystems.....	8
V3: Integrated management of small reservoirs for multiple uses	9
V4: Sub-basin management and governance of rainwater and small reservoirs .	10
V5: Coordination and Change	11
2.1.3 Session 3: Bilateral meetings	13
2.1.4 Session 4: Team meetings.....	13
V1.....	13
V2.....	14
V3.....	14
V4.....	15
V5.....	16
Discussion	16
2.1.5 Welcome Cocktail.....	16
2.2 Day 2	17
2.2.1 Session 1: Recap and reporting from yesterday.....	17
2.2.2 Session 2: Learning from other initiatives	17
Nile Basin.....	17
Limpopo Basin.....	18
Topic Working Groups	19
International Forum on Water and Food.....	19
2.2.3 Session 3: Developing a monitoring framework	19
V1.....	20
V2.....	20
V3.....	20
V4.....	20
V5.....	20
Discussion	20
2.2.4 Session 4: Synthesis and recap	20
2.3 Day 3	21
2.3.1 Session 1: Launch of Volta Basin Development Challenge	21
2.3.2 Session 2: National Consultative Forum.....	23
Burkina Faso	23
Ghana	24
Region	25
2.3.3 Session 3: Support mechanisms for the VBDC research.....	26
Communications presentations	26
Internal & External Communications/Data sharing.....	27
Innovation Platforms.....	28
Intra- and inter-basin linkages	29
Scenarios/story lines	29
2.3.4 Session 4: Closing and workshop evaluation.....	30

Annex 1: Revised Agenda	33
Annex 2: List of participants. Final version to be inserted	36
Annex 3: Matrix for cross-project linkages	40

List of Acronyms and Abbreviations

AfDB	African Development Bank
AGRA	Alliance for a Green Revolution in Africa
CGIAR	Consultative Group on International Agricultural Research
CILSS	Comité permanente Inter-Etate de Lutte contre la Sécheresse au Sahel
CIRAD	La recherche agronomique pour le développement, France
CPWF	Challenge Program on Water and Food
CSIR	Council for Scientific and Industrial Research
FARA	Forum for Agricultural Research in Africa
GEau	Gestion de l'Eau, Acteurs, Usages, France
HH	Household
INERA	Institut de l'Environnement et de Recherches Agricoles, Burkina Faso
IP	Innovation platform
IUCN/PAGEV	Projet Amélioration de la gouvernance de l'eau dans le bassin de la Volta de IUCN-The World Conservation Union
IWRM	Integrated water resource management
KNUST	Kwame Nkrumah University of Science and Technology, Ghana
LBDC	Limpopo Basin Development Challenge
NDPC	National Development Planning Commission
PAR	participatory action research
PRDP	Poverty Reduction Development Plan
RMS	Rainwater management system
ROPPA	Reseau des organisations paysannes et des producteurs agricoles de l'Afrique de l'Ouest (Network of Farmers' and Agricultural Producers' Organisations of West Africa)
SARI	Savannah Agricultural Research Institute, Ghana
SEI	Stockholm Environment Institute
SNV	Netherlands Development Organisation
TU Delft	Technical University of Delft, The Netherlands
TWG	Topic working group
UEMOA	Union économique et monétaire ouest-africaine
UER	Upper East Region, Ghana
VBA	Volta Basin Authority
VBDC	Volta Basin Development Challenge
WASCAL	West African Science Service Center on Climate Change and Adapted Land Use
WRI	World Resources Institute, USA

1 Background

The current phase (2010-2013) of the Challenge Program on Water and Food (CPWF) research is addressing the Volta Basin Development Challenge (VBDC) which has been defined as **“integrated management of rainwater and small reservoirs for multiple purposes”**. The research-for-development program is designed to explore the institutional, socio-economic and technical aspects of small reservoir development and maintenance within a wider rainwater management system in the Volta Basin to maximize water for food and ecosystem services. The purpose of the inception workshop was to review and assess all VBDC projects for coherence and integration towards achieving the overall goal. Secondly it provided an opportunity to launch the research agenda, share our plans and approaches with a wider, relevant stakeholder group, and to obtain important feedback which can be fed into the research process. The key question to address during the workshop was: **“what are the lessons learned in the inception phase of VBDC research and how would these lessons shape project implementation in the next phase?”**. It was expected that the workshop would contribute to ensuring relevance of the research agenda, as well as strengthening the integration of the five VBDC projects and their teams.

1.1 Workshop Specific Objectives and Expected Outputs

The meeting aimed at addressing the following specific **objectives**:

1. Reflect on the overall VBDC research program and individual research progress towards achieving the expected outcomes;
2. Strengthen project linkages and research integration across project sites
3. Inform stakeholders about the VBDC research-4-development program and obtain their feedback

Expected **outputs** included:

1. Common understanding and clarity across all VBDC projects and how, together, they form one program. This understanding should result in revised milestone plans
2. Feedback messages from the stakeholders



2 Workshop proceedings

2.1 Day 1

2.1.1 Session 1: Setting the scene

Objective: Participants should know each other and have better understanding of the CPWF approach

1. Welcoming words Dr **Charles Biney**: Dr Biney welcomed the participants on behalf of the Volta Basin Authority. He gave a brief overview of the five projects that comprise the Volta Basin Development Challenge, namely:

V1: Targeting and Scaling Out

V2: Integrated management of rainwater for crop-livestock agroecosystems

V3: Integrated management of small reservoirs for multiple uses

V4: Sub-basin management and governance of rainwater and small reservoirs

V5: Coordination and Change

Dr Biney stressed that whilst the Volta Basin Authority was the lead agency for coordination, that the basin challenge required all other partners to form a big team. He stressed the need to integrate activities across the basin with a focus to finally contribute to improving people's livelihoods.

2. Welcome by the Basin Leader, Dr **Olufunke Cofie**: Dr Cofie welcomed the participants on behalf of the Coordination project and expressed her hope that the workshop would be an opportunity to reflect on activities, update each other and achieve greater understanding amongst each other. She explained in detail the agenda for the following three days and the objectives of the sessions.

3. Introductions of **participants**: Participants were requested to share their name, affiliation & role/interest in Volta BDC; their expectation for the workshop and to share a personal hobby. Key expectations were expressed on greater linkages amongst projects, more synergies, learning and exchange for the newer members, discussions on research methodology and forging one strong team. The team's hobbies are mainly active sports (football, swimming, hiking etc.), family and friends, relaxing while listening to music, watching films and TV and reading.

4. Welcome by Dr **Larry Harrington**: Dr Harrington provided a brief overview of CPWF Phase 2 and explained that it works in six basins (apart from the Volta in the Mekong, Andes, Nile, Limpopo and Ganges) and that each basin has the same approach although there are different challenges in each. There are some common threads across the basins, for example resilience and improved livelihoods. CPWF always works with existing institutions and initiatives to build upon strong foundations. There are opportunities for links between basins where projects look at similar issues (e.g. innovation platforms, rainwater/green water harvesting, coordination & change). Dr Harrington stressed that the research program in the Volta Basin work could be seen as prototype for similar approaches of integrated research across the reformed CGIAR. He concluded by saying that the Management Team of the CPWF will provide enthusiastic support to the basin activities.

2.1.2 Session 2: Project updates

Objective: *To achieve common understanding and clarity of each project across the Volta BDC (and its progress/changes, etc.) and how, together, they form one programme.*

The five teams in the Volta Basin Development Challenge are:

- V1: Targeting and Scaling Out
- V2: Integrated management of rainwater for crop-livestock agroecosystems
- V3: Integrated management of small reservoirs for multiple uses
- V4: Sub-basin management and governance of rainwater and small reservoirs
- V5: Coordination and Change

V1: Targeting and Scaling Out

Dr **Jenny Baron** provided an overview of V1 which is implemented by SEI, together with INERA, University of Ouagadougou, KNUST and SARI. The project aims to develop an evidence and knowledge-based tool to assess and map the likelihood that a given intervention will be successful in given locations, at the basin scale. The project seeks to answer the question of what works where and why.

The project design is through an iterative research process in dialogue with stakeholders and potential end users. It contains several human capacity elements including MSc and professional training. The project works at Basin scale, with in depth cases of success and unsuccessful interventions. The plan includes to use high resolution information meshed with existing information from various sources and to use indicators of certainty in the prediction. The team will carry out a review of existing cases of interventions and will assess new in-depth cases in month 10-18. The expected contribution of V1 to the Volta BDC will be a tool with improved capacity to target areas of particular interventions to contribute to poverty alleviation and (resilient) development pathways.

An update of recent activities since January 2011 was provided; plans for the immediate present/future include:

- Follow up on the involvement of V1 in the Resilience Topic Working Group;
- Assembly of basin-scale biophysical information layers has been completed, domain check of field sites of projects V2, V3, V4 is still required;
- Review on policy setting and development targets (Burkina Faso and Ghana);
- Participation in the 3rd International Forum on Water and Food;
- Facilitator training on data collection methodology;
- Field assessments of identified cases have started.

Some topics for exploration during the workshop were also listed, specifically with respect to data sharing and synchronization of activities.

Clarifications were given on the added value of this project over existing similar projects. One thing that is different is the consideration of adoption rate and the incorporation of human and social capitals into the Bayesian model being developed. Other cases so documented by similar projects did not consider the degree of adoption.

V2: Integrated management of rainwater for crop-livestock agroecosystems

Dr **Augustine Ayantunde** provided the update of this project which is led by ILRI in collaboration with IWMI, CSIR, INERA, SNV and Wageningen University. The objective of the project is to identify, evaluate, adapt, and disseminate best-fit integrated rainwater management strategies, targeted to different biophysical and socio-economic domains.

The three research questions the project aims to address are:

1. What integrated RMS work best where, how, and under which enabling institutional and policy conditions? (output 1: Baseline characterization and inventory of RMS)
2. What are the effects of best-fit integrated RMS on different aspects of farm productivity and profitability, gender-specific livelihoods, equity, hydrology, ecosystem services, and vulnerability of people and the environment? And what tools, frameworks, criteria and indicators do we need to assess these effects and combine them in an integrated analysis to come up with targeted solutions? (outputs 2: Targeted recommendations for different actors and contexts of best integrated RM, and 3: Tools, framework for integrated analysis)
3. How can we foster the adoption, scaling out and scaling up of improved rainwater management practices in mixed crop-livestock agro-ecosystems? Which institutional and policy environments and links to the value chain are needed to ensure adoption by farmers? (outputs 4: Dissemination and communication of project outputs, and 5: Capacity building)

The methodology includes reviewing and evaluating rainwater management lessons from the past, baseline studies, an innovations system approach, participatory action research and modeling. Two sites in Northern Ghana (Tolon-Kumbungu District and Lawra District) and Burkina Faso (Koubri District and Ouahigouya District) had been chosen. Within each district 4 communities (villages) were chosen.

