

2012 Technical Report per Activity

Each Program Participant must provide a small remark against each activity/deliverable to indicate the status of the activity (2-4 sentences required per activity) using the form below. Updated data from the current partners is also required.

CCAFS Center Led Activities IWMI - International Water Management Institute

| Activity No. 129 | | | | | |
|---|--|---|----------------------------|---------------------|--------------------------------|
| Activity title | Evaluation of the potential for sustainable higher water and land productivity and the resulting livelihood benefits for rural poor women and men from aquaculture integrated with small-scale irrigation - under changing climates | | | | |
| CCAFS Objective (select from drop list) | 1.1 Adapted farming systems | CCAFS Milestone No. (select from drop list / for further details go to CCAFS 2012 - 2015 LOGFRAME sheet) | 1.1.1 2012 (3) | | |
| Activity objectives (what the activity aims to achieve) | Objective 1 To achieve the deliverables listed below | | | | |
| Activity status | Partially completed | | | | |
| Insert a small remark to indicate the status of the activity. (2-4 sentences required per activity) | First two deliverables are nearly complete and papers / reports summarising them are either under review or about to be submitted. The results of the third deliverable were presented at the WaterNet 13-th Symposium in Johannesburg in November 2012. The modeling exercises are at final stage; A new DSS tool (in addition to planned output) is being developed; Final writeups and stakeholder workshop planned for May 2013. | | | | |
| Deliverables status (You may add any unexpected deliverable) | Type | Description | Year | Status | Format |
| | Data | Quantified livelihood and gender benefits related to water availability and use under changing climates - from aquaculture-irrigation production systems. | 2013 | Partially completed | Document (*.doc, *.odt, *.pdf) |
| | Reports, publications | Location and condition-specific strategies and practical guidelines for improving water yield and productivity of these systems in Malawi, Zambia and Mozambique | 2012 | Partially completed | Document (*.doc, *.odt, *.pdf) |
| | Reports, publications | Recommendations for policy and for formal and informal institutional arrangements to improve management of small-scale irrigation and diversified irrigation-aquaculture production systems (submitted for publication) | 2012 | Completed | Document (*.doc, *.odt, *.pdf) |
| | Model tools and software | A MS Excel based DSS for integrated water allocation | 2012 | Partially completed | Spreadsheet (*.xls, *.ods) |
| | Capacity | A Malawian student finished his master thesis based on the project | 2012 | Completed | Document (*.doc, *.odt, *.pdf) |
| | Acronym | Name | | | |
| | WF | WorldFish | | | |
| | CG - CGIAR Center | Contact Point Full Name | Contact Point Email | | |
| | | Joseph Nagoli | J.Nagoli@CGIAR.ORG | | |
| | Acronym | Name | | | |
| | | University of Osnabruck | | | |
| | AI - Academic Institution | Contact Point Full Name | Contact Point Email | | |
| | | Jorg Krywkow | jkrywkow@uos.de | | |
| | Acronym | Name | | | |
| | University of Malawi | | | | |
| AI - Academic Institution | Contact Point Full Name | Contact Point Email | | | |
| | geoffrey chavula | gchavula@gmail.com | | | |

| | | | | |
|----------------------------|---|--|---|--|
| Current Partners | Acronym | | Name | |
| | | | World Vision International | |
| | NGO_DO - Non-governmental organization/Development organization | | | |
| | Contact Point Full Name | | Contact Point Email | |
| | Essau Mwendo Phiri | | Essau_mwendo@wvi.org | |
| | Acronym | | Name | |
| | | | Department of Climate Change & Meteorological Services (Malawi) | |
| | Contact Point Full Name | | Contact Point Email | |
| | Stanley David Chabvunguma | | schabvunguma@yahoo.com | |
| Acronym | | Name | | |
| | | Department of Fisheries (Malawi, Zambia) | | |
| Contact Point Full Name | | Contact Point Email | | |
| Mulenga Venantious Musonda | | venantiousifishing@yahoo.com | | |

Activity No. 130

| | | | |
|--|---|--|----------------|
| Activity title | | Assessing the combined impact of watershed interventions and projected climatic changes on surface and groundwater availability for agriculture and food security of vulnerable rural men and women in selected watersheds in India; Identification and prioritization of watersheds in the mid-hills and mountains of Nepal that are significantly vulnerable to Climate Change; Evaluating the impact of watershed management interventions in two vulnerable watersheds in Nepal through simulation modelling and participatory surveys | |
| CCAFS Objective (select from drop list) | 1.1 Adapted farming systems | CCAFS Milestone No. (select from drop list / for further details go to CCAFS 2012 - 2015 LOGFRAME sheet) | 1.1.1 2012 (4) |
| Activity objectives (what the activity aims to achieve) | Objective 1 To achieve deliverables listed below | | |
| Activity status | Completed | | |
| Insert a small remark to indicate the status of the activity. (2-4 sentences required per activity) | This activity block includes two parallel activities - in India and Nepal, the later being larger. For most practical purposes, both may be considered complete. This activity already resulted in at least one outcome that is reported under "Outcomes" section. It is possible that this line of work will continue in Nepal and discussions with ADB are currently on the way | | |

| Type | Description | Year | Status | Format |
|-----------------------|--|------|-----------|--------------------------------|
| Reports, publications | A summary of the impact of watershed development, climate and land use change on groundwater hydrology in selected areas of Peninsular India | 2013 | Completed | Document (*.doc, *.odt, *.pdf) |
| Data | Watersheds in Nepal mid-hills and mountains ranked by their vulnerability to climate change in terms of a number of bio-physical, climatic and socio-economic indicators | 2012 | Completed | GIS vector (shapefiles) |
| Reports, publications | The list of identified most effective watershed management options in Nepal mid-hills to guide donor investment and build climate resilience | 2012 | Completed | Document (*.doc, *.odt, *.pdf) |

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|-------------------------|-------------------------|---------------------|---|--|
| Current Partners | Acronym | | Name | |
| | DSCWM | | Department of Soil Conservation and Watershed Management (DSCWM) of the Government of Nepal | |
| | Contact Point Full Name | | Contact Point Email | |
| | Dr. Jaganath Joshi | | Jagannathjoshi@hotmail.com | |
| | Acronym | | Name | |
| | ADB | | Asian Development Bank | |
| Contact Point Full Name | | Contact Point Email | | |
| Cindy Malvicini | | cmalvicini@adb.org | | |

Activity No. 131

| | |
|----------------|--|
| Activity title | Synthesis of groundwater assessments from over 10 countries throughout Africa; Evaluating prospects and constraints of Managed Aquifer Recharge (MAR) for augmenting water supplies for poor farming communities in South Asia; Hydro-economic assessment of the potential for flood water harvesting in selected regions of SEA |
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|--|--------------------|---|---|---|----------------|--------------------------------|
| CCAFS Objective <small>(select from drop list)</small> | | 1.1 Adapted farming systems | CCAFS Milestone No. <small>(select from drop list / for further details go to CCAFS 2012 - 2015 LOGFRAME sheet)</small> | | 1.1.1 2012 (4) | |
| Activity objectives <small>(what the activity aims to achieve)</small> | Objective 1 | To achieve deliverables listed below | | | | |
| Activity status | | <div>Completed</div> | | | | |
| Insert a small remark to indicate the status of the activity. <small>(2-4 sentences required per activity)</small> | | *The assessment of over 10 African countries has been performed and a reference book that brings them together and synthesizes the findings is about to go to print. * Hydrological and economic analysis of MAR in India at the basin scale evaluated. * Novel floodwater harvesting concept formulated and evaluated in one river basins in Thailand (Chao Praya) and journal article published | | | | |
| Deliverables status <small>(You may add any unexpected deliverable)</small> | | Type | Description | Year | Status | Format |
| | | Reports, publications | Recommendations for groundwater development in sub-Saharan Africa under current and future climates (presented either as a book, or a set of Reports, submitted for publication) | 2012 | Completed | Document (*.doc, *.odt, *.pdf) |
| | | Data | Preliminary summary of the key experiences, from CCAFS study sites, related to the selection of MAR structures and effective demand management strategies and their applicability to a larger South Asia region | 2012 | Completed | Document (*.doc, *.odt, *.pdf) |
| | | Reports, publications | Report / paper with an assessment of flood harvesting potential in SEA and other regions, and analysis of socio-economic benefits for poor rural farmers | 2012 | Completed | Document (*.doc, *.odt, *.pdf) |
| Current Partners | | Acronym | | Name | | |
| | | GWRC | | Groundwater Research Center, Khon Kaen University, Thailand | | |
| | | NARES - National agricultural research and extension services | | Contact Point Full Name | | Contact Point Email |
| | | | | Assoc. Prof. Kriengsak Srisuk | | kriengsk@kku.ac.th |
| | | Acronym | | Name | | |
| | | | | CSIR - Water Resources Institute, Ghana | | |
| | | GO - Government office/department | | Contact Point Full Name | | Contact Point Email |
| | | | | Dr. Emmanuel Obuobie | | obuobie@yahoo.com |
| | | Acronym | | Name | | |
| | | DGR | | Department of Groundwater Resources, Ministry of Natural Resources and Environment, Bangkok, Thailand | | |
| GO - Government office/department | | Contact Point Full Name | | Contact Point Email | | |
| | | | | | | |
| Acronym | | Name | | | | |
| AI - Academic Institution | | Moi University | | | | |
| | | Contact Point Full Name | | Contact Point Email | | |
| | | | | | | |
| Acronym | | Name | | | | |
| MWE | | Ministry of Water and Environment, Kampala, Uganda | | | | |
| GO - Government office/department | | Contact Point Full Name | | Contact Point Email | | |
| | | Dr Callist Tindimugaya | | callist.tindimugaya@mwe.go.ug | | |
| Acronym | | Name | | | | |
| NARES - National agricultural research and extension services | | Department of Animal Health & Livestock Development, Lilongwe, Malawi | | | | |
| | | Contact Point Full Name | | Contact Point Email | | |
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|-------------------------------------|--|---|
| | Acronym | Name |
| | SUA | Sokoine University of Agriculture |
| | AI - Academic Institution | Contact Point Full Name |
| | | Contact Point Email |
| | Acronym | Name |
| | | Geology Department, University of Ilorin, Nigeria |
| | AI - Academic Institution | Contact Point Full Name |
| | Dr Tijani Moshood | Contact Point Email |
| | | tmoshoo@yahoo.com |
| | Acronym | Name |
| CIRAD | Centre International de Recherche Agricole et du Developpement | |
| ARI - Advanced Research Institution | Contact Point Full Name | |
| | Contact Point Email | |
| | Dr Bruno Barbier | bruno.barbier@2ie-edu.org |

Activity No. 132

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|--|--|---|------------|
| Activity title | Synthesys of IWM previous work in the Volta and Blue Nile Basins on water storage evaluation under future climates, and examination of technical, socio-economic and environmental criteria for evaluation of various storage options; Analysis of prospects and constraints of water storage development under current and future water availability/ use in Nepal | | |
| CCAFS Objective (select from drop list) | 1.1 Adapted farming systems | CCAFS Milestone No. (select from drop list / for further details go to CCAFS 2012 - 2015 LOGFRAME sheet) | 1.1.1 2013 |
| Activity objectives (what the activity aims to achieve) | Objective 1 | To achieve deliverables listed below | |
| Activity status | Partially completed | | |
| Insert a small remark to indicate the status of the activity. (2-4 sentences required per activity) | This is a block of activities that examines how water storage in different regions can be used to buffer CC-related water resources variability. Part of the study sought to determine how climate change could be better built into the planning and management of water storage in sub-Saharan Africa. The study was conducted in Ghana (the Volta Basin) and Ethiopia (the Blue Nile) and comprised analyses at both the basin scale and site level. Work was completed in 2012. Nepal part of the study is smaller, still ongoing due to bilateral project, and will be wrapped up in the first half of 2013 | | |

| Type | Description | Year | Status | Format |
|-----------------------|--|------|---------------------|--------------------------------|
| Reports, publications | Recommendations on how to consider climate change in evaluation of water storage options, basin-wide water storage planning in river basins, and assessment of the need for storage for different uses (submitted in 2012) | 2012 | Completed | Document (*.doc, *.odt, *.pdf) |
| Reports, publications | An inventory of existing and potential artificial and natural water storage systems for the Koshi basin of Nepal, and draft guidelines for sustainable development of storage 'continuum' in the region | 2013 | Partially completed | Document (*.doc, *.odt, *.pdf) |

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|-----------------------------------|-------------------------------------|---|
| | Acronym | Name |
| | PIK | Potsdam-Institut für Klimafolgenforschung |
| | ARI - Advanced Research Institution | Contact Point Full Name |
| | Dr. Fred Hattermann | Contact Point Email |
| | | hattermann@pik-potsdam.de |
| | Acronym | Name |
| | WRI | Water Research Institute |
| | ARI - Advanced Research Institution | Contact Point Full Name |
| | Barnabus Amisigo | Contact Point Email |
| | | barnyy2002@yahoo.co.uk |
| Acronym | Name | |
| UBC | University of British Columbia | |
| AI - Academic Institution | Contact Point Full Name | |
| Mr John Janmaat | Contact Point Email | |
| | John.Janmaat@ubc.ca | |
| Acronym | Name | |
| DOI | Department of Irrigation (Nepal) | |
| GO - Government office/department | Contact Point Full Name | |
| Mr Uttam Raj Timilsina | Contact Point Email | |
| | uttamrajtimilsina@gmail.com | |