A table provided information about links to other VBDC projects (better elaborated under project linkages) and a graph illustrated links to other projects through the activity on institutional and policy analysis:

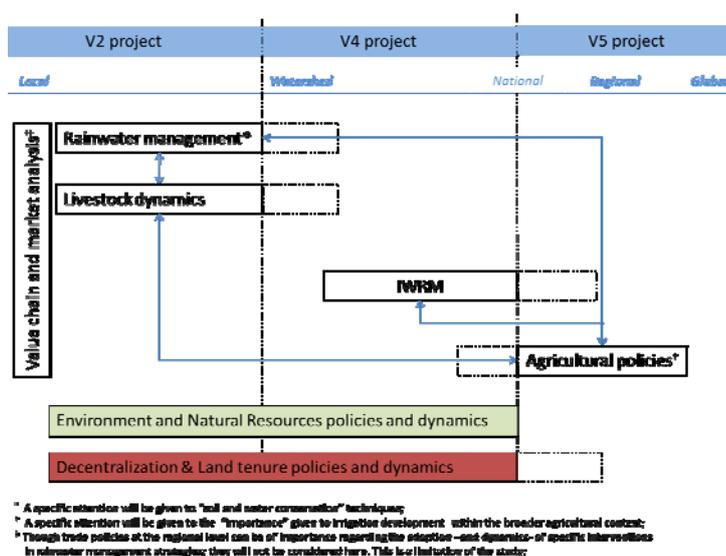


Figure 1: Integrated framework for institutional and policy analysis.

Discussions following this presentation focused on linkages with project V1 and the similarities with LBDC project L3 which is using a similar approach of Innovation Platforms in their analysis.

The following **emerging issues** were brought to the attention of the group:

1. Linking rainwater management to identified value chains at innovation platforms (IP) (maintaining focus on rainwater management)
2. Assessing the impact of IPs on livelihood of household and community (process versus product)
3. Data quality from participatory action research (maintaining good science while ensuring farmers' participation in on-farm experiments)
4. Delay in fund disbursement by CPWF and implications for field activities in the coming wet season

V3: Integrated management of small reservoirs for multiple uses

Dr **Philippe Cecchi** provided an overview of the project, giving a brief historical flashback of the emergence of the Volta BDC in general and this project in particular from CPWF Phase 1 research. Having provided the background and pertaining problems, the V3 project sets out to develop integrated management options to enhance productivity and ensure equitable allocation of water resources; to identify uses and users, assess their needs, clarify social and ecological determinants, control health consequences. It will focus on individual small reservoirs considered within their biophysical contexts and their economical dynamics.

Integrated reservoir management requires knowledge on processes:

- at the adequate scales
- in their dynamics
- in their contexts

Stakeholder's perceptions and expectations need to be considered.

The project is led by CIRAD and partners with GEau, TU Delft, INERA, WRI and CSIR-SARI. Site selection has already been completed. Four clusters of reservoirs have been selected for various activities. Two clusters will serve as core sites (V3 labs) while the other two will be satellite sites for further documentation (Figure 2).

Four PhD research have been defined (some in collaboration with other VBDC projects.) as follows

- Social and spatial controls of health around small reservoirs
- Aquatic invertebrates as bioindicators of water quality and ecosystem health
- Hydrological modelling at local scale
- Clustering of reservoirs at sub-basin scale: cumulative effects and hysteresis

The key questions the project aims to respond to include: Erosion & siltation, Water quality & productivity, Conflicts & access to (land & water) resources, Political drivers. The main challenges the project faces include:

- There is need for clarification of the expectations by various stakeholders;
- The importance of participative approaches and modeling (through shared innovation platforms) needs to be verified;

- An assessment of the relevance of the measured externalities is required (consensus forming among the stakeholders)
- Implementation of “pilot” operations (what methodology?)
- Up and out scaling and sharing of information.

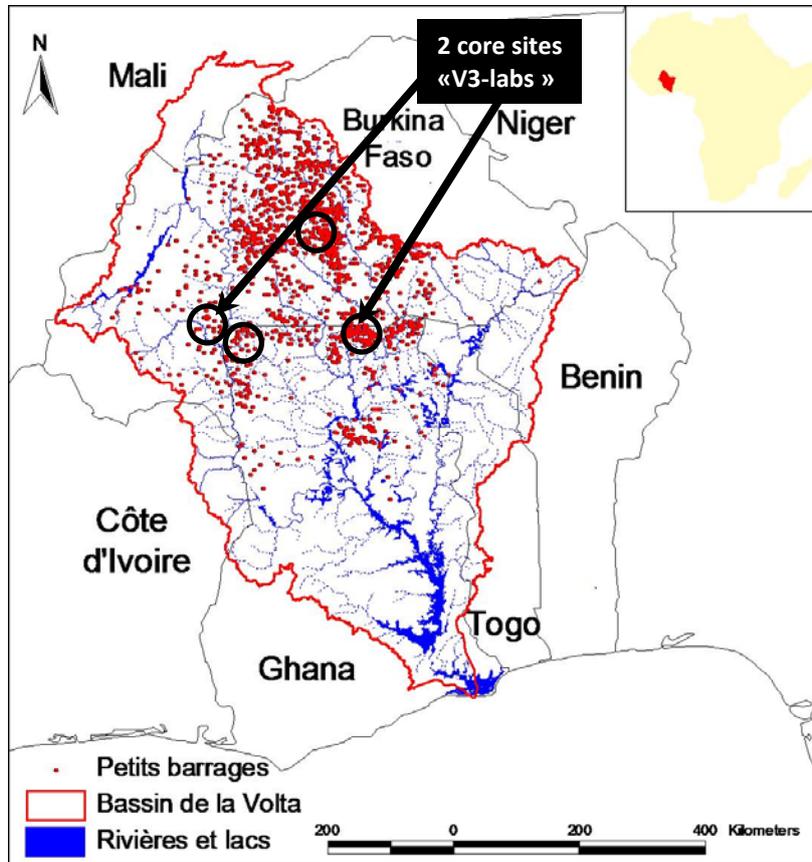


Figure 2: Project sites of project V3.

A critical issue that came out during the discussion session following this presentation was the lack of reference to local institutions that will help to sustain small reservoirs in the communities. How will V3 work with them and ensure sustainability of the research results? One way that was suggested is through the participatory modeling and also through the link to V4 in one of the sites.

V4: Sub-basin management and governance of rainwater and small reservoirs

The project was jointly presented by Dr **Katherine Snyder** and Dr **Fred Kizito**. The overall objective of the project is to “identify socially acceptable land and water governance options and identify their livelihoods, health and environmental impacts, including spatial and temporal trade-offs at the watershed level”. The approach is to support on-going IWRM policy initiatives through participatory processes based on companion modeling. The project has identified two project sites. In Burkina Faso it will support an existing platform at Bougouriba 7 (Mouhoun/Black Volta river basin) and in Ghana it will create a local platform in the “Zebilla” Area (White Volta) in Bawku West and Bawku Municipal Districts (UER).

Progress to date includes:

- Protocol for detailed case studies (at secondary sites) completed;
- Preliminary site visits in the two pilot watersheds carried out;

- Identification of experts (*éclairateurs*) to act as a ‘visionary panel’ in both countries (role: give direction and feedback on project implementation strategy);
- First meeting held with the visionary panel in Ghana;
- Continuous stakeholder engagement with and beyond project partners ongoing.

Next steps include:

- Detailed case study (in secondary sites) to be finalized (by August)
- Biophysical modeling to be finalized for the two pilot watersheds (by August 2010)
- Meeting with visionary panel to be held in Burkina Faso (in September)
- Platform to be designed for use in local stakeholder consultation (by last quarter of 2011)
- Draft Institutional and Political Analysis developed (by last quarter of 2011)

Following this presentation, there was a discussion on how to link on-going V4 work to other VBDC projects¹. It was suggested that estimating the cost of the policy processes being studied will enable making of sound recommendations.

V5: Coordination and Change

Dr **Olufunke Cofie** presented the update of this project, which has the objective to “ensure coherence amongst the VBDC Projects and align BDC research to stakeholders need, so as to contribute to poverty reduction and improved livelihood resilience in the Basin”. The key questions the project aims to respond to are whether the VBDC research implementation is relevant to the issue on the ground, whether the projects are being implemented in perspectives and whether they are delivering on agreed outputs and outcomes. She first presented the project’s theory of change as illustrated in the outcome pathway. A diagram showing the interconnectivity amongst the Volta Basin projects was shown (Figure 3) as well as the current sites for VBDC research (Figure 4).

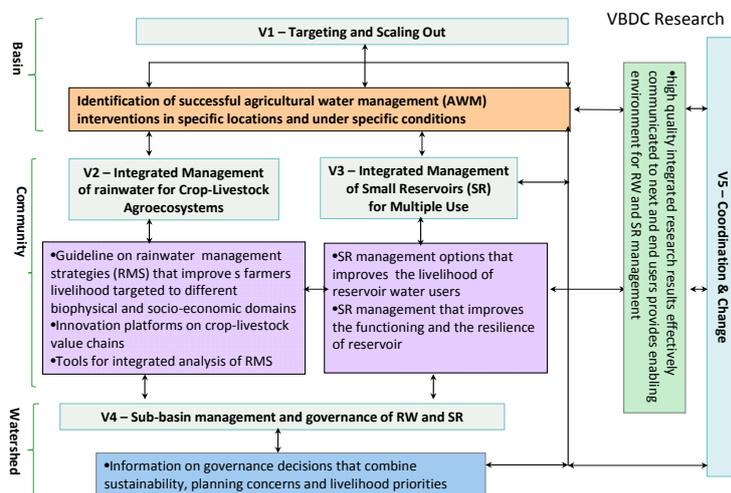


Figure 3: Relationships and key outputs of the five Volta Basin Development Challenge projects.

¹ With respect to the governance study as clarified by the V4 Project Leader, it should be noted that V4 is not addressing the governance component of technological interventions being studied in the VBDC. Project V4 focuses only on the specific case of IWRM i.e looking at the governance dynamics that shape IWRM policies and implementation at the watershed level. While some of the research by V4 (e.g policy and institutional analysis) could inform the other projects in terms of governance, V4 cannot provide information on the governance dynamics of technologies being studied in the other projects. These are to varying degrees addressed for defined technologies by respective projects. Nevertheless linking up with other projects will be useful

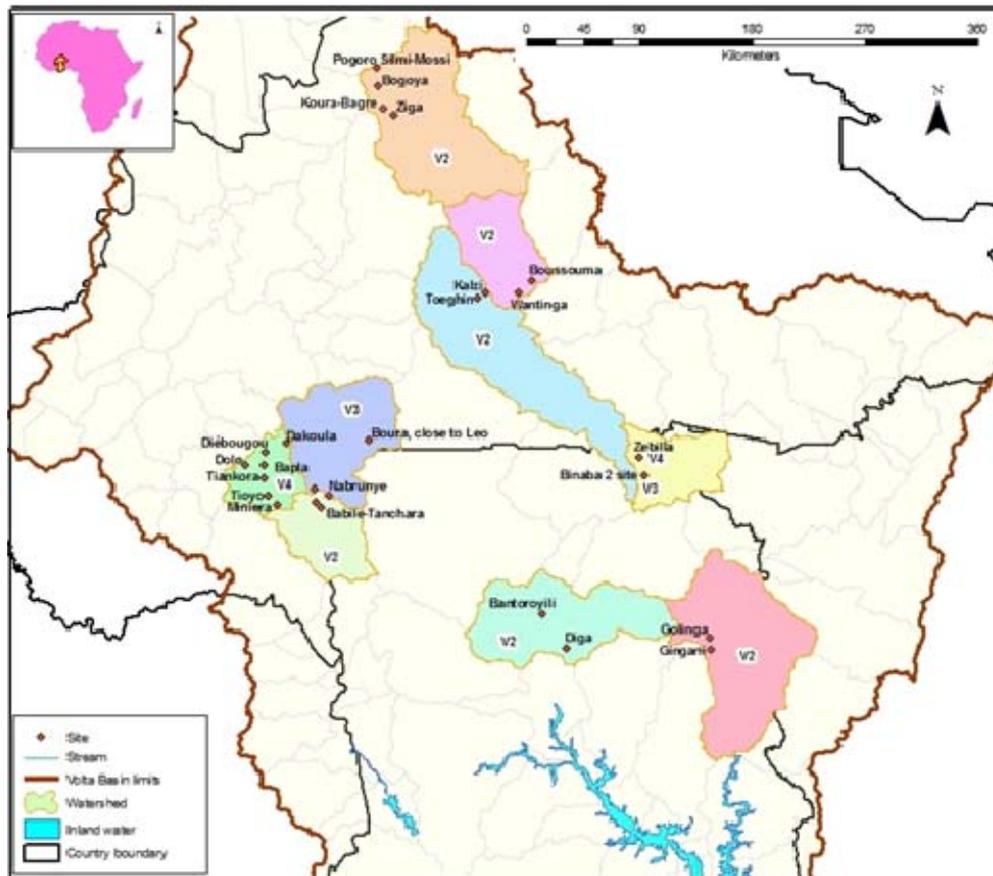


Figure 4: Core project watersheds.

Project V5 is combining different strategies to achieve the stated objectives. These include research coordination, fostering change through multi-stakeholder processes, innovation research, as well as applying the principles of adaptive management in monitoring and evaluation.

Ensuring effective communication is a core activity of V5 and steps are being taken to develop a sound communications strategy. A first step has been a communications audit and the establishment of an internal working platform (wiki). A website is under development.

Key challenges to the project are:

- A late start of V5, officially in March 2011, several months after the other projects started;
- A wrong perception of V5 roles and its contribution to VBDC by project teams;
- Tendency of research team towards conventional research process which does not promote the research-for-development approach;
- Seemingly complex CPWF concepts and processes;
- Socio-cultural and institutional differences in the basin.

Dr Coffie ended with the hope that this workshop would provide an opportunity to thrash these challenges and break barriers.

The discussion following this presentation centred around: project linkages, research at different scales, selection of sites (and opportunities for linkages), usefulness of expected outcomes for users at different levels, interactive website.

2.1.3 Session 3: Bilateral meetings

Objectives: *To obtain common agreement on project linkages; To review joint actions and to get a clear understanding on how V5 can strengthen the links.*

These meetings were organized as short sessions of bilateral meetings, sandwiched between meetings within the teams, firstly to clarify any needs from other projects, and later to update their workplans, if necessary, following the discussions (Session 4).

Discussion points for the bilateral meetings were:

- What do you need from one another to achieve your objectives?
- What are the opportunities for linkages/joint actions?
- What are the interdependencies between projects?
- How can we improve/ensure integration & linkages through communication?

The schedule was as follows:

Room 1	Room 2
V1+V2	V3+V4
V1+V3	V2+V4
V2+V3	V1+V4

2.1.4 Session 4: Team meetings

Objectives: *To capture the new information from Session 3 and ensure the planned activities will be carried out.*

Feedback was provided the next morning but is reported here for greater clarity. Annex 3 tabulates the information for better clarity.

V1

The team identified areas of crosscutting interest and/or requirements for interchange with the other Vs:

- With V2,V3,V4: share V1 stakeholder consultation output (draft protocol; criteria for success; map with cases).
- With V2, V4: a list of interventions that V1 will look at was identified, including which technologies have been identified for targeting & scaling out.
- V2,V3,V4: a characterization of sites, current & possibly historical.
- With V5: need to determine how and when to share database.
- Ongoing discussions are still needed with V2 to determine a review of lessons learned, about drivers and what works where.

V1 requested other teams to support them by doing or providing a characterisation of field tested technologies /approaches if they have a protocol, and to inform V1 on potential cases that should be added

A number of issues had been raised but parked because of lack of sufficient time:

- Historical change /different states...
- Help from V4 is required on social proxies discussions
- The term ‘Scenarios’ means different thing for different projects and there is need for more clarification across teams
- There is a certain overlap of partners to engage with

V2

The team reported that they were now more conscious of the need to communicate better with other teams and provided a list of links with other teams and joint activities that were identified.

- With V1: the review of success stories of rainwater management and small reservoirs in the Volta basin is similar to the activity “learning from the past” from V2. So to be done together. There is also the need to work on common scenarios. First to review, then we decide.
- With V3: need to enhance interactions:
 - Data and protocols sharing: a lot was done in Koubri, data is available on CD. V2 will also do economic assessment and share protocols, especially with SNV who is looking at market opportunities;
 - V3 interested in all what is agricultural intensification impact on ecosystems, so in documenting very local processes, V2 might be aware of potentially harmful practices (e.g intensive uses of agricultural inputs) that might disturb aquatic ecosystems. Such information will be shared with V3.
 - Adaptive management: in 10 months we will gather and share and adapt what need to be adapted
- With V4: V2 and V4 work on different sites at different scales but still something can be done together:
 - V4 need to get from V2 the ground information, the understanding at local context/ constraints / perception... through PAR, HH Survey reports
 - No connection from biophysical point of view but rather on policy / institutional point of view modeling aspects that are similar in V2 and V4, but aspects /scenarios.
 - V2 and V4 need to make sure they add to each other and must communicate a lot (through wiki?)
 - Near future: SNV will invite V4 people to IP as observers.

V2 reported that the discussion with other projects did not in principle change anything in their activities, but rather that they now had a better understanding and consciousness of what was going on in other projects and that they are better aware of the need to share and communicate, and that also the timing of data sharing is important.

V3

The team gave a recap of the agreement of project linkages at the time of the proposal development in April 2010 and then proceeded to give an update on issues discussed

in the bilateral meetings and they were therefore reporting on progress and any deviations identified. The key linkages the team identified are with V1, V2 and V4.

- With V1, V2, V4: Site selection. There has been agreement with V4 for one of V3s core sites (Zebilla / Upper East Ghana) and shared satellite sites have been identified with V4 (Bougouriba) and V2 (Upper West Ghana and Nariarlé).
- With V4: Management and Governance, where V3 depends on V4 for regional assessments to contextualize its local observations. This is in progress through a number of PhD projects and the agreement on common sites. Still to be managed is the synchronization of the activities internally and with V4 through a joint calendar.
- With V1: V3 depends on V1 for synoptic indications. There was agreement that V1 will provide core biophysical characterization by the end of the rainy season (available in less than 4 months) but the meeting clarified that V1 will not be in a position to provide an historical evolution of these characters. V3 provided to V1 the coordinates of core sites during the workshop and it will provide to V1 the characterization of its pilot-sites (as far as produced & validated). V3 will provide V1 with “indicators” (success-stories) which V3 is currently clarifying with V2 and will share with V1 by the end of June. The WEAP fine resolution is available from V1, possibly for the Zebilla site and will be shared with V3.
- With V2 on multiple use systems. V3 & V2 recognized that they had not interacted sufficiently thus far, in particular because of site selection issues. They will need to intensify exchange and communication, for example by exchanging their mailing lists and facilitate interactions. V3 will provide available data related to the Nariarlé Basin (as already done with V1; layers) and the teams will look into sharing websites. V3 and V2 agreed to use the Adaptive Management opportunity open by the CWPf to collaborate on specific issues / sites identified before 2012 (already scheduled).

V4

V4 was hampered by the absence of its team leader and felt that they could not commit to new activities without consulting with him. However, linkages were identified as follows:

- With V1: The team found it relatively difficult to identify linkages with V1 and where input could be provided. Nevertheless, the team offered to look at the V1 protocol for case studies when it is ready and to advise (where possible) on what are good social proxies (e.g. organization of the community, access to information etc.) that are important for adoption of agricultural water management (AWM) interventions.
- With V3: Data analysis for policy and governance. They recognized that there is need for more communication and open data sharing between the teams.
- With V2 and V3: V4 could provide input at local level, through stakeholder platforms, to these teams and feed policy, institutional and governance analysis to provide understanding of how these factors shape local context and choices. Continual communication and data sharing were also highlighted to avoid duplication;
- With V5: it was suggested that V5 could provide help by illustrating the work schedules and aim at synchronization of activities.

Capacity building was identified as a gap and the question raised in which project and how capacity building for farmers will be addressed. The suggestion was made that each project could identify ways in which they are building capacity of farmers in different ways (e.g. innovation platforms, participatory action research, etc.).