| | | | |
|---------------------------|---|--|------------------------|
| Current Partners | Acronym | Name | |
| | WECS | Water and Energy Commission Secretariat, Nepal | |
| | GO - Government office/department | Contact Point Full Name | Contact Point Email |
| | | Mr Shishir Koirala | ccrkoirala@hotmail.com |
| | Acronym | Name | |
| | | | |
| | GO - Government office/department | Contact Point Full Name | Contact Point Email |
| | | | |
| | Acronym | Name | |
| | ZEF | German Centre for Development Research (ZEF) | |
| | ARI - Advanced Research Institution | Contact Point Full Name | Contact Point Email |
| | | Dr. Irit Eguavoen | eguavoen@uni-bonn.de> |
| Acronym | Name | | |
| | Arba Minch University, Ethiopia | | |
| | Contact Point Full Name | Contact Point Email | |
| | Kassa Tadele | kassatad@yahoo.com | |
| Acronym | Name | | |
| ISSER | Institute of Statistical, Social and Economic Research, University of Ghana | | |
| AI - Academic Institution | Contact Point Full Name | Contact Point Email | |
| | Felix Asante | fasante@ug.edu.gh | |
| Acronym | Name | | |
| | | | |
| AI - Academic Institution | Contact Point Full Name | Contact Point Email | |
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|--|--|---|------------|---------------------|--------------------------------|
| Activity No. 133 | | | | | |
| Activity title | Comprehensive analysis of literature, existing statistical data and inventories of glaciers spread in countries and major river basins of South, Central and South East Asia. Review and analysis of existing information on the impacts of changing climate (at present and in the future) on glacial characteristics and impacts on water availability in major agricultural basins of Asia (macro scale); Detailed assessment of recent snow cover changes in four small sub-basins in HKH region (micro scale) | | | | |
| CCAFS Objective (select from drop list) | 1.1 Adapted farming systems | CCAFS Milestone No. (select from drop list / for further details go to CCAFS 2012 - 2015 LOGFRAME sheet) | 1.1.1 2013 | | |
| Activity objectives (what the activity aims to achieve) | Objective 1 | To achieve deliverables listed below | | | |
| Activity status | Completed | | | | |
| Insert a small remark to indicate the status of the activity. (2-4 sentences required per activity) | Activity is complete and resulted in several research publications (IWMI Research Reports, Journal papers) that are all in press currently. Two IWMI Research Reports on Glaciers' role in water resources of the Region are the first un-biased, comprehensive study of this subject. Mapped material related to this study is being placed on IWMI web site and shall be available for public viewing shortly | | | | |
| Deliverables status (You may add any unexpected deliverable) | Type | Description | Year | Status | Format |
| | Reports, publications | Reports / papers on the role of glaciers and snow in the water balance of major Asian Rivers, sensitivity of glacial systems to climate change and realted implications for agriculture, food security and livelihoods in these basins (Macro scale) -in press. | 2012 | Completed | Document (*.doc, *.odt, *.pdf) |
| | Reports, publications | Quantified recent changes in snow cover in four small sub-basins of the HKH region (Micro scale) | 2012 | Partially completed | Document (*.doc, *.odt, *.pdf) |
| | Data | Maps of glaciers spread and snow cover and their changes under CC in six major river basins of Asia | 2013 | Completed | Database (*.sql, *.mdb, etc) |
| | Data | Inventory of glaciers and their changes - in 6 main river basins of Asia | 2012 | Completed | Document (*.doc, *.odt, *.pdf) |
| Current Partners | Acronym | Name | | | |
| | ICIMOD | International Centre for Integrated Mountain Development | | | |
| RO - Regional Organization | Contact Point Full Name | Contact Point Email | | | |
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| Activity No. 134 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|---|--------------------------------|------------|------|-------------|------|-------------------------|---------------------|----------------------------|---|--|---------------------|--------------------------------|-----------------------------------|--|--|---------------------|-------|-----------------------------------|--|--|--|--|-----------------------------------|--|----------------------------------|--|--|
| Activity title | | Reviewing information on current and projected climate changes for Pakistan and Indus Basin; Simulation of water availability, use in agriculture and allocations scenarios in Indus Basin under current and future climates- using the set of hydrology and water resources planning models | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCAFS Objective <small>(select from drop list)</small> | | 1.1 Adapted farming systems | CCAFS Milestone No. <small>(select from drop list / for further details go to CCAFS 2012 - 2015 LOGFRAME sheet)</small> | | 1.1.1 2013 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Activity objectives <small>(what the activity aims to achieve)</small> | Objective 1 | To achieve deliverables listed below | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Activity status | | Partially completed | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Insert a small remark to indicate the status of the activity. <small>(2-4 sentences required per activity)</small> | | Due to unexpected the departure of the responsible staff member in late 2012, activity is partially complete. However, draft report on CC analysis is available and is being reviewed with a view to publish it as a formal output. All models required were setup and simply require fine tuning. All the project tasks have been re-assigned to different staff. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Deliverables status <small>(You may add any unexpected deliverable)</small> | | <table border="1"> <thead> <tr> <th>Type</th> <th>Description</th> <th>Year</th> <th>Status</th> <th>Format</th> </tr> </thead> <tbody> <tr> <td>Data</td> <td>Documented analysis on the exiting climate projections for Pakistan with implications for revitalising irrigation in the entire Indus Basin</td> <td>2012</td> <td>Partially completed</td> <td>Document (*.doc, *.odt, *.pdf)</td> </tr> <tr> <td>Model tools and software</td> <td>A set of co-hesive simulation models established and calibrated for entire Indus basin - for evaluation of various policy scenarios that aim to enhance irrigation efficiency, water-productivity and a flow of gender-related benefits in the basin</td> <td>2013</td> <td>Partially completed</td> <td>Other</td> </tr> </tbody> </table> | | | | Type | Description | Year | Status | Format | Data | Documented analysis on the exiting climate projections for Pakistan with implications for revitalising irrigation in the entire Indus Basin | 2012 | Partially completed | Document (*.doc, *.odt, *.pdf) | Model tools and software | A set of co-hesive simulation models established and calibrated for entire Indus basin - for evaluation of various policy scenarios that aim to enhance irrigation efficiency, water-productivity and a flow of gender-related benefits in the basin | 2013 | Partially completed | Other | | | | | | | | | | |
| Type | Description | Year | Status | Format | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data | Documented analysis on the exiting climate projections for Pakistan with implications for revitalising irrigation in the entire Indus Basin | 2012 | Partially completed | Document (*.doc, *.odt, *.pdf) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model tools and software | A set of co-hesive simulation models established and calibrated for entire Indus basin - for evaluation of various policy scenarios that aim to enhance irrigation efficiency, water-productivity and a flow of gender-related benefits in the basin | 2013 | Partially completed | Other | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Current Partners | | <table border="1"> <thead> <tr> <th></th> <th>Acronym</th> <th>Name</th> <th>Contact Point Full Name</th> <th>Contact Point Email</th> </tr> </thead> <tbody> <tr> <td>RO - Regional Organization</td> <td>ICIMOD</td> <td>International Centre for Integrated Mountain Development</td> <td>Arun Shrestha</td> <td>abshrestha@icimod.org</td> </tr> <tr> <td>GO - Government office/department</td> <td></td> <td>Government of Pakistan The Provincial Irrigation and Agriculture Departments</td> <td></td> <td></td> </tr> <tr> <td>GO - Government office/department</td> <td></td> <td>Government of Punjab The Provincial Irrigation and Agriculture Departments</td> <td></td> <td></td> </tr> <tr> <td>GO - Government office/department</td> <td></td> <td>Government of Khyber Pukhtunkhwa</td> <td></td> <td></td> </tr> </tbody> </table> | | | | | Acronym | Name | Contact Point Full Name | Contact Point Email | RO - Regional Organization | ICIMOD | International Centre for Integrated Mountain Development | Arun Shrestha | abshrestha@icimod.org | GO - Government office/department | | Government of Pakistan The Provincial Irrigation and Agriculture Departments | | | GO - Government office/department | | Government of Punjab The Provincial Irrigation and Agriculture Departments | | | GO - Government office/department | | Government of Khyber Pukhtunkhwa | | |
| | Acronym | Name | Contact Point Full Name | Contact Point Email | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RO - Regional Organization | ICIMOD | International Centre for Integrated Mountain Development | Arun Shrestha | abshrestha@icimod.org | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GO - Government office/department | | Government of Pakistan The Provincial Irrigation and Agriculture Departments | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GO - Government office/department | | Government of Punjab The Provincial Irrigation and Agriculture Departments | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GO - Government office/department | | Government of Khyber Pukhtunkhwa | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Activity No. 135 | | | | | | | | | | | | | | | |
|--|---|--|---|--------------------------------|------------|------|-------------|------|--------|--------|--------------------------|---|------|---------------------|--------------------------------|
| Activity title | | Synthesis of previous and current research on adaption to climate change in Godavari and Krishna River basins, India | | | | | | | | | | | | | |
| CCAFS Objective <small>(select from drop list)</small> | | 1.1 Adapted farming systems | CCAFS Milestone No. <small>(select from drop list / for further details go to CCAFS 2012 - 2015 LOGFRAME sheet)</small> | | 1.1.1 2013 | | | | | | | | | | |
| Activity objectives <small>(what the activity aims to achieve)</small> | Objective 1 | To achieve deliverables listed below | | | | | | | | | | | | | |
| Activity status | | Completed | | | | | | | | | | | | | |
| Insert a small remark to indicate the status of the activity. <small>(2-4 sentences required per activity)</small> | | The main thrust of this activity block is complete, and the full-scale book on the subject mater was published in 2012 | | | | | | | | | | | | | |
| Deliverables status <small>(You may add any unexpected deliverable)</small> | | <table border="1"> <thead> <tr> <th>Type</th> <th>Description</th> <th>Year</th> <th>Status</th> <th>Format</th> </tr> </thead> <tbody> <tr> <td>Model tools and software</td> <td>An inventory of socio-economic methodologies to quantify climate change impacts</td> <td>2012</td> <td>Partially completed</td> <td>Document (*.doc, *.odt, *.pdf)</td> </tr> </tbody> </table> | | | | Type | Description | Year | Status | Format | Model tools and software | An inventory of socio-economic methodologies to quantify climate change impacts | 2012 | Partially completed | Document (*.doc, *.odt, *.pdf) |
| Type | Description | Year | Status | Format | | | | | | | | | | | |
| Model tools and software | An inventory of socio-economic methodologies to quantify climate change impacts | 2012 | Partially completed | Document (*.doc, *.odt, *.pdf) | | | | | | | | | | | |

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|--|-----------------------|--|------|-----------|--------------------------------|
| | Reports, publications | A summary of climate change adaptation options in India with a focus on Godavari River Basin | 2012 | Completed | Document (*.doc, *.odt, *.pdf) |
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|------------------|---|--|---|---------------------------------|
| Current Partners | Acronym | | Name | |
| | Bioforsk | | Norwegian Institute for Agricultural and Environmental Research | |
| | ARI - Advanced Research Institution | | Contact Point Full Name | Contact Point Email |
| | | | Dr. Udaya Sekhar Nagothu | Nagothu.UdayaSekhar@bioforsk.no |
| | Acronym | | Name | |
| | IIT | | Indian Institute of Technology | |
| | ARI - Advanced Research Institution | | Contact Point Full Name | Contact Point Email |
| | | | Dr. A.K.Gosain | gosain@civil.iitd.ac.in |
| | Acronym | | Name | |
| | TNAU | | Tamil Nadu Agricultural University | |
| | NARES - National agricultural research and extension services | | Contact Point Full Name | Contact Point Email |
| | | | Dr.Geetha Lakshmi | geetha@tnau.ac.in |
| | Acronym | | Name | |
| | RI | | Water and Land Management Training and Research Institute | |
| | GO - Government office/department | | Contact Point Full Name | Contact Point Email |
| | | | Dr.K.Tirupataiah | dg.walamtari@gmail.com |

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|---|-------------|---|--|------------|--------|
| Activity No. 136 | | | | | |
| Activity title | | Evaluation of impacts of future climate on water balance of two major African cities (Accra and Addis Abeba), and designing adaptation strategies in the context of basin water resources planning through stakeholder platforms | | | |
| CCAFS Objective <i>(select from drop list)</i> | | 1.1 Adapted farming systems | CCAFS Milestone No. <i>(select from drop list / for further details go to CCAFS 2012 - 2015 LOGFRAME sheet)</i> | 1.1.1 2013 | |
| Activity objectives <i>(what the activity aims to achieve)</i> | Objective 1 | To achieve deliverables listed below | | | |
| Activity status | | Completed | | | |
| Insert a small remark to indicate the status of the activity. <i>(2-4 sentences required per activity)</i> | | The project will be closed 1 February 2013. There is only one specific activity pending, which is a policy round table scheduled to take place in early February (with the permission of the donor). The agenda mentioned in deliverable below is a strategic document for adaptation, one for each city - Addis and Accra - is to be printed in 2013. Several other outputs are in review and hence not included in the list of publications. For all practical purposes this activity is complete, will not extend into 2013 as a separate one. Part of this activity is reported under "case study" section. | | | |
| Deliverables status <i>(You may add any unexpected deliverable)</i> | Type | Description | Year | Status | Format |
| | Capacity | Strategic agenda for responding to climate-induced challenges in water supply, flooding and wastewater generation in cities that takes into account implications for prei-urban agriculture and the needs of most vulnerable urban and rural groups in the adjacent basins (presented to policy-makers through policy briefs and booklets) | 2012 | Completed | Other |

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|--|---|--|--|---------------------------|
| | Acronym | | Name | |
| | WRI | | Water Research Institute | |
| | NARES - National agricultural research and extension services | | Contact Point Full Name | Contact Point Email |
| | | | Dr Barnabas Amisigo | barnyy2002@yahoo.co.uk |
| | Acronym | | Name | |
| | ILGS | | Institute for Local Governance Studies | |
| | NARES - National agricultural research and extension services | | Contact Point Full Name | Contact Point Email |
| | | | Dr Felix Amakye | famakye@gmail.com |
| | Acronym | | Name | |
| | | | Addis Abeba University | |
| | AI - Academic Institution | | Contact Point Full Name | Contact Point Email |
| | | | Dr Semu Moges | semu.moges.2000@gmail.com |

| | |
|--|--|
| | <div> <div>Acronym</div> <div>EDRI</div> </div> <div> <div>Name</div> <div>Ethiopian Development Research Institute</div> </div> |
| | <div> <div>ARI - Advanced Research Institution</div> <div> <div>Contact Point Full Name</div> <div>Dr Alebel Beyrau</div> </div> <div> <div>Contact Point Email</div> <div>alebel.bw@gmail.com</div> </div> </div> |

Activity No. 137

| | | | | | |
|---|---|---|----------------|---------------------|--------------------------------|
| Activity title | Simulating future scenarios of water availability and use in agriculture with consideration of several change drivers and technology development trends - under current and future climates - using global hydro-economic model | | | | |
| CCAFS Objective <i>(select from drop list)</i> | 1.1 Adapted farming systems | CCAFS Milestone No. <i>(select from drop list / for further details go to CCAFS 2012 - 2015 LOGFRAME sheet)</i> | 1.1.2 2013 (1) | | |
| Activity objectives <i>(what the activity aims to achieve)</i> | Objective 1 To achieve deliverables listed below | | | | |
| Activity status | Completed | | | | |
| Insert a small remark to indicate the status of the activity. <i>(2-4 sentences required per activity)</i> | The WATERSIM model was run for three socio-economic scenarios (dealing with GDP and population) along with future climate change scenarios. Some of the outputs from the analysis were used in the Gulbenkien book chapters. An IWMI Research Report based on the results of this study is currently under review and is expected to be published in early 2013. A separate analysis was also conducted on the desalinization technology and its possible role in alleviating the future water scarcity issues, and results are being summarised in a journal article . | | | | |
| Deliverables status <i>(You may add any unexpected deliverable)</i> | Type | Description | Year | Status | Format |
| | Data | Documented analysis of water availability for agriculture, water saving with less food wastage, and water saving with "healthy diet" - under different Climate Change scenarios - globally; | 2012 | Completed | Document (*.doc, *.odt, *.pdf) |
| | Reports, publications | Documented analysis of scenarios of clean energy development combined with water desalination technology development - and the implications of these scenarios for water availability for agriculture | 2013 | Partially completed | Document (*.doc, *.odt, *.pdf) |
| Current Partners | <div> <div>Acronym</div> <div>SIWI</div> </div> <div> <div>Name</div> <div>Stockholm International Water Institute</div> </div> | | | | |
| | <div> <div>ARI - Advanced Research Institution</div> <div> <div>Contact Point Full Name</div> <div>Jan Lundqvist</div> </div> <div> <div>Contact Point Email</div> <div>Jan.Lundqvist@siwi.org</div> </div> </div> | | | | |
| | <div> <div>Acronym</div> <div></div> </div> <div> <div>Name</div> <div></div> </div> | | | | |
| | <div> <div>ARI - Advanced Research Institution</div> <div> <div>Contact Point Full Name</div> <div></div> </div> <div> <div>Contact Point Email</div> <div></div> </div> </div> | | | | |

2012 Technical Report per Activity

Each Program Participant must provide a small remark against each activity/deliverable to indicate the status of the activity (2-4 sentences required per activity) using the form below. Updated data from the current partners is also required.