V5

Representatives of the V5 team were present at each of the bilateral meetings. The team will ensure better coordination and synchronization of activities. They will meet more regularly henceforth to follow up on the coordination task. However, they request the other Vs to provide information on who does what and when. Outputs from some projects may not be directly useable by end users; V5 will provide the support to interpret the results to make them useable at that level

Discussion

The discussion following these presentations focused on:

- The need to have a **systematic** way to **capture the research processes** resulting from the ‘consciousness’ for better links and communication that the teams reported and to systematically document changes that affect the research for development (e.g. through process documentation/analysis). Apart from the research processes, the **stakeholder engagement processes** are equally important. As many projects integrate this approach in their work, it will be good to analyze how it is affecting the research and how together, these are leading to development outcomes.
- **How to capture innovation processes** arising from the BDC, i.e. both the internal research and external engagement processes. A framework to do this was suggested with a request to V5 to support the teams in using it, and in accepting that this additional work load could lead to delays in research activities. V3 reported that they have a person on board who will ‘catch’ innovation and progress (through a journal) with their participatory modeling component.
- **Sharing data** was discussed controversially, with suggestions reaching from an open door policy within the VBDC and to provide data on request, to putting data onto a central repository. Who has access to what kind of data (raw data, meta data) was debated. The issue was raised that data generated by one partner might not be useful for another because the need for the additional use is not defined up front. A suggestion was put forward to establish a Core Group with members of each team to reflect on consistency of data formats. The issue of IPR was also raised. The possibility of each data generator keeping raw data and V5 holding meta data with information on where data on which subject might be found was raised and it seems that this was finally agreed as a workable solution.
- **Emerging topics** from this discussion were participatory modeling and learning alliances.
- **Communication** was also another issue of concern raised at this point but discussed in depth during Day 3.

2.1.5 Welcome Cocktail

The reception provided an opportunity to relax and get to know one another better.

2.2 Day 2

2.2.1 Session 1: Recap and reporting from yesterday

After the facilitator provided a quick feedback on sessions 1 and 2 from the previous day, the projects each reported back from their bilateral meetings and outcomes from the consecutive discussions (see above for details).

2.2.2 Session 2: Learning from other initiatives

Objectives: To learn from other basins and capitalize on other ongoing activities to which we can contribute.

This was organized as an Open Space session with four consecutive stations in the four corners of the room. Participants were split into four groups and spent about 20 minutes at each station before moving on to the next. The stations were:

- a. Lessons from Nile BDC (by Shirley Tarawali)
- b. Lessons from Limpopo BDC (by Amy Sullivan)
- c. Topic Working Groups (by Jenny Baron)
- d. International Forum Water & Food 3 (by Philippe Cecchi)

Nile Basin

A short presentation was given on the Nile BDC and its 5 projects:

N1: Learning from the past (which was carried out as a short consultancy, already published)

N2: Integrated rain water management strategies (led by IWMI)

N3: Targeting and scaling out (led by ILRI)

N4: Assessing/anticipating consequences (led by IWMI)

N5: Coordination (co-led by ILRI and IWMI)

There are only 3 sites, all in Ethiopia, and all projects are led by either IWMI or ILRI with the other Centre's interaction. This setup facilitates interaction among project teams and the integration of research across projects. The lessons from the NBDC can be drawn from the aspects of science, communication and partnership. The scientific research at the NBDC is beyond water but also covering market, technical, social and institutional dimensions.

1. Why did the Nile project choose to work only within one country? The initial phase of Nile work carried out projects in all the countries in the Nile Basin. However, the projects had little connection to one another and there was a feeling that they did not add up to a cohesive whole. So, for the second phase, it was decided that for better coordination of the research and for greater impact, the Nile project should focus on the Blue Nile and the Ethiopian highlands. The N4 project will then deal with the effects of RWM on the entire basin through modeling.

2. Partners: how are national partners involved? We engage with national partners at a variety of levels (from local to national) and in a variety of ways (through on-the-ground research to innovation platforms to integrating our work into national policy and development initiatives). National partners include government departments, universities and national research institutes.

3. Communication: how Nile managed communication was of considerable interest. Nile uses wiki, a blog, and yammer (internet based tools) and also tries to have monthly meetings. Those who are not able to attend as they reside outside of Ethiopia are connected to the meetings through Webex. While Nile still struggles with communication, most members are now using the tools and communication has improved. It must be noted however that people were 'forced' into it especially the use of the wiki, as they were constantly (daily) compelled to visit the wiki site if they wanted any information on the program. We also have the advantage that most of us are in one office in Ethiopia.

4. How do we interact with the communities? We interact through our baseline studies and through innovation platforms. Also, we will be starting a participatory video activity in each site in which communities will be engaged to make their own videos about their concerns and constraints with regards to water management. These videos will be used in the innovation platforms and for various communication activities throughout the project.

5. Why did we choose the sites we did? The sites in the NBDC were chosen to represent a continuum of land-use/farming systems in the Ethiopian highlands as well as different levels of land degradation.

6. How do the different NBDC projects interact? Again, as we are all more or less located in one office, interaction is pretty easy and the monthly meetings help. In addition, the NBDC project was conceived first as a whole and unified project with a common agenda and then divided up in 5 component projects. This is a bit different from the Volta basin.

Limpopo Basin

The Limpopo BDC is similar to Volta BDC in that it started roughly at the same time and is also designed around 5 similar projects. There are six sites in four countries (South Africa, Zimbabwe, Mozambique and Botswana). No one project is alone in a site. At least two projects take place in any one site, thus data sharing is not a prominent problem in this BDC, rather project teams are working together, in development of research protocols, engaging stakeholders, site visits and other outreach activities. The L2 and L3 link the LBDC to national partners and to the private sector (e.g. the fertilizer company through the innovation platform of L3). The coordination & change project L5 is building upon a well-established policy network of FANRPAN with GWP and WaterNet (and their networks) as key partners. One achievement is the contribution of high level delegates (head of SADC water division, Provincial heads of Agriculture in the four countries) into the LBDC research design, site selection and the research processes. This has not only shaped the research direction but has enhanced the commitment (in terms of human and financial) of policy makers in the on-going research.

The questions by participants centred around similar issues as for the Nile above: communication of project partners and external audiences, data and information sharing, cross-project linkages & integration, how innovation platforms work in L3 and linkages with decision makers, which the Limpopo Coordination project tries to develop as proactively as possible.

Topic Working Groups

There are 6 basins and several cross-cutting working groups on specific topics of **common interest**;

- **Resilience** led by Line Gordon and Elin Enfors
- **Global Drivers**, led by Simon Cook
- **Learning to Innovate**, led by Boru Douthwaite

A couple of new topics are under consideration: Spatial Information, Modeling and Scale (to be led by Charlotte McAllister) and possibly an Africa platform.

The essence of the TWGs is for cross basin learning fed by and into on-going research in the basins. In each basin, TWG champions have been informally identified to help facilitate the input into and benefit from the TWGs. Resilience TWG was already launched in March 2011 and researchers from VBDC have been invited to join the group. The workplan for the 'Resilience' TWG is not yet known. 'Learning to Innovate' is already operating through a virtual discussion group. 'Global Drivers' is just starting to link up with interested researchers and projects.

International Forum on Water and Food

This global conference will take place in Pretoria, South Africa, 14-17 November 2011. It is an event organized by CPWF to foster cross-learning. Abstract deadline is 15 July 2011. www.waterandfood.org/IFWF3

Key questions raised by the participants were:

1. How can we provide abstracts if Volta activities have just started?

Can include past research or emerging messages. Important that the topic is relevant to the Basin Challenge.

2. Who will attend?

There will be teams from the six basins (about 20-25 persons), leaders of the Topic Working Groups, CP Secretariat, key players at the global level and media. Expected are about 250 participants. The Team leaders will coordinate participation; each team has funds available in their budget for the participation of several members.

3. Will high-level policy makers be involved?

This is at the discretion of the Basin Leader/Coordination & Change project. There will be one Basin representative on the Policy Panel.

2.2.3 Session 3: Developing a monitoring framework

Objectives: To ensure the projects are logically organised to achieve the desired changes and we are able to monitor and document (and communicate) our achievements.

There was a brief introduction by the facilitator which was further expanded by the Basin Leader. The researchers were encouraged to revisit their 'theory of change' to ensure that the pathways initially designed are still valid having gone through the inception phase. The activity took place in the five project teams. Teams were encouraged to work in three steps and to use elements of their existing milestone plans and workplans so as to avoid to create an entirely new document:

- Step 1: Reflect on your existing outcome pathways (OLMs) and narrow down on key outcome targets and review target groups².
- Step 2: Define SMART indicators of change to enable subsequent monitoring
- Step 3: Decide how to track changes from project interventions; by whom?; when? (resource implications)

A quick round of feedback revealed the following progress:

V1

The team has had a head start on this exercise as the leader had done a similar exercise earlier and came with a draft plan..

V2

Following the instructions given and earlier comments on a draft outcome target indicator and baseline plan, they focused on two outcome pathways, learning alliances with policy makers and action research with farmers and traders and defined SMART indicators, as well as methods and time line for tracking changes.

V3

By the end of the allocated time, the team was still at Step 1 but profited from clarifications by the Basin Leader. They would therefore continue to work on the OLM and aim to translate expected changes into what can be tracked.

V4

Indicators and monitoring approaches have been developed in the OITB spreadsheet of the inception report. The team reviewed this and noted that the indicators will allow monitoring the progress made during implementation of the companion modeling approach”.

V5

The team is planning to reduce its output pathways from 4 to 3 and processed 2 during the discussion. They will continue to work on the OLMs during a meeting following the inception workshop.

Discussion

The Basin Leader reminded the participants that the outcomes of the revised outcome pathways would have to be incorporated into the pending revisions of the inception reports. There was the suggestion that each project team designates a person as a focal point for tracking changes but no conclusions were reached on this.

2.2.4 Session 4: Synthesis and recap

Objective: To summarize and share the achievements of the day.

² A general observation was that some people were reluctant to work on ‘OLM’. Project teams are at different levels of comprehension of the OLM approach. Before the workshop, three of the five projects revised their theory of change, though needed to redefine indicators of change. Judging from diverse levels of comprehension, it was easier to start up this exercise with the familiar OLM excel sheet rather than introducing a new graphic of stripped OLM which was painstakingly prepared ahead of time by Sophie Alvarez. It was decided to use the stripped OLM at a later stage on individual project basis after revision of project OLMs to further enhance the development of a mutually accepted BDC theory of change.

The facilitator provided a brief recap of the day's activities and discussions and informed the delegates of the plans for the following day. This led to a discussion about consecutive working groups (based on burning issues) for the next afternoon session. The following topics were discussed:

- Internal and external communications need further discussion following the presentations by the communications team planned for tomorrow.
- Several projects manage different kinds of innovation platforms at different scales. There is need to discuss the links and opportunities further.
- Several projects are using scenarios at different scale. A working group was suggested to look into how to harmonize the 'story lines'.
- The suggestion was made to allow for space to continue some of the bilateral meetings from the previous day. This was then expanded to include links to other basins as well.
- The day would also provide a forum for in-country discussions following the official launch.

2.3 Day 3

2.3.1 Session 1: Launch of Volta Basin Development Challenge

Objective: Launching the Volta BDC and creating awareness of its activities to a wide range of stakeholders.

The launch was chaired by Dr **Charles Biney**, Director, VBA, who expressed his pleasure that the event provided an opportunity for policy makers and researchers to share information and learn from each other. He introduced the invited guests:

Dr **Hamidou Traoré**, Representative of the Minister for Science, Research and Innovation of Burkina Faso. Dr Traoré is a biocontrol expert and also the focal point of two information sharing platforms under FARA: RAILS and DONATA.

Dr. **Abdulai Baba Salifu**, Director General of CSIR, Ghana. Dr Salifou is an entomologist and has worked on integrated pest management at Savannah Agricultural Research Institute, Tamale, Ghana. He was also involved in the first phase of the CPWF.

Mr K. A. **Tabi**, Representative of the Minister for Environment, Science and Technology, Ghana. Mr Tabi is the Director for Research Statistics and Information Management at the Ministry.

Dr **Koanda Sabné**, Representative of the Minister of Agriculture and Water Resources in Burkina Faso. Dr **Koanda** is an engineer specialized in Fluid Mechanics and Hydraulics. He is the head of several water management authorities and also teaches Mechanics at university.

Mr **Jonas E. Fiangor**, Representative of the Minister of Food and Agriculture, Ghana. Mr Fiangor is an Agric-Economist and Head of the Budget Office.



Following the introduction, the Basin Leader Dr **Olufunke Coffie** gave a brief introduction to the Challenge Program Water and Food and explained that it had been operating in its First Phase 2003-2008 in ten basins with a large number of projects. After evaluating the outcomes from this approach and the research results, Phase 2 was designed building upon the lessons from the previous work. Phase 2 has fewer projects, operates in only six basins and aims at better integration across basins and with other initiatives. It has an integrated strategy, combining policy, environment, institutions and technologies. Moving on Dr Coffie provided an overview of the Volta Basin, straddling the countries of Ghana, Burkina Faso, Mali, Cote d'Ivoire, Togo, Benin, and highlighted some of its pertinent challenges which center around inefficient rainwater and small reservoir management. Therefore the goal of the Volta Basin Development Challenge is to "Improve rainwater and small reservoir management in Burkina Faso and Northern Ghana to contribute to poverty reduction and improved livelihoods resilience while taking account of downstream and upstream water users including ecosystem services." The presentation concluded in the hope that the successful Volta Basin Development Challenge would have achieved the development of a decision support system and recommendations for appropriate management of water resources in the basin.

Dr Salifou then addressed the participants, stating that CSIR is very interested in the upcoming research program, having been actively involved in its Phase 1. He said that CSIR, and the DG personally, would do their best to support the activities and that he was looking forward to further exchange with colleagues in Burkina Faso, as Ghana could learn a lot from its neighbours on water harvesting and water management.

Dr Koanda in his address mentioned the importance of a strong monitoring and evaluation system and information sharing. He stressed the importance of good communication amongst the team and assured the program of the support of the Ministry of Agriculture and Water Resources.

Mr Fiangor, speaking on behalf of the Minister of Food and Agriculture, Ghana, congratulated everyone on their work so far. He encouraged the researchers to carry

out work that is really relevant to the end users, farmers. He also encouraged the researchers to develop constant dialogue with policy makers so that there will be joint agreement on the research direction. He ended by wishing the participants and delegates a fruitful launch of the programme.

Dr Traoré spoke on behalf of the Minister for Science, Research and Innovation. He stated the big issues still concerning Burkina Faso's agriculture but mentioned that there are also big opportunities for development. Some recent accomplishments included assessments of water needs for staple crops millet, sorghum and maize, redistribution of water downstream and spatial characterization of water use in Burkina Faso. INERA is the organization in Burkina Faso responsible for agricultural research, and it was well represented in the Volta BDC, including several scientists who had been active in CPWF's Phase 1. Dr Traoré expressed the Minister's gratitude to donors and funders of the research and assured the delegates that the Ministry will provide the necessary support to the projects and to INERA. He wished all success to the projects in their aim to contribute to the improvement of the livelihoods of people in the Volta Basin.

Finally, Mr Tabi spoke on behalf of the Minister for Environment, Science and Technology, Ghana. He stated that the research provides an opportunity for researchers in Ghana and the basin neighbours to collaborate on important issues and forge new partnerships. The research and CPWF's agenda were in line with the government's development strategies to increase agricultural productivity and to reach food security in an environmentally sustainable way. Therefore the launch of the Volta BDC came at exactly the right time. He assured the delegates of the Minister's wish to provide all necessary support that this research will make an impact on the improvement of the lives of our people.

Having said that, Mr Tabi officially declared the Volta Basin Development Challenge launched.

2.3.2 Session 2: National Consultative Forum

Objective: To discuss strategic issues about opportunities and challenges in the Volta BDC countries and at regional level.

Participants broke into three groups, discussing opportunities and prevailing gaps for Burkina Faso, Ghana and the regional level.

Burkina Faso

The participants from Burkina Faso compared the Poverty Reduction Development Plan (PRDP) with the strategy of VBDC and found that there is a core compliance in: poverty reduction, improved resilience and sustainable development. They then compared the Specific Objectives with the VBDC strategy and listed which projects aligned to these and at the same time identified a few gaps:

Specific Objectives from PRDP	Contribution by VBDC	Identified gaps
Water Management	V3, V2, V4, V1	drinking water supply
Soil Fertility	V3, V2, V1	

Improved animal husbandry and fisheries	V2, V3	
Improvement of the environment and production	V2	
Development of priority sectors	V2, V3	
Development of markets and market information systems	V2	
Stakeholder coordination	V4, V1, V3, V2, V5	
Income generating activities	V2, V3	
		Bushmeat resources
		Domestic and alternative energy
Sustainable resource management	all Vs	
Empowerment of rural people as development actors	V3, V2	

The group listed that the activities of the Volta BDC added value to ongoing initiatives by providing and contributing to platforms for information exchange and data sharing with other basins and also with additional partners within and beyond the Volta Basin, such as the ABN (Niger Basin Authority). VBDC is also providing important support to the capacity strengthening of partners. Therefore, Burkina Faso is interested in contributing to the VBDC as good synergies were identified.

Ghana

The Ghana group listed the key development challenges for the country and agreed that rainwater harvesting and management of small reservoirs were key issues, thus there was a clear link to the VBDC. They identified as development goals: poverty reduction, food security and wealth creation. The VBDC provided opportunities in developing a decision support that could be translated to reach farmers, for example on topics such as:

- Effective rain water harvesting,
- Good conservation strategies,
- Capacity building for the people in the grass root.

The hope was expressed that with the help of V5, the information could be ‘translated’ to influence policy by informing policy makers and especially the National Planning Commission of Ghana, which was seen as a key partner agency. The VBDC provided a good opportunity for Learning Alliances.

Links between large and small reservoirs were identified as gaps that should be addressed as well as testing management systems under different climate scenarios.

Some partners that should be included closer into the activities were listed:

- NGOs
- Northern Rural Growth Programme
- Savanna Accelerated Development Authority (SADA)
- National Development Planning Commission which operates in a decentralized mode through satellites across the country. It would be useful if V5 could send policy briefs to NDPC regularly.
- AGRA and WASCAL programs
- Coraf

Lastly, value could be added to ongoing initiatives by networking and harmonizing activities coupled with periodic auditing.

Region

The regional group reported back by stating that some broad issues were now receiving greater attention, for example Climate Change, thus it was necessary to continuously pay attention to opportunities. The group listed a large number of regional players which could play roles in VBDC, such as:

- ECOWAS – this was a particularly important group as they also had increasing visibility in the region
- NEPAD/CAADP
- FARA and its subregional organization Coraf (focusing on climate change, food security and the SSA Challenge Program)
- IUCN/PAGEV
- CILSS
- UEMOA
- AGRA
- AfDB (with its focus on energy, agriculture, water)
- ROPPA
- IFAD in particular but more important the
- Donors group in Burkina and in Ghana
- Islamic Development Bank
- WASCAL

An audit of ongoing initiatives and opportunities was suggested as a priority activity for V5.

It was important to link to the private sector and technical sectors such as the energy sector.

The group also identified an important external driver for change in the increasing foreign direct investment in land. Such private land deals are often made without a concern on the water resources and can have negative implications to water access by small-holders but also to the rice, cocoa and cassava sectors. Local private sector act as intermediaries. It was highlighted that CPWF research should be mindful of these developments and contribute research results that will inform decisions on these issues. Such large land use will have implications for water access and availability by small holders. We need to understand what the thresholds and tradeoffs are for such large land leasing for foreign investors. Some of the problems are compounded by lack of multi-sectoral planning so perhaps VBDC or VBA platforms can constitute

avenues through which some of these issues can be addressed. It was discussed that the VBDC need to be up to date with:

- ongoing or new regional initiatives;
- what donors want and interested in now;
- other water competitors that can affect water availability and access;
- private sector involvement in the value chain and possible contribution to microcredit;
- ecological services at different scale, which are important, not only the productive use of water which has dominated the VBDC so far.

2.3.3 Session 3: Support mechanisms for the VBDC research

Objective: To achieve a common understanding of how to communicate within the team and with other stakeholders and to achieve common understanding of other key issues: data sharing, scenarios at different levels and opportunities and needs for intra- and inter-basin links.

Communications presentations

The session started with a couple of presentations about the CPWF Communications Strategy and its direct implication on the Volta BDC and on the communications audit recently carried out by V5.