CCAFS Center Led Activities IWMI - International Water Management Institute

| Activity No. 138 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|---------------------------|---|------------|---------|-------------|-------------------------|---------------------|---------------------------|---------------------|--|------|---------------------------|------------------------------|-----------------|---|------|-----------|--------------------------------|--------------------------|--|---|-----------|--------------------------------|-----------------------|--|--------------------|---------------------------|--------------------------------|---|--|--|--|--|---------------|--|
| Activity title | | Analysing climate-related risks for agriculture and livelihoods, and trends in current climates | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCAFS Objective <small>(select from drop list)</small> | | 2.1 Identify and test innovations that enable rural communities to better manage climate-related risk and build more resilient livelihoods | | CCAFS Milestone No. <small>(select from drop list / for further details go to CCAFS 2012 - 2015 LOGFRAME sheet)</small> | 2.1.1 2012 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Activity objectives <small>(what the activity aims to achieve)</small> | Objective 1 | To achieve deliverables listed below | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Activity status | | Completed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Insert a small remark to indicate the status of the activity. <small>(2-4 sentences required per activity)</small> | | All flood-related deliverables have been complete and addition output - IWMI Research Report - summarising all findings is being compiled. Trend analyses were completed in 2012 and published in 3 peer-reviewed international journals. A paper on trends in India has been submitted in January 2013 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Deliverables status <small>(You may add any unexpected deliverable)</small> | | <table border="1"> <thead> <tr> <th>Type</th> <th>Description</th> <th>Year</th> <th>Status</th> <th>Format</th> </tr> </thead> <tbody> <tr> <td>Data</td> <td>Mapped flood risk over South Asia under current climates using RS data - with a resolution of 0.5 km</td> <td>2012</td> <td>Completed</td> <td>Database (*.sql, *.mdb, etc)</td> </tr> <tr> <td>Data</td> <td>Identified hot spots (globally) where flood risk increased / decrease in recent times</td> <td>2012</td> <td>Completed</td> <td>Document (*.doc, *.odt, *.pdf)</td> </tr> <tr> <td>Model tools and software</td> <td>A new method for identification of inundated areas using satellite imagery</td> <td>2012</td> <td>Completed</td> <td>Document (*.doc, *.odt, *.pdf)</td> </tr> <tr> <td>Reports, publications</td> <td>Documented analysis of trends in various agriculturally-relevant climatic and hydrological variables - in India, Central Asia, WA, and SEA</td> <td>2012</td> <td>Completed</td> <td>Document (*.doc, *.odt, *.pdf)</td> </tr> </tbody> </table> | | | | Type | Description | Year | Status | Format | Data | Mapped flood risk over South Asia under current climates using RS data - with a resolution of 0.5 km | 2012 | Completed | Database (*.sql, *.mdb, etc) | Data | Identified hot spots (globally) where flood risk increased / decrease in recent times | 2012 | Completed | Document (*.doc, *.odt, *.pdf) | Model tools and software | A new method for identification of inundated areas using satellite imagery | 2012 | Completed | Document (*.doc, *.odt, *.pdf) | Reports, publications | Documented analysis of trends in various agriculturally-relevant climatic and hydrological variables - in India, Central Asia, WA, and SEA | 2012 | Completed | Document (*.doc, *.odt, *.pdf) | | | | | | | |
| Type | Description | Year | Status | Format | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data | Mapped flood risk over South Asia under current climates using RS data - with a resolution of 0.5 km | 2012 | Completed | Database (*.sql, *.mdb, etc) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data | Identified hot spots (globally) where flood risk increased / decrease in recent times | 2012 | Completed | Document (*.doc, *.odt, *.pdf) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model tools and software | A new method for identification of inundated areas using satellite imagery | 2012 | Completed | Document (*.doc, *.odt, *.pdf) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reports, publications | Documented analysis of trends in various agriculturally-relevant climatic and hydrological variables - in India, Central Asia, WA, and SEA | 2012 | Completed | Document (*.doc, *.odt, *.pdf) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Current Partners | | <table border="1"> <thead> <tr> <th>Acronym</th> <th>Name</th> <th>Contact Point Full Name</th> <th>Contact Point Email</th> </tr> </thead> <tbody> <tr> <td>AI - Academic Institution</td> <td>Oklahoma University</td> <td></td> <td></td> </tr> <tr> <td>AI - Academic Institution</td> <td>TERI</td> <td>TERI University</td> <td></td> </tr> <tr> <td></td> <td></td> <td>PK Joshi</td> <td>pkjoshi27@hotmail.com</td> </tr> <tr> <td>Research_Network - Research network</td> <td>Symbiosis Institute of Geoinformatics, Pune</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Tarun Pratap Singh</td> <td>tarunsingh@rediffmail.com</td> </tr> <tr> <td>End_users - End users</td> <td>Director, Central Research Institute for Dryland Agriculture, Hyderabad</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Venkateswarlu</td> <td></td> </tr> </tbody> </table> | | | | Acronym | Name | Contact Point Full Name | Contact Point Email | AI - Academic Institution | Oklahoma University | | | AI - Academic Institution | TERI | TERI University | | | | PK Joshi | pkjoshi27@hotmail.com | Research_Network - Research network | Symbiosis Institute of Geoinformatics, Pune | | | | | Tarun Pratap Singh | tarunsingh@rediffmail.com | End_users - End users | Director, Central Research Institute for Dryland Agriculture, Hyderabad | | | | | Venkateswarlu | |
| Acronym | Name | Contact Point Full Name | Contact Point Email | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AI - Academic Institution | Oklahoma University | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AI - Academic Institution | TERI | TERI University | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | PK Joshi | pkjoshi27@hotmail.com | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Research_Network - Research network | Symbiosis Institute of Geoinformatics, Pune | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Tarun Pratap Singh | tarunsingh@rediffmail.com | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| End_users - End users | Director, Central Research Institute for Dryland Agriculture, Hyderabad | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Venkateswarlu | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Activity No. 139 | | | | | |
|--|--|---|--|---|------------|
| Activity title | | Assessing the needs and priorities of female and male farmers for climate-related information and its dissemination through mobile phones; developing the web-based services to provide this information in Sudan, Egypt and Ethiopia | | | |
| CCAFS Objective <small>(select from drop list)</small> | | 2.3 Support risk management through enhanced prediction of climate impacts on agriculture, and enhanced climate information and services | | CCAFS Milestone No. <small>(select from drop list / for further details go to CCAFS 2012 - 2015 LOGFRAME sheet)</small> | 2.3.2 2012 |

| Activity objectives <i>(what the activity aims to achieve)</i> | Objective 1 | To achieve deliverables listed below | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|---------------------|---------------------------------------|--|--|---------|-------------|------|------------------------------------|--------|---------------------|---|-------------------------|---------------------|--------------------------------|--------------------------|--|------------------------------------|---------------------|---------------------------------------|------|---|---------------------|-----------|------------------------------|--------------------------|--|------|-------------------------------------|------------------------------|-------------------------|--|------|-----------------|------------------------------|---|-------|--|--|-------------------------|---------------------|--|----------------------|---------------------------|-------------------|--------|---|--|-------------------------|---------------------|--|---------------|--|
| Activity status | | <div>Partially completed</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Insert a small remark to indicate the status of the activity. <i>(2-4 sentences required per activity)</i> | | This is an ongoing bilateral Project. During 2012, User Need Assessment through detailed surveys and field visits was completed for the sites in Egypt, Ethiopia and Sudan. The report has been completed for Ethiopia and others shall be available in first quarter of 2013. Special capacity building programs on the use of ICT for weateher and water information for farmers and functionaries was completed for the sites at Egypt and Ethiopia. Prototype of the sevice and advisories through the specially designed webs and through the mobiles have been developed for the farmers and functionaries in Ethiopia and Egypt. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Deliverables status <i>(You may add any unexpected deliverable)</i> | | <table border="1"> <thead> <tr> <th>Type</th> <th>Description</th> <th>Year</th> <th>Status</th> <th>Format</th> </tr> </thead> <tbody> <tr> <td>Data</td> <td>User Requirements in selected countries are understood and documented</td> <td>2012</td> <td>Partially completed</td> <td>Document (*.doc, *.odt, *.pdf)</td> </tr> <tr> <td>Model tools and software</td> <td>Prototype cell-phone or web-based information systems for monitoring climate, water and crop related data are available in draft form for Sudan and Ethiopia</td> <td>2013</td> <td>Partially completed</td> <td>GIS raster (ESRI Grids, GeoTiff, etc)</td> </tr> <tr> <td>Data</td> <td>Household questionnaire on User Need Assessment- Ethiopia</td> <td>2012</td> <td>Completed</td> <td>Database (*.sql, *.mdb, etc)</td> </tr> <tr> <td>Data</td> <td>Household questionnaire on User Need Assessment- Egypt</td> <td>2012</td> <td>Completed</td> <td>Database (*.sql, *.mdb, etc)</td> </tr> <tr> <td>Data</td> <td>Household questionnaire on User Need Assessment- Sudan</td> <td>2012</td> <td>Completed</td> <td>Database (*.sql, *.mdb, etc)</td> </tr> </tbody> </table> | | | | | Type | Description | Year | Status | Format | Data | User Requirements in selected countries are understood and documented | 2012 | Partially completed | Document (*.doc, *.odt, *.pdf) | Model tools and software | Prototype cell-phone or web-based information systems for monitoring climate, water and crop related data are available in draft form for Sudan and Ethiopia | 2013 | Partially completed | GIS raster (ESRI Grids, GeoTiff, etc) | Data | Household questionnaire on User Need Assessment- Ethiopia | 2012 | Completed | Database (*.sql, *.mdb, etc) | Data | Household questionnaire on User Need Assessment- Egypt | 2012 | Completed | Database (*.sql, *.mdb, etc) | Data | Household questionnaire on User Need Assessment- Sudan | 2012 | Completed | Database (*.sql, *.mdb, etc) | | | | | | | | | | | | | | | | | | |
| Type | Description | Year | Status | Format | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data | User Requirements in selected countries are understood and documented | 2012 | Partially completed | Document (*.doc, *.odt, *.pdf) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model tools and software | Prototype cell-phone or web-based information systems for monitoring climate, water and crop related data are available in draft form for Sudan and Ethiopia | 2013 | Partially completed | GIS raster (ESRI Grids, GeoTiff, etc) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data | Household questionnaire on User Need Assessment- Ethiopia | 2012 | Completed | Database (*.sql, *.mdb, etc) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data | Household questionnaire on User Need Assessment- Egypt | 2012 | Completed | Database (*.sql, *.mdb, etc) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data | Household questionnaire on User Need Assessment- Sudan | 2012 | Completed | Database (*.sql, *.mdb, etc) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Current Partners | | <table border="1"> <thead> <tr> <th>Acronym</th> <th colspan="2">Name</th> </tr> </thead> <tbody> <tr> <td>PRI - Private Research Institution</td> <td>eLeaf</td> <td>Water Watch (eLeaf)</td> </tr> <tr> <td></td> <td>Contact Point Full Name</td> <td>Contact Point Email</td> </tr> <tr> <td></td> <td>Ivo Miltenburg</td> <td>i.miltenburg@eleaf.org</td> </tr> <tr> <td>PRI - Private Research Institution</td> <td>DLVPlant</td> <td>DLVPlant (Netherlands)</td> </tr> <tr> <td></td> <td>Contact Point Full Name</td> <td>Contact Point Email</td> </tr> <tr> <td></td> <td>Francis Hoogerwerf</td> <td>F.hoogerwerf@dlvplant.nl</td> </tr> <tr> <td>GO - Government office/department</td> <td>MoW</td> <td>Ministry of Water Resources (Sudan)</td> </tr> <tr> <td></td> <td>Contact Point Full Name</td> <td>Contact Point Email</td> </tr> <tr> <td></td> <td>Younis Gismilla</td> <td>hrs_younis@hotmail.com</td> </tr> <tr> <td>NARES - National agricultural research and extension services</td> <td>SWERI</td> <td>Soil, Water and Environment Research Institute</td> </tr> <tr> <td></td> <td>Contact Point Full Name</td> <td>Contact Point Email</td> </tr> <tr> <td></td> <td>Abdel Taher Moustafa</td> <td>abdelahermoustafa@aol.com</td> </tr> <tr> <td>Select a partner.</td> <td>HEDBEZ</td> <td>Hedbez Consultants PLC, Addis Ababa, Ethiopia</td> </tr> <tr> <td></td> <td>Contact Point Full Name</td> <td>Contact Point Email</td> </tr> <tr> <td></td> <td>Bezabih Emana</td> <td></td> </tr> </tbody> </table> | | | | | Acronym | Name | | PRI - Private Research Institution | eLeaf | Water Watch (eLeaf) | | Contact Point Full Name | Contact Point Email | | Ivo Miltenburg | i.miltenburg@eleaf.org | PRI - Private Research Institution | DLVPlant | DLVPlant (Netherlands) | | Contact Point Full Name | Contact Point Email | | Francis Hoogerwerf | F.hoogerwerf@dlvplant.nl | GO - Government office/department | MoW | Ministry of Water Resources (Sudan) | | Contact Point Full Name | Contact Point Email | | Younis Gismilla | hrs_younis@hotmail.com | NARES - National agricultural research and extension services | SWERI | Soil, Water and Environment Research Institute | | Contact Point Full Name | Contact Point Email | | Abdel Taher Moustafa | abdelahermoustafa@aol.com | Select a partner. | HEDBEZ | Hedbez Consultants PLC, Addis Ababa, Ethiopia | | Contact Point Full Name | Contact Point Email | | Bezabih Emana | |
| Acronym | Name | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PRI - Private Research Institution | eLeaf | Water Watch (eLeaf) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Contact Point Full Name | Contact Point Email | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Ivo Miltenburg | i.miltenburg@eleaf.org | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PRI - Private Research Institution | DLVPlant | DLVPlant (Netherlands) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Contact Point Full Name | Contact Point Email | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Francis Hoogerwerf | F.hoogerwerf@dlvplant.nl | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GO - Government office/department | MoW | Ministry of Water Resources (Sudan) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Contact Point Full Name | Contact Point Email | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Younis Gismilla | hrs_younis@hotmail.com | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NARES - National agricultural research and extension services | SWERI | Soil, Water and Environment Research Institute | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Contact Point Full Name | Contact Point Email | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Abdel Taher Moustafa | abdelahermoustafa@aol.com | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Select a partner. | HEDBEZ | Hedbez Consultants PLC, Addis Ababa, Ethiopia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Contact Point Full Name | Contact Point Email | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Bezabih Emana | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

2012 Technical Report per Activity

Each Program Participant must provide a small remark against each activity/deliverable to indicate the status of the activity (2-4 sentences required per activity) using the form below. Updated data from the current partners is also required.

CCAFA Center Led Activities IWMI - International Water Management Institute

| Activity No. 140 | | | | | | |
|---|--------------------|--|---|----------------------------|---------------------|---------------------------------------|
| Activity title | | Developing new tools and climate-related datasets for river basin modelling and yield assessment under current and future climates | | | | |
| CCAFA Objective (select from drop list) | | 4.2 Assemble data and tools for analysis and planning | CCAFA Milestone No. (select from drop list / for further details go to CCAFA 2012 - 2015 LOGFRAME sheet) | | 4.2.1 2012 (3) | |
| Activity objectives (what the activity aims to achieve) | Objective 1 | To produce tools / datasets that are listed as "deliverables" below | | | | |
| Activity status | | Completed | | | | |
| Insert a small remark to indicate the status of the activity. (2-4 sentences required per activity) | | All deliverables are complete. Methods have been documented and submitted for publications and articles (under review in Journals). Datasets are available and need to be made publicly available through IWMI web site, e.g. through Water Data Portal. | | | | |
| Deliverables status (You may add any unexpected deliverable) | | Type | Description | Year | Status | Format |
| | | Data | Actual evapotranspiration (ET) estimates for the 2050s at fine grid resolution for 3 IPCC SRES scenarios: A1B, A2 and B1 using downscaled data from two GCMs: CNRM-CM3 and MIROC MEDRES | 2012 | Completed | GIS raster (ESRI Grids, GeoTiff, etc) |
| | | Model tools and software | A new methodology for reconstruction of daily rainfall 1 km X 1 km files for data-poor regions from RS data and limited ground gauged rainfall observations | 2012 | Completed | Other |
| | | Data | Reconstructed rainfall fields for Sri Lanka for the decade 2000-2010 | 2012 | Partially completed | GIS raster (ESRI Grids, GeoTiff, etc) |
| | | Model tools and software | A new methodology for use of Climate Forecast System Reanalysis (CFSR) to Improve Input into basin hydrology models | 2012 | Completed | Database (*.sql, *.mdb, etc) |
| | | Select a data type | | | Select a status | Select a format |
| | | Select a data type | | | Select a status | Select a format |
| Current Partners | | Acronym | Name | | | |
| | | GO - Government office/department | Department of Meteorology of Sri Lanka | | | |
| | | | Contact Point Full Name | Contact Point Email | | |
| | | | L. Chandrapala | meteo@slt.lk | | |
| | | Acronym | Name | | | |
| | | AI - Academic Institution | Cornell University | | | |
| | | | Contact Point Full Name | Contact Point Email | | |
| | Tammo S. Steenhuis | tammo@cornell.edu | | | | |
| Current Partners | | Acronym | Name | | | |
| | | AI - Academic Institution | Virginia Polytechnic Institute and State University | | | |
| | | | Contact Point Full Name | Contact Point Email | | |
| | | | Zachary M. Easton | zeaston@vt.edu | | |

2012 summary report of activities and deliverables by Output level

Each Program Participant must prepare a succinct summary of activities and deliverables, organised by Output level of the CCAFS objectives. Length is dependent on budget size so please refer to the table on the explanatory notes.

CCAFS Center Led Activities IWMI - International Water Management Institute

| Theme 1. Adaptation to Progressive Climate Change | |
|---|--|
| Objective 1.1 Analyze and design processes to support adaptation of farming systems in the face of future uncertainties of climate in space and time | |
| Outcome 1.1: Agricultural and food security strategies that are adapted towards predicted conditions of climate change promoted and communicated by the key development and funding agencies (national and international), civil society organizations and private sector in at least 20 countries | |
| Output 1.1.1 Development of farming systems and production technologies adapted to climate change conditions in time and space through design of tools for improving crops, livestock, agronomic and natural resource management practices | |
| <p><i>Prepare a succinct summary of activities and deliverables, organised by Output level of the CCAFS objectives</i></p> | <p>Center activities under this output aim to produce tools, information and recommendations for improved water management at different scales and in different geographical and political settings. More specifically these include i) formulating recommendations for policy and for formal and informal institutional arrangements to improve management of small-scale irrigation and diversified irrigation-aquaculture production systems (activities behind this range from detailed small scale hydrological modelling in small catchments in southern Africa to address water availability issues to farmers' workshops) ii) detailed assessment and mapping of watersheds in Nepal mid-hills and mountains and ranking them by their vulnerability to climate change in terms of a number of bio-physical, climatic and socio-economic indicators - to help guide ADB adaptation investments in the country iii) Assessment of the current state of groundwater use and potential for use (as a promising CC adaptation option) on, effectively pan-African scale iv) First cut hydrological and economic analysis of the prospects and constraints for managed aquifer recharge (MAR) in India as a way to enhance water availability for agriculture in rural India (aspects related to the selection of MAR structures and effective demand management strategies and their applicability to a larger South Asia region) v) formulated novel floodwater harvesting concept (Underground Taming of Floods - UTF) and its biophysical, social and economic evaluation in Chao Praya Basin in Thailand vi) A summary of how to consider climate change in evaluation of water storage options, basin-wide water storage planning in river basins, and assessment of the need for storage for different uses - in several basins in Africa and South Asia vii) a first comprehensive unbiased analysis on the role of glaciers and snow in the water balance of major Asian Rivers, sensitivity of glacial systems to climate change and related implications for agriculture, food security and livelihoods in these basins with multiple mapped material and inventories viii) multi-model evaluation of water availability and allocation to support various policy scenarios that aim to enhance irrigation efficiency, water-productivity and a flow of benefits for the poor in Indus Basin ix) An inventory of socio-economic methodologies to quantify climate change impacts, and a review of adaptation options to CC in Peninsular India x) finalization of strategic recommendations on how to respond to climate-induced challenges in water supply, flooding and wastewater generation in Accra and Addis</p> |
| Output 1.1.2 Building of regional and national capacities to produce and communicate socially inclusive adaptation and mitigation strategies for progressive climate change at the national level (e.g. through NAPAs) | |
| <p><i>Prepare a succinct summary of activities and deliverables, organised by Output level of the CCAFS objectives</i></p> | <p>The work under this Output included large-scale global modelling of water-related implications of CC with a view to analyse water availability for agriculture, potential for water savings with less food wastage, water saving with "healthy diet" - under different Climate Change scenarios - globally. The research documented the results of various such scenarios for regions and Nations. In addition, IWMI continued to work with Sri Lanka Government on CC adaptation - followed from the previously successful documentation and communication of IWMI 2011 products. In 2012, this resulted in inclusion of IWMI representative into Expert Committee on Climate Change Adaptation - and advisory body for the Government of Sri Lanka on adaptation measures</p> |
| Theme 2. Adaptation through Managing Climate Risk | |
| Objective 2.1 Identify and test innovations that enable rural communities to better manage climate-related risk and build more resilient livelihoods | |
| Outcome 2.1: Systematic technical and policy support by development agencies for farm- to community-level agricultural risk management strategies and actions that buffer against climate shocks and enhance livelihood resilience in at least 20 countries | |
| Output 2.1.1 Synthesized knowledge and evidence on innovative risk management strategies that foster resilient rural livelihoods and sustain a food secure environment | |
| <p><i>Prepare a succinct summary of activities and deliverables, organised by Output level of the CCAFS objectives</i></p> | <p>The work under this output included the development of new method for identification of inundated areas using satellite imagery, mapping flood risk over larger South Asia Region under current climates using remotely sensed data - with a detailed spatial resolution of 0.5 km daily, identification of flood risk hot spots where flood risk increased / decrease in recent times, and analysis of trends in various agriculturally-relevant climatic and hydrological variables related to rainfall (frequency, timing, etc.) in various regions. In 2012, started to examine the possibilities of using our flood-risk products in the context of weather insurance and re-insurance. Trend analysis suggested that while rainfall trends may not be seen or significant at individual sites, they become significant if the data is analysed regionally.</p> |
| Objective 2.3 Support risk management through enhanced prediction of climate impacts on agriculture, and enhanced climate information and services | |
| Outcome 2.3 Enhanced uptake and use of improved climate information products and services, and of information about agricultural production and biological threats, by resource-poor farmers, particularly vulnerable groups and women, in at least 12 countries | |
| Output 2.3.2 Synthesized knowledge and evidence on institutional arrangements and communication processes for enhancing climate services for agriculture and food security, including services that reach marginalized farmers and women | |
| <p><i>Prepare a succinct summary of activities and deliverables, organised by Output level of the CCAFS objectives</i></p> | <p>Activities under this output are primarily confined to one ongoing bilateral Project funded by IFAD and focusing on the novel ways of using technology for water-related information services to farmers. Detailed surveys and field visits was completed for Egypt, Ethiopia and Sudan to examine user (farmers) needs. The idea is to have a fully operational mobile phone based information service in at least 3 countries that, through mobile phones, brings farmer information on the condition of their fields, soil water content, advise on irrigation scheduling etc - that is derived from high-tech detailed remote sensing on-line data (breaking the digital divide between RS and farmers). Special capacity building programs on the use of ICT for weather and water information for farmers and functionaries were organised for sites at Egypt and Ethiopia. Prototype of the service and advisories have been developed and we expect the services to be operational in later part of 2013 and early part of 2014 - depending on the country.</p> |

| Theme 4. Integration for Decision Making | |
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| Objective 4.2 Assemble data and tools for analysis and planning | |
| Outcome 4.2 Improved frameworks, databases and methods for planning responses to climate change used by national agencies in at least 20 countries and by at least 10 key international and regional agencies | |
| Output 4.2.1 Integrated assessment framework, toolkits and databases to assess climate change impacts on agricultural systems and their supporting natural resources | |
| Regional site and baseline characterization | |
| Prepare a succinct summary of activities and deliverables, organised by Output level of the CCAFS objectives | Most of the products under this outputs are targeted databases of climate-related parameters. A new methodology for reconstruction of daily rainfall 1 km X 1 km fields for data-poor regions has been developed based on remote sensing vegetation condition data and limited ground gauged rainfall observations. The first cut of reconstructed rainfall fields for Sri Lanka for the decade of 2000-2010 has been produced and is being fine-tuned, as was recommended by the paper reviewers. In parallel, the researchers from IWMI, Cornell U and Virginia Politech in USA jointly developed a new method+ology for use of Climate Forecast System Reanalysis (CFSR) to Improve Input into basin hydrology models and tested it in Blue Nile Basin. |

List of publications that acknowledge CCAFS support

(a) Each Program Participant must list all publications that acknowledge CCAFS support. Only include publications that came out in final version in the calendar year. Please do not include journal papers under review (submitted etc) or out in electronic format ahead of print, except of course for electronic-only journals.

(b) Please try to format references in the Harvard style. A clear guide can be found here:

<http://libweb.anglia.ac.uk/referencing/harvard.htm>

(c) For journal articles, please indicate all of the references that are "green open access" with a single asterisk and those that are "gold open access" with a double asterisk. This is now a requirement from CGIAR donors. Green open access means that the authors have made a free copy available on a website. Gold open access means that the journal allows free download (either as standard practice or because the authors paid for it).

(d) For all publications that are up online, please provide a web link if possible. This will help us to advertise your work more widely.

CCAFS Center Led Activities

IWMI - International Water Management Institute

| | | |
|---------------|----------------|---------------------|
| Publication 1 | Type | Citation identifier |
| | Journal papers | |
| | Citation | |
| Publication 2 | Type | Citation identifier |
| | Book chapters | |
| | Citation | |
| Publication 3 | Type | Citation identifier |
| | Journal papers | |
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| Publication 4 | Type | Citation identifier |
| | Journal papers | |
| | Citation Bharati, Luna; Gurung, Pabitra; Jayakody, Priyantha. 2012. Hydrologic characterization of the Koshi Basin and the impact of climate change. Hydro Nepal: Journal of Water, Energy and Environment, April:18-22. (Special issue on "Proceedings of National Conference on Water, Food Security and Climate Change in Nepal" with contributions by IWMI authors). | |
| Publication 5 | Type | Citation identifier |
| | Other | |
| | Citation Bharati, Luna; Smakhtin, Vladimir; Gurung, Pabitra; Lacombe, Guillaume; Amarasinghe, Upali A.; Sapkota, Pratibha; Hoanh, Chu Thai. 2012. Environmentally sustainable water resources management in the Upper Ganga Basin under changing climate conditions. [Project report prepared by IWMI for World Wide Fund for Nature, India under the project "Environmentally Sustainable Water Resources Management in the Upper Ganga Basin" Kathmandu, Nepal: International Water Management Institute (IWMI). 51p. | |
| Publication 6 | Type | Citation identifier |
| | Journal papers | doi: http://dx.doi.org/10.1007/s10113-012-0287-4 |
| | Citation Boelee, Eline; Yohannes, M.; Poda, J.-N.; McCartney, Matthew; Hagos, Fitsum; Cecchi, P.; Kibret, S.; Laamrani, H. 2012. Options for water storage and rainwater harvesting to improve health and resilience against climate change in Africa. Regional Environmental Change, 11p. (Online first). | |
| Publication 7 | Type | Citation identifier |
| | Journal papers | doi:10.2166/wpt.2012.025 |
| | Citation B. Croke, N. Herron, P. Pavelic, S. Ahmed, V. R. Reddy, R. Ranjan, G. Syme, M. Samad and K. V. Rao (2012) Impacts of meso-scale Watershed Development in Andhra Pradesh (India) and their implications for designing and implementing improved WSD policies and programs. Water Practice & Technology Vol 7 No 1, | |
| Publication 8 | Type | Citation identifier |
| | Other | |
| | Citation Giriraj, Amarnath. 2012. Large-scale flood event: global and regional assessment. In Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP). International Training Course: Application of Space Technology for Disaster Risk Reduction. Lecture notes. Dehradun, India: Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP). pp.187-202. | |