Mr **Michael Victor, CPWF Communications Coordinator**, highlighted the differences between **conventional communications** (to inform, a more passive way of passing information, one-way, publications in journals and usually at the end of the research process) and **R4D communication** (aiming to change perceptions, a continuous and iterative two-way dialogue, from the start of the research processes). He pointed out the different roles of communication at program, basin and project levels and that there were different target groups at different levels.

Some **guidelines** were presented that CPWF is suggesting to the BDCs:

- Each basin to have its own website (or can be part of global) – projects should not have own website
- All CPWF to use CPWF repository for outputs (<http://results.waterandfood.org>) & knowledge tree for internal documents
- Each basin to set up google calendar
- Social media (twitter, facebook, etc.) based on needs of basins
- Consistent use of identity and colors at basin and projects

CPWF was planning to develop a **resource set** for all basins, consisting of

- Outcome Stories
- Briefing notes
- Posters
- A source book

Michael then presented the new CPWF logo which now clearly lists the six basins in which the program works, and the suggested basin logos. The proposed Volta logo will depict a hippo on ochre background.

The second presentation by Mr **Mahamoudou Sawadogo** and Mr **Sidi Coulibaly** focused on the communications audit. The objectives of this audit were to make sure that communication objectives and tools to be used in projects are linked to project objectives; to be able to develop a basin-wide communication strategy and to allow for an exchange on operational issues related to the Volta Basin communications strategy with project teams. The audit was based on the communication plans as presented in the five project documents. The key outputs of the audit related to five areas:

- Target groups, which are in 6 key clusters - farmers and communities; extension agents; researchers and academics; policy makers; donors and investors; NGOs;
- Communication goals, which included data sharing, dissemination of findings, awareness raising on water management issues;
- Communication tools: needed are various forms such as website, wiki, email, central database, audiovisual and printed materials;
- Plans to share project outputs/printed materials and publications include multi-stakeholder platforms, networking, participatory and action research are the approaches favoured for carrying out outreach activities. Output material would be made freely available at various events and opportunities (field days, forum, TWG, etc.);
- Resources – only a few teams have made adequate human and financial resources available for the communication they plan; the range was from 7-18% of budget.

A few issues were then highlighted to be discussed in the following working groups. The next steps following from this audit now include;

- Developing strategy and operational plan – June
- Present draft strategy and plan – early July
- Getting website for external in French & English (by mid-July)
- Improving and strengthening internal wiki/google site up (End of June)
- Training of project teams on use of wiki/website/CPWF web tools (end of July)
- Developing basin story for IFWF3 (Start in August)

Participants then regrouped into four working groups:

- Communication and data sharing
- Innovation platforms
- Intra- and inter-basin linkages
- Scenarios and story lines

Initially two distinct groups were planned for internal and external communication but these were then combined.

Internal & External Communications/Data sharing -- Chair: Mahamoudou Sawadogo

Objective: To identify the information needs, identify key target groups and reach agreement on common communication tools and their use.

The group developed a matrix depicting a communications strategy:

Target groups	Goal	Internal/External	What info to share?(communication needs)	How	Communication tools to be used
Farmers and communities		External	Production practices Project outputs	Project presentation Participation in mid-term workshops Forums Field visits	Radio, TV, mobile phone, village and community meetings, leaflets, theater fairs,
Researchers and academics		Internal	Protocols Research outputs Reports(Trip reports, mission) Email database	The web Meetings	Website Wiki Social media (skype, yammer, email)
Policy makers		External	Project presentation Summarised project outcomes Progress reports	Workshop Briefing notes TV Meetings	Policy briefs, mobile phone
Donors and investors		External	Progress reports; Technical and financial reports		
NGOs					
Extension agents					

Target groups	Goal	Collected inside/collected from outside	What data to share	How	Storing and dissemination tools
Researchers and academics		Collected inside	Biophysical and socio-economic data; Protocols		

Innovation Platforms -- Chair: Hubert Some

Objective: To map the different platforms in the five Volta projects, identify the differences/commonalities and opportunities for collaboration.

The group presented an inventory of existing innovation platforms across the projects:

V1	<ul style="list-style-type: none"> Stakeholder Consultations
V2	<ul style="list-style-type: none"> Community Level Platform for Value Chain (Farmers, Input distributors)

	etc); <ul style="list-style-type: none"> • Learning Alliance at the Regional/District Level to enhance stakeholder capacity
V3	<ul style="list-style-type: none"> • Participatory Model at the Regional/District Level; • Water User Association at the Local Level
V4	<ul style="list-style-type: none"> • Water User association at the Local Level • District Level Stakeholder Consultation – multi-stakeholder platform • Regional Stakeholder Consultation • Visionary Team (National/Institutional)
V5	<ul style="list-style-type: none"> • National and Regional Stakeholder Consultation

Differences were identified at the scale, objective and Strategy (Local, Regional, National).

Commonalities were the Local/Community Level Platforms (which are common to V1, V2, V3, V4).

Opportunities include to plan to engage common platforms at the same time.

Intra- and inter-basin linkages -- Chair: Charles Biney

Objective: *To follow up on the bilateral meetings; to identify opportunities to link with other basins and suggest mechanisms for exchange and learning.*

Intra

The group noted that the mechanics for achieving linkages were already available and included CPWF Yammer and project wiki. It however agreed that, although V5 started later than the other V projects, it was necessary to continue to develop and refine a common vision amongst the projects and suggested that there should be an outcome pathway at Basin Level. The group also noted that there has been continuous interaction between the various projects since the beginning of the Volta BDC, notably through speed dating. As a follow up, the highlights identified during such interaction should put into practice by the various projects as part implementation activities on the field.

Inter

The group recognized that whilst the Volta BDC is already linking to other basins (viz. the participation of Limpopo and Nile basin representatives) there is much more that could be done. There is the need to sign up to other initiatives such as Topic Working Groups, the proposed African Platform, African Network of Basin Organizations and International Network of Basin Organizations. It would also be useful to develop or strengthen exchanges across basins with respect to the common projects in the BDCs.

Scenarios/story lines -- Chair: Mark van Wijk

Objective: *To take stock of scenarios being developed in different projects and align them across different levels.*

The group started with a discussion to define the terminology:

Storyline: general description of developments (e.g. economic development, environmental attitude; think here of the 4 IPCC storylines)

Scenario: scale dependent technical implementation of the storyline (e.g. what does the storyline mean in practice for farmers, for water management etc.)

Storylines should be consistent across Vs: they give us a framework within which the V's can formulate their specific scenario's and associated questions/interventions. It was pointed out that it is important to realize that these scenarios are not only important as model input, but also form key information into the

- learning alliances
- innovation platforms
- stakeholder platforms
- discussion groups

It was suggested to link up to the global drivers TWG in the development of story lines. Questions remain whether the TWG has a list of stories, and how these can translate into regionally relevant drivers.

Agreement across the Volta projects is required on factors like:

- economic development
- land use development
- demographics
- climate change

The group agreed that V5 will take the lead in developing story lines, because V5 has the overview and interacts with high level officials (who probably have important visions on the storylines). This could also be part of activity 'learning from the past' that is taking place through V2. V5 will allocate a person for 1-3 months to work on this story line development.

There is an urgent need for these storylines so that projects are aligned. An overview of pending activities reliant on story lines was provided:

- V2: will set up IP's within a month and start planning on-farm experiments.
- V3: within a month is planning an important workshop with all kinds of different stakeholders.
- V4: will have a stakeholder platform in September 2010.

2.3.4 Session 4: Closing and workshop evaluation

Objective: To recap of the last 3 days work and to identify any unfinished business and to agree on a plan for dealing with this. To evaluate the workshop.

The facilitator gave a brief recap of all the outcomes from the day's sessions and then the Basin Leader wrapped up the workshop by providing a list of next steps, including:

- Workshop report circulated by 15 June;
- revised inception reports submitted by 7 June;
- Abstract for IFWF3 submitted by 15 July but need to be submitted to V5 earlier (by 20 June);
- Basin-wide field tour – suggested for 2012 as most have used up their travel budget for 2011;
- IFWF3, in South Africa 15-17 November 2011. Delegates to be determined;
- Communications system in place by end of June;
- Website operational by July.

It is important that all basin team members have access to the VBDC wiki site in order to stay connected. A sheet was put up for everyone to put their names and emails down in case they were not yet connected to the site.

For end of workshop evaluation, participants were given green and red cards and



asked to provide a few words on each on issues they particularly liked and particularly disliked, respectively.

I liked ... 😊	I disliked... ☹️
<ul style="list-style-type: none"> • facilitation was good • logistical organization • respect of timing • content of discussions • inter 'V' meetings • presentations by leaders • group discussions were good but must be preceded by proper understanding • meeting place • issues are now clearer • good understanding of linkages between 'Vs' • OLM completed • facilitation • issues discussed were relevant • presence of policy makers • projects overviews • experience sharing • better interaction between projects • understood better project linkages 	<ul style="list-style-type: none"> • programme too long; no place for relaxing • time devoted to exercises (too short) • internet not working in the room • accommodation • internet access • workshop facility • workshop document not available in time • schedule too tight • some activities not productive • should have focused on having same understanding on issues • improve facilitation • not enough time for group discussions/work • participants have not got working documents before the meeting • workshop too loaded • participants were overstretched • accommodation was not correct, hotel

<ul style="list-style-type: none"> • facilitation • organization • achievements • translation has been excellent • experience from Nile and Limpopo basins • group discussions • well organized • important event to get to know people • discussions and general approach • liked hearing about all the projects' different objectives/progress • a good atmosphere during workshop • well organized • high participation • free of intimidation (enjoyed it) • timeliness was ok • good meals • good & productive discussions • enhanced collaboration among 'V' projects • productive & good facilitation • great food • learning more about V-projects • facilitation • interaction with other projects • participatory and interactive • the organization of the inception workshop has been fantastic • bilateral meetings were excellent • conscious effort to integrated teams very good • facilitation • speak concrete • good interactions • identification of shared issues • translation 	<ul style="list-style-type: none"> far from downtown • still miss a detailed action plan • lack of activities in the evening, isolated hotel • science was lacking • not enough time for internal project meetings • CPWF is always requesting more! • not enough time for discussion • the days were too long – law of diminishing return sets in • loaded • link between Vs must be worked on beyond this workshop • nothing bad was identified except the punctuality of participants • no excursion • outcome logic models/and indicators exercise was very hard to follow • need of integrating actual science into project activities • hotel facilities • internet (lack of) • did not like spending so long on OLMs • the hotel was away from town center • would have liked more 'content' discussions: which interventions, which scenarios, which indicators • the smell in the bed room • could use more time within the project • programme too full
--	---