| Publication 9 | <table> <tr> <th data-bbox="456 155 743 176">Type</th><th data-bbox="857 155 1370 176">Citation identifier</th></tr> <tr> <td data-bbox="456 176 743 212">Conference proceedings</td><td data-bbox="857 176 1370 212"></td></tr> <tr> <th colspan="2" data-bbox="399 260 1427 281">Citation</th></tr> <tr> <td colspan="2" data-bbox="399 281 1427 491"> <p>Giriraj, Amarnath; Ameer, Mohamed; Aggarwal, Pramod; Smakhtin, Vladimir. 2012. Detecting spatio-temporal changes in the extent of seasonal and annual flooding in South Asia using multi-resolution satellite data. In Civco, D. L.; Ehlers, M.; Habib, S.; Maltese, A.; Messinger, D.; Michel, U.; Nikolakopoulos, K. G.; Schulz, K. (Eds.). Earth resources and environmental remote sensing/GIS applications III: proceedings of the International Society for Optics and Photonics (SPIE), Vol.8538, Amsterdam, Netherland, 1-6 July 2012. Bellingham, WA, USA: International Society for Optics and Photonics (SPIE). 11p.</p> </td></tr> </table> | Type | Citation identifier | Conference proceedings | | Citation | | <p>Giriraj, Amarnath; Ameer, Mohamed; Aggarwal, Pramod; Smakhtin, Vladimir. 2012. Detecting spatio-temporal changes in the extent of seasonal and annual flooding in South Asia using multi-resolution satellite data. In Civco, D. L.; Ehlers, M.; Habib, S.; Maltese, A.; Messinger, D.; Michel, U.; Nikolakopoulos, K. G.; Schulz, K. (Eds.). Earth resources and environmental remote sensing/GIS applications III: proceedings of the International Society for Optics and Photonics (SPIE), Vol.8538, Amsterdam, Netherland, 1-6 July 2012. Bellingham, WA, USA: International Society for Optics and Photonics (SPIE). 11p.</p> | |
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| <p>Giriraj, Amarnath; Ameer, Mohamed; Aggarwal, Pramod; Smakhtin, Vladimir. 2012. Detecting spatio-temporal changes in the extent of seasonal and annual flooding in South Asia using multi-resolution satellite data. In Civco, D. L.; Ehlers, M.; Habib, S.; Maltese, A.; Messinger, D.; Michel, U.; Nikolakopoulos, K. G.; Schulz, K. (Eds.). Earth resources and environmental remote sensing/GIS applications III: proceedings of the International Society for Optics and Photonics (SPIE), Vol.8538, Amsterdam, Netherland, 1-6 July 2012. Bellingham, WA, USA: International Society for Optics and Photonics (SPIE). 11p.</p> | | | | | | | | | |
| Publication 10 | <table> <tr> <th data-bbox="456 531 743 552">Type</th><th data-bbox="857 531 1370 552">Citation identifier</th></tr> <tr> <td data-bbox="456 552 743 588">Journal papers</td><td data-bbox="857 552 1370 588">DOI 10.1007/s10661-012-2810-y.</td></tr> <tr> <th colspan="2" data-bbox="399 636 1427 657">Citation</th></tr> <tr> <td colspan="2" data-bbox="399 657 1427 762"> <p>Gumma, M. K. and Pavelic, P. 2012 Mapping of groundwater potential zones across Ghana using remote sensing, geographic information systems and spatial modelling. Environmental Monitoring and Assessment</p> </td></tr> </table> | Type | Citation identifier | Journal papers | DOI 10.1007/s10661-012-2810-y. | Citation | | <p>Gumma, M. K. and Pavelic, P. 2012 Mapping of groundwater potential zones across Ghana using remote sensing, geographic information systems and spatial modelling. Environmental Monitoring and Assessment</p> | |
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| Journal papers | DOI 10.1007/s10661-012-2810-y. | | | | | | | | |
| Citation | | | | | | | | | |
| <p>Gumma, M. K. and Pavelic, P. 2012 Mapping of groundwater potential zones across Ghana using remote sensing, geographic information systems and spatial modelling. Environmental Monitoring and Assessment</p> | | | | | | | | | |
| Publication 11 | <table> <tr> <th data-bbox="456 810 743 831">Type</th><th data-bbox="857 810 1370 831">Citation identifier</th></tr> <tr> <td data-bbox="456 831 743 867">Journal papers</td><td data-bbox="857 831 1370 867"></td></tr> <tr> <th colspan="2" data-bbox="399 915 1427 936">Citation</th></tr> <tr> <td colspan="2" data-bbox="399 936 1427 1062"> <p>Gurung, Pabitra; Bharati, Luna. 2012. Downstream impacts of the Melamchi Inter-Basin Water Transfer Plan (MIWTP) under current and future climate change projections. Hydro Nepal: Journal of Water, Energy and Environment, April:23-29. (Special issue on "Proceedings of National Conference on Water, Food Security and Climate Change in Nepal" with contributions by IWMI authors).</p> </td></tr> </table> | Type | Citation identifier | Journal papers | | Citation | | <p>Gurung, Pabitra; Bharati, Luna. 2012. Downstream impacts of the Melamchi Inter-Basin Water Transfer Plan (MIWTP) under current and future climate change projections. Hydro Nepal: Journal of Water, Energy and Environment, April:23-29. (Special issue on "Proceedings of National Conference on Water, Food Security and Climate Change in Nepal" with contributions by IWMI authors).</p> | |
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| Journal papers | | | | | | | | | |
| Citation | | | | | | | | | |
| <p>Gurung, Pabitra; Bharati, Luna. 2012. Downstream impacts of the Melamchi Inter-Basin Water Transfer Plan (MIWTP) under current and future climate change projections. Hydro Nepal: Journal of Water, Energy and Environment, April:23-29. (Special issue on "Proceedings of National Conference on Water, Food Security and Climate Change in Nepal" with contributions by IWMI authors).</p> | | | | | | | | | |
| Publication 12 | <table> <tr> <th data-bbox="456 1110 743 1131">Type</th><th data-bbox="857 1110 1370 1131">Citation identifier</th></tr> <tr> <td data-bbox="456 1131 743 1167">Journal papers</td><td data-bbox="857 1131 1370 1167">doi: http://dx.doi.org/10.2166/wp.2011.065</td></tr> <tr> <th colspan="2" data-bbox="399 1215 1427 1236">Citation</th></tr> <tr> <td colspan="2" data-bbox="399 1236 1427 1341"> <p>Hosterman, H. R.; McCornick, Peter G.; Kistin, E. J.; Sharma, Bharat; Bharati, Luna. 2012. Freshwater, climate change and adaptation in the Ganges River Basin. Water Policy, 14(1):67-79.</p> </td></tr> </table> | Type | Citation identifier | Journal papers | doi: http://dx.doi.org/10.2166/wp.2011.065 | Citation | | <p>Hosterman, H. R.; McCornick, Peter G.; Kistin, E. J.; Sharma, Bharat; Bharati, Luna. 2012. Freshwater, climate change and adaptation in the Ganges River Basin. Water Policy, 14(1):67-79.</p> | |
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| Journal papers | doi: http://dx.doi.org/10.2166/wp.2011.065 | | | | | | | | |
| Citation | | | | | | | | | |
| <p>Hosterman, H. R.; McCornick, Peter G.; Kistin, E. J.; Sharma, Bharat; Bharati, Luna. 2012. Freshwater, climate change and adaptation in the Ganges River Basin. Water Policy, 14(1):67-79.</p> | | | | | | | | | |
| Publication 13 | <table> <tr> <th data-bbox="456 1390 743 1411">Type</th><th data-bbox="857 1390 1370 1411">Citation identifier</th></tr> <tr> <td data-bbox="456 1411 743 1446">Journal papers</td><td data-bbox="857 1411 1370 1446">DOI:10.1080/02508060.2012.708601</td></tr> <tr> <th colspan="2" data-bbox="399 1495 1427 1516">Citation</th></tr> <tr> <td colspan="2" data-bbox="399 1516 1427 1614"> <p>Kumar, S., Surinaidu L., Pavelic, P. and Davidson, B. 2012 Integrating cost and benefit considerations with supply- and demand-based strategies for basin-scale groundwater management in South-West India. Water International</p> </td></tr> </table> | Type | Citation identifier | Journal papers | DOI:10.1080/02508060.2012.708601 | Citation | | <p>Kumar, S., Surinaidu L., Pavelic, P. and Davidson, B. 2012 Integrating cost and benefit considerations with supply- and demand-based strategies for basin-scale groundwater management in South-West India. Water International</p> | |
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| Journal papers | DOI:10.1080/02508060.2012.708601 | | | | | | | | |
| Citation | | | | | | | | | |
| <p>Kumar, S., Surinaidu L., Pavelic, P. and Davidson, B. 2012 Integrating cost and benefit considerations with supply- and demand-based strategies for basin-scale groundwater management in South-West India. Water International</p> | | | | | | | | | |
| Publication 14 | <table> <tr> <th data-bbox="456 1656 743 1677">Type</th><th data-bbox="857 1656 1370 1677">Citation identifier</th></tr> <tr> <td data-bbox="456 1677 743 1713">Journal papers</td><td data-bbox="857 1677 1370 1713">doi: http://dx.doi.org/10.1007/s10584-011-0359-3</td></tr> <tr> <th colspan="2" data-bbox="399 1761 1427 1782">Citation</th></tr> <tr> <td colspan="2" data-bbox="399 1782 1427 1887"> <p>Lacombe, Guillaume; Hoanh, Chu Thai; Smakhtin, Vladimir. 2012. Multi-year variability or unidirectional trends?: mapping long-term precipitation and temperature changes in continental Southeast Asia using PRECIS regional climate model. Climatic Change, 113(2):285-299.</p> </td></tr> </table> | Type | Citation identifier | Journal papers | doi: http://dx.doi.org/10.1007/s10584-011-0359-3 | Citation | | <p>Lacombe, Guillaume; Hoanh, Chu Thai; Smakhtin, Vladimir. 2012. Multi-year variability or unidirectional trends?: mapping long-term precipitation and temperature changes in continental Southeast Asia using PRECIS regional climate model. Climatic Change, 113(2):285-299.</p> | |
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| Citation | | | | | | | | | |
| <p>Lacombe, Guillaume; Hoanh, Chu Thai; Smakhtin, Vladimir. 2012. Multi-year variability or unidirectional trends?: mapping long-term precipitation and temperature changes in continental Southeast Asia using PRECIS regional climate model. Climatic Change, 113(2):285-299.</p> | | | | | | | | | |

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| Publication 15 | Type | Citation identifier |
| | Journal papers | doi: http://dx.doi.org/10.1080/02626667.2012.728291 |
| | Citation Lacombe, Guillaume; McCartney, Matthew; Forkuor, Gerald. 2012. Drying climate in Ghana over the period 1960–2005: evidence from the resampling-based Mann-Kendall test at local and regional levels. Hydrological Sciences Journal, 16p. (Online first). | |
| Publication 16 | Type | Citation identifier |
| | Journal papers | doi: http://dx.doi.org/10.1007/s00704-012-0654-6 |
| | Citation Lacombe, Guillaume; Smakhtin, Vladimir; Hoanh, Chu Thai. 2012. Wetting tendency in the Central Mekong Basin consistent with climate change-induced atmospheric disturbances already observed in East Asia. Theoretical and Applied Climatology, 13p. (Online first). | |
| Publication 17 | Type | Citation identifier |
| | Journal papers | doi: http://dx.doi.org/10.1007/s12571-011-0154-z |
| | Citation Mainuddin, M.; Kirby, M.; Hoanh, Chu Thai. 2011. Adaptation to climate change for food security in the lower Mekong Basin. Food Security, 3(4):433-450. | |
| Publication 18 | Type | Citation identifier |
| | Journal papers | doi: http://dx.doi.org/10.1080/02508060.2012.645192 |
| | Citation Mainuddin, M.; Kirby, M.; Hoanh, Chu Thai. 2012. Water productivity responses and adaptation to climate change in the Lower Mekong Basin. Water International, 37(1):53-74. | |
| Publication 19 | Type | Citation identifier |
| | Other | doi:10.5337/2012.219. |
| | Citation McCartney, M.; Forkuor, G.; Sood, A.; Amisigo, B.; Hattermann, F.; Muthuwatta, L. 2012. The water resource implications of changing climate in the Volta River Basin. Colombo, Sri Lanka: International Water Management Institute (IWMI). 40p. (IWMI Research Report 146). | |
| Publication 20 | Type | Citation identifier |
| | Book chapters | |
| | Citation Mulligan, M.; Fisher, M.; Sharma, Bharat; Xu, Z. X.; Ringler, C.; Mahe, G.; Jarvis, A.; Ramirez, J.; Clanet, J.-C.; Ogilvie, A.; Ahmad, M. D. 2012. The nature and impact of climate change in the Challenge Program on Water and Food (CPWF) basins. In Fisher, M.; Cook, Simon (Eds.). Water, food and poverty in river basins: defining the limits. London, UK: Routledge. pp.334-362 | |

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| Publication 21 | <div>Type</div> <div>Books</div> | <div>Citation identifier</div> |
| | <div>Citation</div> <div>Nagothu, U. S.; Gosain, A. K.; Palanisami, Kuppannan. (Eds.) 2012. Water and climate change: an integrated approach to address adaptation challenges. New Delhi, India: Macmillan. 282p.</div> | |
| | | |
| Publication 22 | <div>Type</div> <div>Book chapters</div> | <div>Citation identifier</div> |
| | <div>Citation</div> <div>Nagothu, U. S.; Gosain, A. K.; Palanisami, Kuppannan. 2012. An introduction to climate change impacts on water resources and adaptation. In Nagothu, U. S.; Gosain, A. K.; Palanisami, Kuppannan (Eds.). Water and climate change: an integrated approach to address adaptation challenges. New Delhi, India: Macmillan. pp.1-20</div> | |
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| Publication 23 | <div>Type</div> <div>Conference proceedings</div> | <div>Citation identifier</div> |
| | <div>Citation</div> <div>Nhamo, Luxon; Chilonda, Pius. 2012. Water and agriculture vulnerability to climate change and adaptive capacity in southern Africa. Paper presented at the WISA (Water Institute of Southern Africa) Biennial conference on Water Footprints, Cape Town, South Africa, 6-10 May 2012. 9p.</div> | |
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| Publication 24 | <div>Type</div> <div>Book chapters</div> | <div>Citation identifier</div> |
| | <div>Citation</div> <div>Palanisami, Kuppannan; Kakumanu, Krishna Reddy; Nagothu, U. S.; Ranganathan, C. R.; Barton, D. N. 2012. Vulnerability assessment, impacts of climate change on agricultural production in the Godavari River Basin, India. In Nagothu, U. S.; Gosain, A. K.; Palanisami, Kuppannan (Eds.). Water and climate change: an integrated approach to address adaptation challenges. New Delhi, India: Macmillan. pp.169-193.</div> | |
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| Publication 25 | <div>Type</div> <div>Book chapters</div> | <div>Citation identifier</div> |
| | <div>Citation</div> <div>Palanisami, Kuppannan; Ranganathan, C. R.; Kakumanu, Krishna Reddy; Nagothu, U. S. 2012. Impact of climate change on agriculture and optimum land and water use planning: evidence from the Sri Ram Sagar Project, Godavari Basin. [India]. In Nagothu, U. S.; Gosain, A. K.; Palanisami, Kuppannan (Eds.). Water and climate change: an integrated approach to address adaptation challenges. New Delhi, India: Macmillan. pp.194-237</div> | |
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| Publication 26 | <div>Type</div> <div>Book chapters</div> | <div>Citation identifier</div> |
| | <div>Citation</div> <div>Palanisami, Kuppannan; Ranganathan, C. R.; Senthilnathan, S.; Govindaraj, S. 2012. Economic analysis of climate change impacts on agriculture at farm level. In Anbumozhi, V.; Breiling, M.; Pathmarajah, S.; Reddy, V. R. (Eds.). Climate change in Asia and the Pacific: how can countries adapt?. New Delhi, India: Sage. pp.276-286.</div> | |
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| Publication 27 | Type | Citation identifier |
| | Books | doi: 10.5337/2012.213. |
| | Citation Pavelic, P., Giordano, M., Keraita, B., Rao, T., and Ramesh, V. (Eds.). 2012 Groundwater availability and use in Sub-Saharan Africa: a review of 15 countries. Colombo, Sri Lanka: International Water Management Institute (IWMI). | |
| Publication 28 | Type | Citation identifier |
| | Journal papers | |
| | Citation Pavelic, P., Smakhtin, V., Favreau, G. and Villholth, K.G. 2012 Water balance approach for assessing potential for smallholder groundwater irrigation in sub-Saharan Africa. Water SA 38(3):399-405. | |
| Publication 29 | Type | Citation identifier |
| | Journal papers | |
| | Citation Pavelic, P., Srisuk, K., Saraphirom, P., Nadee, S., Pholkern, K., Chusanathas, S., Munyou, S., Tangsutthinon, T., Intarasut, T. and Smakhtin, V. 2012 Balancing-out floods and droughts: Opportunities to utilize floodwater harvesting and groundwater storage for agricultural development in Thailand. Journal of Hydrology 470–471:55–64. | |
| Publication 30 | Type | Citation identifier |
| | Journal papers | doi: http://dx.doi.org/10.1016/j.agwat.2011.10.01 |
| | Citation Pavelic, Paul; Patankar, U.; Acharya, Sreedhar; Jella, Kiran; Gumma, M. K. 2012. Role of groundwater in buffering irrigation production against climate variability at the basin scale in South-West India. Agricultural Water Management, 103(1):78-87. | |
| Publication 31 | Type | Citation identifier |
| | Other | |
| | Citation Siddiqui, Salman; Bharati, Luna; Pant, Menuka; Gurung, Pabitra; Rakhal, Biplov. 2012. Nepal: building climate resilience of watersheds in mountain eco-regions – climate change and vulnerability mapping in watersheds in middle and high mountains of Nepal. ADB Technical Assistance Consultant's Report for Department of Soil Conservation and Watershed Management (DSCWM), Government of Nepal. Kathmandu, Nepal: Asian Development Bank (ADB). 96p. | |
| Publication 32 | Type | Citation identifier |
| | Journal papers | doi: http://dx.doi.org/10.1659/MRD-JOURNAL-D-11-00127.1 |
| | Citation Stucker, Dominic; Kazbekov, Jusipbek; Yakubov, Murat; Wegerich, Kai. 2012. Climate change in a small transboundary tributary of the Syr Darya calls for effective cooperation and adaptation. Mountain Research and Development, 32(3):275-285. | |

| Publication 33 | <table> <tr> <th data-bbox="456 153 743 174">Type</th><th data-bbox="857 153 1370 174">Citation identifier</th></tr> <tr> <td data-bbox="456 174 743 212">Journal papers</td><td data-bbox="857 174 1370 212">doi: http://dx.doi.org/10.1016/j.jag.2012.07.014</td></tr> <tr> <th colspan="2" data-bbox="399 258 1427 279">Citation</th></tr> <tr> <td colspan="2" data-bbox="399 279 1427 384">Tang, B.-H.; Shrestha, B.; Li, Z.-L.; Liu, G.; Ouyang, H.; Gurung, D. R.; Giriraj, Amarnath; Aung, K. S. 2012. Determination of snow cover from MODIS data for the Tibetan Plateau Region. International Journal of Applied Earth Observation and Geoinformation, 10p. (Online first).</td></tr> </table> | Type | Citation identifier | Journal papers | doi: http://dx.doi.org/10.1016/j.jag.2012.07.014 | Citation | | Tang, B.-H.; Shrestha, B.; Li, Z.-L.; Liu, G.; Ouyang, H.; Gurung, D. R.; Giriraj, Amarnath; Aung, K. S. 2012. Determination of snow cover from MODIS data for the Tibetan Plateau Region. International Journal of Applied Earth Observation and Geoinformation, 10p. (Online first). | |
|---|--|------|---------------------|----------------|--|----------|--|---|--|
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| Journal papers | doi: http://dx.doi.org/10.1016/j.jag.2012.07.014 | | | | | | | | |
| Citation | | | | | | | | | |
| Tang, B.-H.; Shrestha, B.; Li, Z.-L.; Liu, G.; Ouyang, H.; Gurung, D. R.; Giriraj, Amarnath; Aung, K. S. 2012. Determination of snow cover from MODIS data for the Tibetan Plateau Region. International Journal of Applied Earth Observation and Geoinformation, 10p. (Online first). | | | | | | | | | |
| Publication 34 | <table> <tr> <th data-bbox="456 426 743 447">Type</th><th data-bbox="857 426 1370 447">Citation identifier</th></tr> <tr> <td data-bbox="456 447 743 485">Journal papers</td><td data-bbox="857 447 1370 485">doi: http://dx.doi.org/10.1016/j.envsci.2011.09.003</td></tr> <tr> <th colspan="2" data-bbox="399 531 1427 552">Citation</th></tr> <tr> <td colspan="2" data-bbox="399 552 1427 688">Vermeulen, S. J.; Aggarwal, Pramod; Ainslie, A.; Angelone, C.; Campbell, B. M.; Challinor, A. J.; Hansen, J. W.; Ingram, J. S. I.; Jarvis, A.; Kristjanson, P.; Lau, C.; Nelson, G. C.; Thornton, P. K.; Wollenberg, E. 2012. Options for support to agriculture and food security under climate change. Environmental Science and Policy, 15(1):136-144.</td></tr> </table> | Type | Citation identifier | Journal papers | doi: http://dx.doi.org/10.1016/j.envsci.2011.09.003 | Citation | | Vermeulen, S. J.; Aggarwal, Pramod; Ainslie, A.; Angelone, C.; Campbell, B. M.; Challinor, A. J.; Hansen, J. W.; Ingram, J. S. I.; Jarvis, A.; Kristjanson, P.; Lau, C.; Nelson, G. C.; Thornton, P. K.; Wollenberg, E. 2012. Options for support to agriculture and food security under climate change. Environmental Science and Policy, 15(1):136-144. | |
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| Journal papers | doi: http://dx.doi.org/10.1016/j.envsci.2011.09.003 | | | | | | | | |
| Citation | | | | | | | | | |
| Vermeulen, S. J.; Aggarwal, Pramod; Ainslie, A.; Angelone, C.; Campbell, B. M.; Challinor, A. J.; Hansen, J. W.; Ingram, J. S. I.; Jarvis, A.; Kristjanson, P.; Lau, C.; Nelson, G. C.; Thornton, P. K.; Wollenberg, E. 2012. Options for support to agriculture and food security under climate change. Environmental Science and Policy, 15(1):136-144. | | | | | | | | | |
| Publication 35 | <table> <tr> <th data-bbox="456 730 743 751">Type</th><th data-bbox="857 730 1370 751">Citation identifier</th></tr> <tr> <td data-bbox="456 751 743 789">Journal papers</td><td data-bbox="857 751 1370 789"></td></tr> <tr> <th colspan="2" data-bbox="399 835 1427 856">Citation</th></tr> <tr> <td colspan="2" data-bbox="399 856 1427 961">Eriyagama, N., Chemin, Y., Alankara, R., Amarasinghe, U., and Hoanh, C.T. 2012. A Methodology for Quantifying Global Consumptive Water Use of Coffee for Sustainable Production under Conditions of Climate Change. Agricultural Systems (under review)</td></tr> </table> | Type | Citation identifier | Journal papers | | Citation | | Eriyagama, N., Chemin, Y., Alankara, R., Amarasinghe, U., and Hoanh, C.T. 2012. A Methodology for Quantifying Global Consumptive Water Use of Coffee for Sustainable Production under Conditions of Climate Change. Agricultural Systems (under review) | |
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| Journal papers | | | | | | | | | |
| Citation | | | | | | | | | |
| Eriyagama, N., Chemin, Y., Alankara, R., Amarasinghe, U., and Hoanh, C.T. 2012. A Methodology for Quantifying Global Consumptive Water Use of Coffee for Sustainable Production under Conditions of Climate Change. Agricultural Systems (under review) | | | | | | | | | |
| Publication 36 | <table> <tr> <th data-bbox="456 1003 743 1024">Type</th><th data-bbox="857 1003 1370 1024">Citation identifier</th></tr> <tr> <td data-bbox="456 1024 743 1062">Other</td><td data-bbox="857 1024 1370 1062"></td></tr> <tr> <th colspan="2" data-bbox="399 1108 1427 1129">Citation</th></tr> <tr> <td colspan="2" data-bbox="399 1129 1427 1234">Sood, A., C.J. Chartres, J. Lundqvist and M. Ait-Kadi (2013). Global Water Demand Scenarios 2010-2050: a cause of concern for food security. IWMI Research Report</td></tr> </table> | Type | Citation identifier | Other | | Citation | | Sood, A., C.J. Chartres, J. Lundqvist and M. Ait-Kadi (2013). Global Water Demand Scenarios 2010-2050: a cause of concern for food security. IWMI Research Report | |
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| Other | | | | | | | | | |
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| Sood, A., C.J. Chartres, J. Lundqvist and M. Ait-Kadi (2013). Global Water Demand Scenarios 2010-2050: a cause of concern for food security. IWMI Research Report | | | | | | | | | |
| Publication 37 | <table> <tr> <th data-bbox="456 1276 743 1297">Type</th><th data-bbox="857 1276 1370 1297">Citation identifier</th></tr> <tr> <td data-bbox="456 1297 743 1335">Book chapters</td><td data-bbox="857 1297 1370 1335"></td></tr> <tr> <th colspan="2" data-bbox="399 1381 1427 1402">Citation</th></tr> <tr> <td colspan="2" data-bbox="399 1402 1427 1518">Cai, X., Molden, D., Mainuddin, M., Sharma, B., Ahmad, M. D., Karimi, P, 2012. Producing more food with less water in a changing world: assessment of water productivity in 10 major river basins. In Fisher, M.; Cook, Simon (Eds.). Water, food and poverty in river basins: defining the limits. London, UK: Routledge. pp.280-300.</td></tr> </table> | Type | Citation identifier | Book chapters | | Citation | | Cai, X., Molden, D., Mainuddin, M., Sharma, B., Ahmad, M. D., Karimi, P, 2012. Producing more food with less water in a changing world: assessment of water productivity in 10 major river basins. In Fisher, M.; Cook, Simon (Eds.). Water, food and poverty in river basins: defining the limits. London, UK: Routledge. pp.280-300. | |
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| Book chapters | | | | | | | | | |
| Citation | | | | | | | | | |
| Cai, X., Molden, D., Mainuddin, M., Sharma, B., Ahmad, M. D., Karimi, P, 2012. Producing more food with less water in a changing world: assessment of water productivity in 10 major river basins. In Fisher, M.; Cook, Simon (Eds.). Water, food and poverty in river basins: defining the limits. London, UK: Routledge. pp.280-300. | | | | | | | | | |
| Publication 38 | <table> <tr> <th data-bbox="456 1549 743 1570">Type</th><th data-bbox="857 1549 1370 1570">Citation identifier</th></tr> <tr> <td data-bbox="456 1570 743 1608">Journal papers</td><td data-bbox="857 1570 1370 1608">doi: 10.1061/(ASCE)IR.1943-4774.0000470</td></tr> <tr> <th colspan="2" data-bbox="399 1654 1427 1675">Citation</th></tr> <tr> <td colspan="2" data-bbox="399 1675 1427 1791">Luo, Y., Jiang, Y., Peng, S., Khan, S., Cai, X., Wang, W. and Jiao, X. 2012. Urban Weather Data to Estimate Reference Evapotranspiration for Rural Irrigation Management. Journal of Irrigation and Drainage Engineering, ASCE. 138(9): 837–842.</td></tr> </table> | Type | Citation identifier | Journal papers | doi: 10.1061/(ASCE)IR.1943-4774.0000470 | Citation | | Luo, Y., Jiang, Y., Peng, S., Khan, S., Cai, X., Wang, W. and Jiao, X. 2012. Urban Weather Data to Estimate Reference Evapotranspiration for Rural Irrigation Management. Journal of Irrigation and Drainage Engineering, ASCE. 138(9): 837–842. | |
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| Publication 39 | <table> <tr> <th data-bbox="456 153 743 212">Type</th><th data-bbox="857 153 1370 212">Citation identifier</th></tr> <tr> <td data-bbox="456 180 743 212">Conference proceedings</td><td data-bbox="857 180 1370 212"></td></tr> <tr> <th colspan="2" data-bbox="399 258 1427 279">Citation</th></tr> <tr> <td colspan="2" data-bbox="399 279 1427 384">Cai, X., Chunga, B., Chijere, A., Hoanh, C. T., Seyoum, S. 2012. A system dynamic approach towards integrated water allocation for small holder irrigation and aquaculture in Malawi, Proceedings of the 13th WaterNet/WARFSA/GWP-SA International Symposium on Integrated Water Resource Management, 31 Oct – 2 Nov 2012, Johannesburg, South Africa.</td></tr> </table> | Type | Citation identifier | Conference proceedings | | Citation | | Cai, X., Chunga, B., Chijere, A., Hoanh, C. T., Seyoum, S. 2012. A system dynamic approach towards integrated water allocation for small holder irrigation and aquaculture in Malawi, Proceedings of the 13th WaterNet/WARFSA/GWP-SA International Symposium on Integrated Water Resource Management, 31 Oct – 2 Nov 2012, Johannesburg, South Africa. | |
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| Publication 40 | <table> <tr> <th data-bbox="456 426 743 485">Type</th><th data-bbox="857 426 1370 485">Citation identifier</th></tr> <tr> <td data-bbox="456 453 743 485">Other</td><td data-bbox="857 453 1370 485"></td></tr> <tr> <th colspan="2" data-bbox="399 531 1427 552">Citation</th></tr> <tr> <td colspan="2" data-bbox="399 552 1427 657">Smakhtin, V. Savoskul, O (2012) Glacier Systems and Seasonal Snow Cover in Six Major Asian River Basins: Water Storage Properties under Changing Climate. IWMI Research Report Series -N149</td></tr> </table> | Type | Citation identifier | Other | | Citation | | Smakhtin, V. Savoskul, O (2012) Glacier Systems and Seasonal Snow Cover in Six Major Asian River Basins: Water Storage Properties under Changing Climate. IWMI Research Report Series -N149 | |
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| Publication 41 | <table> <tr> <th data-bbox="456 699 743 758">Type</th><th data-bbox="857 699 1370 758">Citation identifier</th></tr> <tr> <td data-bbox="456 726 743 758">Other</td><td data-bbox="857 726 1370 758"></td></tr> <tr> <th colspan="2" data-bbox="399 804 1427 825">Citation</th></tr> <tr> <td colspan="2" data-bbox="399 825 1427 930">Smakhtin, V. Savoskul, O (2012) Glacier Systems And Seasonal Snow Cover In Six Major Asian River Basins: Hydrological Role Under Changing Climate IWMI Research Report Series -N150</td></tr> </table> | Type | Citation identifier | Other | | Citation | | Smakhtin, V. Savoskul, O (2012) Glacier Systems And Seasonal Snow Cover In Six Major Asian River Basins: Hydrological Role Under Changing Climate IWMI Research Report Series -N150 | |
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| Publication 42 | <table> <tr> <th data-bbox="456 972 743 1031">Type</th><th data-bbox="857 972 1370 1031">Citation identifier</th></tr> <tr> <td data-bbox="456 999 743 1031">Other</td><td data-bbox="857 999 1370 1031"></td></tr> <tr> <th colspan="2" data-bbox="399 1077 1427 1098">Citation</th></tr> <tr> <td colspan="2" data-bbox="399 1098 1427 1203">Matthew McCartney, Lisa-Maria Rebelo, Stefanos Xenarios and Vladimir Smakhtin (2013) Agricultural water storage: assessing need and effectiveness in an era of climate change IWMI Research Report Series</td></tr> </table> | Type | Citation identifier | Other | | Citation | | Matthew McCartney, Lisa-Maria Rebelo, Stefanos Xenarios and Vladimir Smakhtin (2013) Agricultural water storage: assessing need and effectiveness in an era of climate change IWMI Research Report Series | |
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| Publication 43 | <table> <tr> <th data-bbox="456 1245 743 1304">Type</th><th data-bbox="857 1245 1370 1304">Citation identifier</th></tr> <tr> <td data-bbox="456 1272 743 1304">Journal papers</td><td data-bbox="857 1272 1370 1304">DOI: 10.1007/s10040-011-0824-0.</td></tr> <tr> <th colspan="2" data-bbox="399 1350 1427 1371">Citation</th></tr> <tr> <td colspan="2" data-bbox="399 1371 1427 1476">Syme, G.J., Ratna Reddy, V., Pavelic, P., Croke, B. and Ranjan, R. (2012) Confronting scale in watershed development in India. Hydrogeology Journal, Published Online</td></tr> </table> | Type | Citation identifier | Journal papers | DOI: 10.1007/s10040-011-0824-0. | Citation | | Syme, G.J., Ratna Reddy, V., Pavelic, P., Croke, B. and Ranjan, R. (2012) Confronting scale in watershed development in India. Hydrogeology Journal, Published Online | |
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2012 Case studies