Annex 1: Revised Agenda

Time	Session Aim & expected output	How	Who
Day 1: Updates on project, assessment of the science and progress, highlighting linkages and merging issues/topics			
08.30 -9.00	Arrival and Registration		
09.00-10.30	Session 1: setting the scene, Participants should know each other and have better understanding of the CPWF approach	<ol style="list-style-type: none"> 1. Welcome by V5 lead institution, VBA 2. Introduction of the facilitator and the agenda for the week 3. Introduction of participants 4. Presentation of the CPWF phase II approach and program expectations for VBDC 	<ol style="list-style-type: none"> 1. VBA head, Dr Charles Biney 2. Basin Leader, Dr Funke Cofie 3. Facilitator, Dr Hannah Jaenicke 4. CPWF Research Director, Dr Larry Harrington
10.30-11.00	Coffee		
11.00-13.00	Session 2: Project Update Common understanding and clarity of each project across the VBDC (and its progress/changes, etc) and how, together, they form one program	Updates on V1, V2, V3, V4 and V5 Power point presentation focusing on the science, process, sites, preliminary results, emerging issues, challenges, opportunities, linkages with other projects) followed by Q & A	PLs (Dr Jennie Baron, Dr Augustine Ayantunde, Dr Philippe Cecchi, Dr Katherine Snyder/Dr Fred Kizito, Dr Funke Cofie)
13.00-14.00	Lunch		
14.00-16.30 Break at 15.30	Session 3: project linkages Common agreement on project linkages. Updated list of linkages/joint actions. Clear understanding of how V5 can strengthen such linkages	Project bilateral meetings structured around linkages and integration on questions such as: <ol style="list-style-type: none"> a. What do you need from one another b. What are the opportunities for linkages / joint actions c. What are the interdependencies d. How can we improve/ensure integration/linkages through communication 	Project teams

		2 groups of paired project teams meet in parallel in 3 rounds of discussion: Round 1: V1-V2 and V3-V4; Round 2: V1-V3 and V2-V4 Round 3: V2-V3 and V1-V4 Each team to have 2 people from V5	
16.30-18.00	Session 4. Making sense of the project updates and linkages	In project teams to discuss emerging issues, opportunities for integration. What does it mean for each project- what changes to the workplan/milestone plans? Use the workbook to enable this discussion	working groups in project teams
Welcome Cocktail			
Day 2: Consolidating integration of VBDC Research			
08.30-09.30	Session 1: Recap of the previous day	Highlights of previous day's discussion and opportunities for integration. Will include important feedback from the project team meetings	BL + facilitator
09.30-12.00 Break at 10.15	Session 2: Drawing lessons from other CPWF basins and capitalizing on VBDC research (through TWGs, IFWF3)	Presentations on: 1. Ensuring research integration: lessons from the Nile BDC 2. Lessons from the Limpopo BDC. 3. TWGs 4. IFWF3	1. Shirley Tarawali 2. Amy Sullivan 3. Jennie Baron 4. Philippe Cecchi
12.00 – 13.00	Session 3: How to achieve integration and quality research for development in VBDC research	Revision of projects' theory of change. How do you get to the expected outcomes – revisit the outcome pathway, prioritize and refine. Step 1: Reflect on your existing outcome pathways (OLMs) and narrow down on key outcome targets and review target groups Step 2: Define SMART indicators to enable monitoring Step 3: Decide how to track changes from project interventions; by whom?; when? (resource implications)	in project teams
13.00-14.00	Lunch		
14.00 – 16.00	Session 3 contd	Working in project teams to revise OLM, fine-tune outcome indicators etc	in project teams
16.00-17.00	Session 4: Synthesis of the day		Facilitator

Day 3: Morning – the launch and stakeholder consultative meeting			
8.30-10.30	Session 1: Awareness created and input received from stakeholders	<ol style="list-style-type: none"> 1. Introduction of members of the high table and other participants 2. Welcome statement by Dr. Charles Biney 3. Introduction to the CPWF global/basin. Keynote statements by Government Officials to give their perspectives 4. The Launch. Key stakeholders include representatives of government agencies in Ghana and Burkina Faso, key related initiatives 	<ol style="list-style-type: none"> 1. Dr Charles Biney 2. Dr Charles Biney 3. BL 4. Key government officials
10.30-11.00	coffee		
11.00 - 1200	Session 2	<p>Consultative session. Responding to questions such as: What opportunities does the VBDC research present? How can we get there, add value</p> <p>Summarized highlights of inputs</p>	Working group Chairs: Dr Koanda, Prof Odai, Dr Biney
1200-1330	Lunch		
Day 3: Afternoon: Other support mechanisms for the VBDC research			
1330-1530	Session 3: Communicating VBDC research	<ol style="list-style-type: none"> 1. presentation of the CPWF Communications Strategy 2. presentation on VBDC communication audit 3. Working group session on ‘burning issues’: (a) Communication and data sharing, (b) Innovation Platforms, (c) Scenarios, (d) Intra- and inter-Basin linkages 	<ol style="list-style-type: none"> 1. Michael Victor 2. Mahamoudou Sawadogo and Sidi Coulibaly 3. Working group Chairs: (a) Mahamoudou Sawadogo, (b) Hubert Some, (c) Mark van Wijk, (d) Charles Biney
1530-1600	Session 4. Next steps: identifying unfinished business and workshop evaluation and closure		BL, Facilitator
Day 4: Other project meetings: individual projects; finalizing M&E plans; V5 team meeting			

Annex 2: List of participants.

NO	TITLE	NAME	ORGANIZATION	POSTAL ADDRESS	CONTACT NUMBER	EMAIL ADDRESS
Project V1, Targeting and Scaling Out						
1	Dr	Jennie Barron	Stockholm Environment Institute(SEI)	University of York, York UK	+447792566691	jennie.barron@sei.se
2	Dr	Mathias Fosu	Savannah Agricultural Research Institute(SARI), Ghana	Po Box 52, Tamale	+233244749893	mathiasfosu@yahoo.co.uk
3	Mr	Emmanuel Amoakwah	Savannah Agricultural Research Institute(SARI), Ghana	Po Box 52, Tamale	0247023578	emmanuelkwah@yahoo.co.uk
4	Dr	Seraphine Kabore	Institut de l'Environnement et de Recherches Agricoles(INERA), Burkina Faso	04 BP 8645 Ouaga 04	+22670267840	phinekabore@yahoo.fr
5	Prof	Samuel Nii Odai	Kwame Nkrumah University of Science and Technology(KNUST), Ghana	Civil Eng. Dept, KNUST, Kumasi	+233244797711	snodai@yahoo.com
Project V2, Integrated management of rainwater for crop-livestock agroecosystems						
6	Dr	Augustine Ayantunde	International Livestock Research Institute(ILRI)	BP 320 Bamako, Mali	+22320223375	a.ayantunde@cgiar.org
7	Dr	Mark van Wijk	Wageningen University and Research Centre(WUR)	Wageingen, Netherlands	+31317486102	mark.vanwijk@wur.nl
8	Dr	Shirley Tarawali	International Livestock Research Institute (ILRI)	Po Box 5689 Addis	+251116572221	s.tarawali@cgiar.org
9	Dr	Karbo Naaminong	Animal Research Institute(ARI), Ghana	Box AH 20 Achimotu, Accra	+0208129300	minongkordam@yahoo.com
10	Dr	Korodjouma Ouattara	Institut de l'Environnement et de Recherches Agricoles(INERA), Burkina Faso	BP 10 Koudougou	+22670285094	Korodjouma.ouattara@hotmail.com
11	Dr	Sabine Douxchamps	International Water Management Institute/ International Livestock Research Institute(IWMI/ILRI)	01 BP 594 Ouaga 01	+22675921622	s.douxchamps@cgiar.org
12	Mr	Hubert Some	Netherlands Development Organisation (SNV)	01 BP 625 Ouaga 01	+22670264981	hsome@snvworld.org

NO	TITLE	NAME	ORGANIZATION	POSTAL ADDRESS	CONTACT NUMBER	EMAIL ADDRESS
Project V3, Integrated management of small reservoirs for multiple uses						
13	Dr	Philippe Cecchi	Institut de Recherche pour le Développement, Unité Mixte de Recherche, Gestion de l'Eau, Acteurs, Usages (IRD UMR G-Eau), France	361 Rue Bréton 34196 Montpellier, France	+33467166464	phillipe.cecchi@ird.fr
14	Mr	Frank Annor	Kwame Nkrumah University of Science and Technology(KNUST), Ghana	Civil Eng. Dept KNUST, Kumasi	+233265835335	annorfrank@yahoo.co.uk
15	Dr	Harouna Karambiri	Institut International d'Ingénierie de l'Eau et de l'Environnement (2iE), Burkina Faso	01 BP 594 Ouaga 01	+22650492800	Harouna.karambiri@2ie.org
16	Dr	Karim Traore	Institut de l'Environnement et de Recherches Agricoles(INERA)	01 BP 910 Bobo 01	+22670384552	karim_traore@hotmail.com
17	Dr	Akwasi Abunyewa	Council for Scientific and Industrial Research- Savannah Agricultural Research Institute (CSIR-SARI)	Box 52, Tamale	0245930040	akwasi_abunyewa@yahoo.com
18	Dr	Wilson Dogbe	Council for Scientific and Industrial Research- Savannah Agricultural Research Institute (CSIR-SARI)	Box 52, Tamale	0244603414	wilsondodge@yahoo.com
19	Dr	Joseph Ofori	Council for Scientific and Industrial Research- Savannah Agricultural Research Institute (CSIR-SARI)	Box 38 Achimotu, Accra	0208166162	oforikd@yahoo.com
Project V4, Sub-basin management and governance of rainwater and small reservoirs						
20	Dr	Fred Kizito	International Water Management Institute (IWMI)	PMB 112 CT Accra	+233549579655	f.kizito@cgiar.org
21	Mr	Pierre Zoungrana	Secrétariat Permanent du Plan d'Action pour la Gestion Intégrée des Ressources en Eau (SP/PAGIRE)	BP 7025 Ouaga	+22670267111	zoungranapierre@yahoo.fr
22	Mr	Aaron Aduna	Water Resource Commission (WRC)	Box 489 Accra	0242074137	aaronaduna@yahoo.com
23	Dr	Katherine Snyder	International Water Management Institute (IWMI)	Po Box 5689, Addis		k.snyder@cgiar.org

NO	TITLE	NAME	ORGANIZATION	POSTAL ADDRESS	CONTACT NUMBER	EMAIL ADDRESS
24	Dr	Emmanuel Obuobie	Council for Scientific and Industrial Research- World Resources Institute (CSIR-WRI)	Po Box AH38 Achimotu, Accra	+223241441038	obuobie@yahoo.com
Project V5, Coordination and change						
25	Dr	Olufunke Cofie	Challenge Program on Water and Food/Volta Basin Authority (CPWF/VBA)	10 BP 13621 Ouaga 10	+22674101790	o.cofie@cgiar.org
26	Mr	Mahamoudou Sawadogo	Volta Basin Authority (VBA)	10 BP 13621 Ouaga 10	+22676749013	sa_mahdou@yahoo.fr
27	Dr	Winston Andah	Volta Basin Authority (VBA)	PMB CT.112 Accra	0208155948	andah.w@gmail.com
28	Mr	Sidi Coulibaly	Global Water Partnership (GWP)	03 BP 7112 Ouaga 03	+22670234104	sidicoul@gmail.com
29	Mr	Dam Mogbante	Global Water Partnership (GWP)	03 BP 7112 Ouaga 03	+22670217100	dammogbante@gmail.com
30	Dr	Charles Biney	Volta Basin Authority (VBA)	10 BP 13621 Ouaga 10	+22650376067	cbiney@gmail.com
Invited Stakeholders						
31	Dr	Koanda Sabné	Technical Adviser to the Minister, Ministry of Agriculture, Water and Fishery Resources, Burkina Faso	01 BP 7025 Ouaga 01	+22670335083	koandasabne@gmail.com
32	Dr	Hamidou Traoré	Ministry of Scientific Research and Innovation / Institut de l'Environnement et de Recherches Agricoles (MINRESI/INERA)	04 BP 8645 Ouaga 04	+22670258060	hamitraore8@yahoo.com
33	Mr	Congo Moustapha	Head, L'Agence de l'Eau du Mouhoun	01 BP 39 Bobo	+22670397008	congombfa@yahoo.fr
34	Mr	Jonas Fiangor	Director, Ministry of Food and Agriculture(MoFA), Ghana	P.O. Box 745, Accra	0242815281 0267066177	
35	MR	Kobena Boateng	Director, Ghana Irrigation Development Authority (GIDA)	P. O. Box M 154, Accra	0265516721	
36	Mr	K.A. Tabi	Director, Min of Environment, Science and Technology	P.O. Box M 232, Accra	+233 (0) 302-662 626	kwasitabi@yahoo.com
37	Ms	Esi Biney	Water Resource Commission(WRC) Ghana	CT 5630 Cantonments, Accra		zbiney@yahoo.com
38	Ms.	Hima Paintsil	Water Resource Commission(WRC)	CT 5630 Cantonments, Accra	+233 244227972	himapaintsil@yahoo.com

NO	TITLE	NAME	ORGANIZATION	POSTAL ADDRESS	CONTACT NUMBER	EMAIL ADDRESS
39	Dr.	Abdulai Baba Salifu	Director General, Council for Scientific and Industrial Research(CSIR)			
40	Dr	Timothy Williams	Director for Africa, International Water Management Institute (IWMI), Ghana	PMB CT 112 Cantonments, Accra	+233 (0) 302784753	t.o.williams@cgiar.org
41	Dr	Claudious Chikozho	Researcher, International Water Management Institute (IWMI), Ghana	PMB CT 112 Cantonments, Accra	+233242885094	c.chikozho@cgiar.org
42	Dr	Alain L. Ange	Technical Advisor, Partnerships and Strategic Alliances, Forum for Agric Research in Africa (FARA)	PMB CT 173 Cantonments, Accra	+233 21 772823/779421	aange@fara-africa.org
43	Dr	Benjamin Lamptey	Modeller, West African Science Service Center on Climate Change and Adapted Land Use (WASCAL), Ghana	WASCAL Accra	0273135062	blamptey@gmail.com
44	Dr	Kehinde Makinke	Alliance for a Green Revolution in Africa (AGRA)	PMB KIA 114, Accra	0244339334	kmakinde@agraalliance.org
45	Mr	Christopher Conduah	National Development Planning Commission(NDPC)	P. O. Box CT 633 Cantonments ACCRA	0246108875	ckconduaho@gmail.com
CPWF Global						
46	Dr	Larry Harrington	Research Director, Challenge Program Management Team (CPMT)	IWMI Sri Lanka	16072802666	l.harrington@cgiar.org
47	Mr	Michael Victor	Communications Coordinator, Challenge Program on Water and Food	P.O. Box 4199 Lao P.D.R.		m.victor@cgiar.org
48	Dr	Hannah Jaenicke	Workshop Facilitator	Burghof 26, 53501 Graftschaf-Gelsdorf, Germany		h.jaenicke@cgiar.org
49	Dr	Amy Sullivan	Basin Leader, CPWF- Limpopo Basin	FANRPAN, Private Bag X2087 Silverton 0127, Pretoria, S. Africa.		amysullivan3@gmail.com

Annex 3: Matrix for cross-project linkages

	V1	V2	V3	V4	V5	Other issues
V1		<ul style="list-style-type: none"> • share with V2 stakeholder consultation output (draft protocol; criteria for success; map with cases) • V1 to help with site characterization (current & possibly historical) • Further discussions with V2 to determine a review of lessons learned, about drivers and what works where 	<ul style="list-style-type: none"> • share with V3 stakeholder consultation output, (draft protocol; criteria for success ; map with cases) • Provide V3 with core biophysical characterization of site by end of 2011 rainy season • provide V3 with available WEAP resolutions for the White Volta 	<ul style="list-style-type: none"> • share with V4 stakeholder consultation output (draft protocol; criteria for success; map with cases) • V4 to identify a list of interventions that V1 will look at, including which technologies have been identified for targeting & scaling out • site characterization (current & possibly historical) 	<ul style="list-style-type: none"> • need to determine how and when to share database with V5 	<ul style="list-style-type: none"> • Request to other teams to support V1 by doing or providing a characterisation of field tested technologies/ approaches if they have a protocol, and to inform V1 on potential cases that should be added • How to address historical change /different states...in project sites • Need to clarify the term 'Scenarios' which means different thing for different projects There is overlap of partners to engage with
V2	<ul style="list-style-type: none"> • The review of success stories by V1 is similar to the 		<ul style="list-style-type: none"> • Need to enhance interaction especially via data 	<ul style="list-style-type: none"> • No connection from biophysical point of view but rather on 		

	<p>activity “learning from the past” by V2 so projects leaders will share ToR on this and explore how it can be done together.</p> <p>V2 to provide a list of interventions that V1 will look at, including which technologies have been identified for targeting & scaling out</p>		<p>and protocol sharing</p> <ul style="list-style-type: none"> • V2 to provide any available information on agricultural intensification and impact on aquatic ecosystems (Fred could share from the modelling component) • 	<p>policy / institutional point of view</p> <ul style="list-style-type: none"> • V2 to share with V4 ground information, the understanding at local context/ constraints / perception... through PAR, HH Survey reports • SNV will invite V4 people to IP as observers 		
	•		•	•		
V3	<ul style="list-style-type: none"> • Site selection. • V3 depends on V1 for synoptic indicators. • V3 provided to V1 the coordinates of core sites during the workshop and will provide to V1 the characterization of its pilot-sites (as far as produced & validated). • V3 will provide “indicators” (success-stories) to V1, which V3 is 	<ul style="list-style-type: none"> • Site selection. Shared satellite sites have been identified with V2 (Upper West Ghana and Nariarlé). • V3 & V2 recognized that they had not interacted sufficiently thus far, in particular as related to site selection issues. They will need to intensify exchange and communication, for example by 		<ul style="list-style-type: none"> • Site selection. There has been agreement with V4 for one of V3s core sites (Zebilla / Upper East Ghana) and shared satellite sites have been identified with V4 (Bougouriba). • Management and Governance, where V3 depends on V4 for regional assessments to contextualize its local observations. This is in progress 		

	currently clarifying with V2 and will share with V1 by the end of June.	<p>exchanging their mailing lists and facilitate interactions.</p> <ul style="list-style-type: none"> • V3 will provide available data related on the Nariarlé Basin • V3 and V2 teams will open their websites for easy access by all. • V3 and V2 agreed to use the Adaptive Management opportunity open by the CWWP to collaborate on specific issues / sites identified before 2012 (already scheduled). 		<p>through a number of PhD projects and the agreement on common sites.</p> <ul style="list-style-type: none"> • Still to be managed is the synchronization of the activities internally within V3 and with V4 through the joint calendar. 		
V4	<ul style="list-style-type: none"> • V4 will look at the V1 protocol for case studies when it is ready and to advise (where possible) on what are good social proxies (e.g. organization of the community, access to information etc.) that are important 	<ul style="list-style-type: none"> • V4 can feed policy, institutional and governance analysis to provide understanding of how these factors shape local context and choices • V4 can provide input into other local level studies of V2 (i.e. in 	<ul style="list-style-type: none"> • V4 can feed policy, institutional and governance analysis to provide understanding of how these factors shape local context and choices • V4 can provide input into other local level studies of and V3 		<ul style="list-style-type: none"> • V5 can assist in building communication and collaboration through synchronization of workplans as well as stakeholder engagement 	<ul style="list-style-type: none"> • Capacity building: where is capacity building for farmers? Which project would address farmer capacity building and in what way? Perhaps each project should identify ways in

	for adoption of AWM interventions	<p>survey instruments, and qualitative work)</p> <ul style="list-style-type: none"> • continual communication and data sharing to ensure non-duplication 	<p>(i.e. in survey instruments, and qualitative work)</p> <ul style="list-style-type: none"> • continual communication and data sharing to ensure non-duplication 			<p>which they are building capacity of farmers in different ways (i.e. innovation platforms, participatory action research, etc.)</p>
V5	<ul style="list-style-type: none"> • coordination and synchronization of activities • support to interpret research results to make them useable at end user level • ensure effective communication and data sharing 	<ul style="list-style-type: none"> • coordination and synchronization of activities • support to interpret research results to make them useable at end user level • ensure effective communication and data sharing I 	<ul style="list-style-type: none"> • coordination and synchronization of activities • support to interpret research results to make them useable at end user level • ensure effective communication and data sharing 	<ul style="list-style-type: none"> • coordination and synchronization of activities 		