Number of case studies to be submitted is dependent on budget size so please refer to the table on the explanatory notes. Each case study should be about half a page, and Program Participants are expected to build a portfolio of case studies over the years that demonstrate all different types.

CCAFS Center Led Activities IWMI - International Water Management Institute

| | | |
|-----------------|---|--|
| CASE STUDY 1 | Title Women's voices on climate change in Nepal | Author Florianne Clement |
| | Type Social differentiation and gender | Date (DD/MM/YYYY) 31/12/2012 |
| | Countries Nepal | |
| | Keywords participatory video; climate change; gender; Nepal | Photo URL |
| | Introduction/Objectives (400 characters) Climate change debates are largely driven by scientists and policy-makers in national and international arenas and men and women farmers have little influence over the design of the policies and interventions that aim at reducing their vulnerability. Participatory video, however, offers the opportunity for local people to raise their voices and share their perceptions and knowledge of this issue with a large audience. | |
| | Description of the project, procedures etc. (1100 characters) Pilot project on the use of participatory video as a means to raise the voices of rural women in public debates on climate change. Activities included: (1) Training on film production for a group of 12 women in Dhanusa District, south Nepal; (2) Production of two short films: one on climate change and livelihoods directed by the women participants and one documenting the training and videoing process, (3) Organization of two workshops to screen the films in Kathmandu and Janakpur, Dhanusa District. The films were also screened during the Annual Research Meeting of IWMI in December 2012. (4) Around 50 DVDs of the films have been disseminated to donors, INGOs and government officials in Kathmandu | |
| | Project results (be concrete as possible), innovate findings, novel outcomes and short discussion on the implication of these results (1100 characters) The Results are effectively summarised above. The film screenings received positive responses and enhanced the awareness of the audience on some issues commonly faced by farmers in Nepal such as the impact of climatic variability on livelihoods, men's migration and women's status or inequitable access to groundwater for irrigation. The training also increased the self-confidence of the women participants. On the longer term, this pilot project will be extended to a larger scale. This case study can be seen as capacity enhancement, innovative communication and as gender and differentiation study | |
| | Partners involved and their role (250 characters) RSDC (Nepali national NGO): Local resource organization: entry point to the community, facilitating agency Art for Change Trust (Indian national NGO): Provided training on film-making Farmers cooperative: helped with logistics. | |
| | Links/Sources for further information http://www.iwmi.cgiar.org/Offices/Asia/South_Asia/Nepal/Multimedia.aspx | |
| CASE STUDY 2 | Title Developing and disseminating tools for efficient use of ICT enabled services for weather and water information advice for farmers and functionaries in African countries | Author Bharat Sharma |
| | Type Capacity enhancement | Date (DD/MM/YYYY) |
| | Countries Egypt, Ethiopia | |
| | Keywords SmartICT, Weater and water information, Ethiopia, Egypt | Photo URL |
| | Introduction/Objectives (400 characters) Presently, advice and information on weather and efficient application of water through the use of ICT platforms is available only to large farmers in the developed countries. This study aimed to develop a similar farm-targetted information and advice to the smallholders in Africa: Ethiopia, Egypt, Sudan. The Capacity Development programs were organised to showcase the service and provide hands-on training to the farmers and the farm functionaries. | |
| | Description of the project,, procedures etc. (1100 characters) Two workshops with stakeholders (25 participants -10-12 July 2012 at Cairo, Egypt; and 24 participants -21-23 November, 2012 at Adama, Ethiopia) – disseminate the tools and build capacity in their use. Capacity development guides/ kits and practical exercises developed and disseminated to all stakeholders. | |

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|--|--|----------------------------|--|--|--------------|--|---------------|--|---|--|---------------|--|-------------|--------------------------|------------------|--|----------------------------|--|----------------------------|--|-----------------|--|------------------|--|---|--|--|--|--|--|--|--|--|--|--|--|---|--|--|--|---|--|--|--|--|--|--|--|
| | <p>Project results (be concrete as possible), innovate findings, novel outcomes and short discussion on the implication of these results (1100 characters)</p> <p>Build capacity and guide end-users in becoming aware of the possibilities of smart ICT technologies and provide end-users with knowledge for making use of the applications for obtaining near real time information and advice on weather parameters and water/ irrigation requirements for adaptation to the present and future.</p> <p>Partners involved and their role (250 characters)</p> <p>ELeaf and the DLV Plant, The Netherlands, SWERI, Egypt, Government departments on agriculture, water resources and meteorological services, Farmers unions/ cooperatives, NGOs, research scientists and farmers</p> <p>Links/Sources for further information</p> <p>Additional information on the Project may be seen at the partner website: http://www.smartict-africa.com/EN/</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>CASE STUDY 3</p> | <table border="1"> <tr> <td colspan="2">Title</td> <td colspan="2">Author</td> </tr> <tr> <td colspan="2">Managing water in the urban rural interface under changing climate</td> <td colspan="2">Liqia Raschid</td> </tr> <tr> <td>Type</td> <td>Date (DD/MM/YYYY)</td> <td colspan="2">Countries</td> </tr> <tr> <td>Capacity enhancement</td> <td></td> <td colspan="2">Ghana. Ethiopia</td> </tr> <tr> <td colspan="2">Keywords</td> <td colspan="2">Photo URL</td> </tr> <tr> <td colspan="2">Climate change, urban water systems, policy research and uptake</td> <td colspan="2"></td> </tr> <tr> <td colspan="4"> <p>Introduction/Objectives (400 characters)</p> <p>The study has three objectives namely to (1) develop a shared understanding amongst multiple stakeholders of climate change and its effects on water management at the urban-rural interface, (2) using scenarios, to generate new knowledge on the upstream and downstream implications of urban water demand, and of resulting wastewater generation, as well as on water investment needs, and (3) prepare, in participation with city stakeholders and for the benefit of the most vulnerable groups, a strategic action plan for adapting to climate change based on improved water resource management</p> </td> </tr> <tr> <td colspan="4"> <p>Description of the project,, procedures etc. (1100 characters)</p> <p>The study was carried out in Accra, Ghana and Addis Ababa, Ethiopia, and aimed to provide decision support for authorities to manage the urban water cycle in the face of climate change and urbanization. The study enrolled city authorities and representatives of vulnerable communities in the respective cities into a science-based interactive dialogue. This allowed stakeholders to discuss the consequences of, and develop response strategies at various levels to, the changing circumstances. The stakeholder engagement occurred at different levels (national and local level) through a series of iterative meetings. The workshops brought together climate change and water management experts, decision-makers and representatives of vulnerable communities to collectively design adaptation strategies for the water-use sectors in the two cities. Research was designed to include feedback loops for input from stakeholders in a continuing dialogue throughout the project lifetime. This capacity enhancement was part of the larger project. Other project task contributed information on climate downscaling, hydrological modeling at basin and city level, adaptation to flooding, and water supply/demand management - that was used in the stakeholder platform discussions</p> </td> </tr> <tr> <td colspan="4"> <p>Project results (be concrete as possible), innovate findings, novel outcomes and short discussion on the implication of these results (1100 characters)</p> <p>a stakeholder platform, in the two countries with strengthened capacity to understand and discuss climate change in relation to the urban water sector and the interactions between urban and rural areas in relation to the water cycle. A knowledge base was generated, with the preparation of a strategic agenda for adaptation at the city level for each of the cities</p> </td> </tr> <tr> <td colspan="4"> <p>Partners involved and their role (250 characters)</p> <p>Main partners involved in execution of the project include Council for Scientific and Industrial Research -Water Research Institute (CSIR-WRI) in Ghana; the Institute for Local Governance Studies (ILGS), Ghana, Department of Civil Engineering at Addis Ababa University; Ethiopia and the Ethiopian Development Research Institute (EDRI), in Ethiopia. The partners participated in the research and in the development of the final adaptation agendas.</p> </td> </tr> <tr> <td colspan="4"> <p>Links/Sources for further information</p> <p>http://uradapt.iwmi.org/</p> </td> </tr> </table> | | | | Title | | Author | | Managing water in the urban rural interface under changing climate | | Liqia Raschid | | Type | Date (DD/MM/YYYY) | Countries | | Capacity enhancement | | Ghana. Ethiopia | | Keywords | | Photo URL | | Climate change, urban water systems, policy research and uptake | | | | <p>Introduction/Objectives (400 characters)</p> <p>The study has three objectives namely to (1) develop a shared understanding amongst multiple stakeholders of climate change and its effects on water management at the urban-rural interface, (2) using scenarios, to generate new knowledge on the upstream and downstream implications of urban water demand, and of resulting wastewater generation, as well as on water investment needs, and (3) prepare, in participation with city stakeholders and for the benefit of the most vulnerable groups, a strategic action plan for adapting to climate change based on improved water resource management</p> | | | | <p>Description of the project,, procedures etc. (1100 characters)</p> <p>The study was carried out in Accra, Ghana and Addis Ababa, Ethiopia, and aimed to provide decision support for authorities to manage the urban water cycle in the face of climate change and urbanization. The study enrolled city authorities and representatives of vulnerable communities in the respective cities into a science-based interactive dialogue. This allowed stakeholders to discuss the consequences of, and develop response strategies at various levels to, the changing circumstances. The stakeholder engagement occurred at different levels (national and local level) through a series of iterative meetings. The workshops brought together climate change and water management experts, decision-makers and representatives of vulnerable communities to collectively design adaptation strategies for the water-use sectors in the two cities. Research was designed to include feedback loops for input from stakeholders in a continuing dialogue throughout the project lifetime. This capacity enhancement was part of the larger project. Other project task contributed information on climate downscaling, hydrological modeling at basin and city level, adaptation to flooding, and water supply/demand management - that was used in the stakeholder platform discussions</p> | | | | <p>Project results (be concrete as possible), innovate findings, novel outcomes and short discussion on the implication of these results (1100 characters)</p> <p>a stakeholder platform, in the two countries with strengthened capacity to understand and discuss climate change in relation to the urban water sector and the interactions between urban and rural areas in relation to the water cycle. A knowledge base was generated, with the preparation of a strategic agenda for adaptation at the city level for each of the cities</p> | | | | <p>Partners involved and their role (250 characters)</p> <p>Main partners involved in execution of the project include Council for Scientific and Industrial Research -Water Research Institute (CSIR-WRI) in Ghana; the Institute for Local Governance Studies (ILGS), Ghana, Department of Civil Engineering at Addis Ababa University; Ethiopia and the Ethiopian Development Research Institute (EDRI), in Ethiopia. The partners participated in the research and in the development of the final adaptation agendas.</p> | | | | <p>Links/Sources for further information</p> <p>http://uradapt.iwmi.org/</p> | | | |
| Title | | Author | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Managing water in the urban rural interface under changing climate | | Liqia Raschid | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | Date (DD/MM/YYYY) | Countries | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacity enhancement | | Ghana. Ethiopia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Keywords | | Photo URL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Climate change, urban water systems, policy research and uptake | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Introduction/Objectives (400 characters)</p> <p>The study has three objectives namely to (1) develop a shared understanding amongst multiple stakeholders of climate change and its effects on water management at the urban-rural interface, (2) using scenarios, to generate new knowledge on the upstream and downstream implications of urban water demand, and of resulting wastewater generation, as well as on water investment needs, and (3) prepare, in participation with city stakeholders and for the benefit of the most vulnerable groups, a strategic action plan for adapting to climate change based on improved water resource management</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Description of the project,, procedures etc. (1100 characters)</p> <p>The study was carried out in Accra, Ghana and Addis Ababa, Ethiopia, and aimed to provide decision support for authorities to manage the urban water cycle in the face of climate change and urbanization. The study enrolled city authorities and representatives of vulnerable communities in the respective cities into a science-based interactive dialogue. This allowed stakeholders to discuss the consequences of, and develop response strategies at various levels to, the changing circumstances. The stakeholder engagement occurred at different levels (national and local level) through a series of iterative meetings. The workshops brought together climate change and water management experts, decision-makers and representatives of vulnerable communities to collectively design adaptation strategies for the water-use sectors in the two cities. Research was designed to include feedback loops for input from stakeholders in a continuing dialogue throughout the project lifetime. This capacity enhancement was part of the larger project. Other project task contributed information on climate downscaling, hydrological modeling at basin and city level, adaptation to flooding, and water supply/demand management - that was used in the stakeholder platform discussions</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Project results (be concrete as possible), innovate findings, novel outcomes and short discussion on the implication of these results (1100 characters)</p> <p>a stakeholder platform, in the two countries with strengthened capacity to understand and discuss climate change in relation to the urban water sector and the interactions between urban and rural areas in relation to the water cycle. A knowledge base was generated, with the preparation of a strategic agenda for adaptation at the city level for each of the cities</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Partners involved and their role (250 characters)</p> <p>Main partners involved in execution of the project include Council for Scientific and Industrial Research -Water Research Institute (CSIR-WRI) in Ghana; the Institute for Local Governance Studies (ILGS), Ghana, Department of Civil Engineering at Addis Ababa University; Ethiopia and the Ethiopian Development Research Institute (EDRI), in Ethiopia. The partners participated in the research and in the development of the final adaptation agendas.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Links/Sources for further information</p> <p>http://uradapt.iwmi.org/</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>CASE STUDY 4</p> | <table border="1"> <tr> <td colspan="2">Title</td> <td colspan="2">Author</td> </tr> <tr> <td colspan="2">"Small" solutions for big problems: Integrated irrigation and aquaculture for household food security and income generation</td> <td colspan="2">Xueliang Cai</td> </tr> <tr> <td>Type</td> <td>Date (DD/MM/YYYY)</td> <td colspan="2">Countries</td> </tr> <tr> <td>Inter-center collaboration</td> <td></td> <td colspan="2">Malawi, Zambia, Mozambique</td> </tr> <tr> <td colspan="2">Keywords</td> <td colspan="2">Photo URL</td> </tr> <tr> <td colspan="2">Irrigation, Aquaculture, adaptation</td> <td colspan="2"></td> </tr> <tr> <td colspan="4"> <p>Introduction/Objectives (400 characters)</p> <p>This study focuses on testing low-cost methods for adaptation to climate change in rural settings of southern Africa</p> </td> </tr> <tr> <td colspan="4"> <p>Description of the project,, procedures etc. (1100 characters)</p> <p>This study is undertaken collaboratively with WorldFish center. It actively engages with farmers to integrate irrigation with fish farming practices through optimized management of small storages (farm ponds). The process involved participatory approach (role playing game), field trials and monitoring, and stakeholder workshops (4 workshops) to identify and promote best practices considering upstream-downstream effects in 3 small catchments.</p> </td> </tr> <tr> <td colspan="4"> <p>Project results (be concrete as possible), innovate findings, novel outcomes and short discussion on the implication of these results (1100 characters)</p> <p>Integrated aquaculture and irrigation through small storages (farm ponds) is an effective approach to help farmers improve productivity for own consumptions as well as nutrient intake and cash income. Such small scale water resources management practices are easily adoptable for farmers and do not require a lot of investments which farmers and local governments can not afford. It works particularly well for areas where rainfall is reasonably high (700 - 1000 mm), projected to increase with changing climate, and/or where dambos are important source of water supply.</p> </td> </tr> </table> | | | | Title | | Author | | "Small" solutions for big problems: Integrated irrigation and aquaculture for household food security and income generation | | Xueliang Cai | | Type | Date (DD/MM/YYYY) | Countries | | Inter-center collaboration | | Malawi, Zambia, Mozambique | | Keywords | | Photo URL | | Irrigation, Aquaculture, adaptation | | | | <p>Introduction/Objectives (400 characters)</p> <p>This study focuses on testing low-cost methods for adaptation to climate change in rural settings of southern Africa</p> | | | | <p>Description of the project,, procedures etc. (1100 characters)</p> <p>This study is undertaken collaboratively with WorldFish center. It actively engages with farmers to integrate irrigation with fish farming practices through optimized management of small storages (farm ponds). The process involved participatory approach (role playing game), field trials and monitoring, and stakeholder workshops (4 workshops) to identify and promote best practices considering upstream-downstream effects in 3 small catchments.</p> | | | | <p>Project results (be concrete as possible), innovate findings, novel outcomes and short discussion on the implication of these results (1100 characters)</p> <p>Integrated aquaculture and irrigation through small storages (farm ponds) is an effective approach to help farmers improve productivity for own consumptions as well as nutrient intake and cash income. Such small scale water resources management practices are easily adoptable for farmers and do not require a lot of investments which farmers and local governments can not afford. It works particularly well for areas where rainfall is reasonably high (700 - 1000 mm), projected to increase with changing climate, and/or where dambos are important source of water supply.</p> | | | | | | | | | | | |
| Title | | Author | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| "Small" solutions for big problems: Integrated irrigation and aquaculture for household food security and income generation | | Xueliang Cai | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | Date (DD/MM/YYYY) | Countries | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inter-center collaboration | | Malawi, Zambia, Mozambique | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Keywords | | Photo URL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Irrigation, Aquaculture, adaptation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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|--|--|--------------------------|------------------|
| | Partners involved and their role (250 characters) | | |
| | WorldFish center Zomba office - GIS support, socio-economic analysis and coordinating field activities and workshops; University of Osnabruck - Conducting role playing games; University of Malawi - Field monitoring and data collection; Worldvision International - Field monitoring and farmers' mobilization; Department of fisheries (Malawi, Zambia) - Field monitoring and trials; Department of meteorological services - climate analysis | | |
| | Links/Sources for further information | | |
| | n/a | | |
| CASE STUDY 5 | Title | | Author |
| | Establishment of Climate Water Forum - Andhra Pradesh, India | | K. Palanisami |
| | Type | Date (DD/MM/YYYY) | Countries |
| | Policy advocacy | | India |
| | Keywords | | Photo URL |
| | Policy forum, capacity building | | |
| | Introduction/Objectives (400 characters) | | |
| | Several national agencies, including the Indian Council of Agricultural Research (ICAR) and the Department of Science and Technology (DST), along with international research organizations such as ACIAR and CGIAR, have initiated programs of research into climate change adaptation and mitigation through their own network institutions/organizations. It is critical that results from these studies are shared with different stakeholders so that the outcome of the studies can be used to inform and guide the decision making process and the formulation of appropriate policies. Hence as part of the ongoing research studies by IWMI in AP state, a common forum has been initiated to convey the relevant messages on climate change related issues to the implementing agencies like Government departments and NGOs | | |
| | Description of the project,, procedures etc. (1100 characters) | | |
| | The Climate Water Forum is jointly anchored by International Water Management Institute (IWMI), Hyderabad and Water and Land Management Training and Research Institute (WALAMTARI), Govt. of Andhra Pradesh, India The aim of the Forum is to Synthesis, Share and Advocate research results on Climate and Water areas. This project is funded by the Australian Center for International Agriculture Research (ACIAR). | | |
| | Project results (be concrete as possible), innovate findings, novel outcomes and short discussion on the implication of these results (1100 characters) | | |
| | <p>To facilitate the flow of information generated through these research initiatives, the Climate and Water Forum (CWF) has been established in Sep 2012. Constituent members of the CWF represent the range of organizations actively involved in research, training, development, and the formulation of policy. The aims and activities of CWF are:</p> <ul style="list-style-type: none"> - The promotion of key outcomes and messages generated on climate change adaptation associated with the cluster of ACIAR projects in Andhra Pradesh and elsewhere in India that may be relevant to scaling out and influencing the decision making process. - Facilitation of regular meetings of the Forum (3 monthly basis) in Hyderabad to discuss climate and water issues and the review of research findings generated through research initiatives. - The development of a Forum website to act as a repository for information on climate change adaptation and mitigation research and outcomes; and the establishment of a virtual community of Indian climate change enthusiasts. - Regular newsletters on the activities of the Forum that will strengthen and influence the research and policy focus of climate and water studies. The first Newsletter issue is printed. | | |
| Partners involved and their role (250 characters) | | | |
| IWMI - India, Water and Land Management Training and Research Institute (WALAMTARI) of the Govt. of AP, India, ACIAR | | | |
| Links/Sources for further information | | | |
| n/a | | | |

2012 Outcome report

Frequency of reporting outcomes is dependent on budget size so please refer to the table on the explanatory notes. (max 1 page)

CCAFS Center Led Activities IWMI - International Water Management Institute

What is the outcome of the research (use of research results by non-research partners)?

The use of IWMI's vulnerability assessment by Asian Development Bank (ADB) and DSCWM (Department of Soil Conservation and Watershed Management of Nepal) for the design of the watershed component of the Pilot Program for Climate Resilience (PPCR). The goal of the PPCR is to help countries transform to a climate resilient development path, consistent with national poverty reduction and sustainable development goals. PPCR is a targeted program under the Climate Investment Fund (CIF) with dedicated funding to pilot new approaches with potential for scaling up.

What outputs produced in the three preceding years resulted in that outcome?

Siddiqui, Salman; Bharati, Luna; Pant, Menuka; Gurung, Pabitra; Rakhal, Biplov. 2012. Nepal: building climate resilience of watersheds in mountain eco-regions – climate change and vulnerability mapping in watersheds in middle and high mountains of Nepal. ADB Technical Assistance Consultant's Report for Department of Soil Conservation and Watershed Management (DSCWM), Government of Nepal. Kathmandu, Nepal: Asian Development Bank (ADB). 96p.

Luna Bharati and Pabitra Gurung. 2013 Building CC resilience in the West Seti Basin, Nepal Project Report to ADB and DSCWM.

National Conference on Water, Food Security and Climate Change in Nepal. 23-24 November, 2011, Lalitpur, Nepal. Eds. L.Bharati, S. Sijapati, A.Gautam and P.Sapkota. IWMI-Nepal, Kathmandu

Bartlett, R.; Bharati, Luna; Pant, Dhruba; Hosterman, H.; McCornick, P. G. 2010. Climate change impacts and adaptation in Nepal. Colombo, Sri Lanka: International Water Management Institute (IWMI). 25p. (IWMI Working Paper 139)

Samad, Madar. 2010. Synthesis of IWMI work in Nepal. Colombo, Sri Lanka: International Water Management Institute (IWMI). 24p. (IWMI Working Paper 138)

Eriyagama, N., Smakhtin, V., Chandrapala, V., Fernando, K. (2010) Impacts of Climate Change on Water Resources and Agriculture in Sri Lanka: A Review and Preliminary Vulnerability Mapping. IWMI Research Report 135, http://www.iwmi.cgiar.org/Publications/IWMI_Research_Reports/PDF/PUB135/RR135-High_res.pdf

What partners helped in producing the outcome?

Department of Soil Conservation and Watershed Management (DSCWM)
Asian Development Bank (ADB)

Who used the output?

Department of Soil Conservation and Watershed Management (DSCWM)
ADB

How was the output used?

IWMI assisted ADB and DSCWM (Department of Soil Conservation and Watershed Management) in designing the watershed component of the Pilot Program for Climate Resilience (PPCR). The goal of the PPCR is to help countries transform to a climate resilient development path, consistent with national poverty reduction and sustainable development goals. PPCR is a targeted program under the Climate Investment Fund (CIF) with dedicated funding to pilot new approaches with potential for scaling up.

IWMI conducted a climate change (CC) vulnerability assessment of the mid-hills and mountain regions of Nepal. Based on this assessment and IWMI's recommendations on river basins/sub-basins that are significantly vulnerable to CC, DSCWM selected the pilot project sites where activities for the PPCR will be implemented.

IWMI conducted modeling and analysis of the selected basin/sub-basins to help the planning of watershed management scenarios that are effective in mitigating projected CC impacts. This activity was done in collaboration with the ADB team and DSCWM. I.e. IWMI's recommendations from modeling and analysis were used to design the watershed interventions for building CC resilience.

IWMI also formulated a proposal for implementing a monitoring program that will allow further validation and adjustments of the hydrological models to be implemented during implementation of the PPCR project.

OUTCOME 1

What is the evidence for this outcome: Specifically, what kind of study was conducted to show the connection between the research and the outcome? Who conducted it? Please provide a reference or source.

The study on vulnerability assessment of Nepal watersheds in mid-hills and mountain was conducted by IWMI and was funded by ADB with limited additional support from CCAFS Windows funds for extra staff time. The project was officially registered on IWMI eProject system. Agreement with the ADB is available. The final report on the PPCR design which is in preparation will incorporate IWMI's outputs and recommendations. The main reference is: Siddiqui, Salman; Bharati, Luna; Pant, Menuka; Gurung, Pabitra; Rakhal, Biplov. 2012. Nepal: building climate resilience of watersheds in mountain eco-regions – climate change and vulnerability mapping in watersheds in middle and high mountains of Nepal. ADB Technical Assistance Consultant's Report for Department of Soil Conservation and Watershed Management (DSCWM), Government of Nepal. Kathmandu, Nepal: Asian Development Bank (ADB). 96p. There is a plan to publish the results in a more formal source in 2013.

Gender and Social Differentiation related activities summary report - 2012

CRPs that have presented their Gender Strategy to the Consortium in 2012 should show progress in 2013 in relation to implementing the Strategy. Therefore it is expected from Program Participants that findings of gender and social differentiation activities and their significance to be referred in this summary report. It is essential to relate progress towards outcomes to the baseline gender-differentiated conditions being used to measure change. This report should also refer specifically to what is being learnt about gender and how this knowledge is being used to inform research priority-setting and approach. If none or few of your activities integrate gender please explain why it is not relevant to your research portfolio.

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CCAFS Center Led Activities IWMI - International Water Management Institute

Many IWMI activities under CCAFS have direct or indirect gender angle. Gender analysis has been incorporated in the feasibility assessment of storage options in Africa (Volta and Blue Nile Basins) and Nepal, as means to adapt to climate change. Surveys included investigation of acquisition of storage by different social groups, implications of land and water rights for those; issues of resettlement and compensation and livelihood change. Under IFAD funded work in Ethiopia and Sudan, both male and female farmers have been selected for capacity building programs and for pilot testing of the mobile phone based irrigation advisory services. It is understood that climate change debates are largely driven by scientists and policy-makers in national and international arenas, where men and women farmers have little influence over the design of the policies and interventions that aim at reducing their vulnerability. To change this, the approach that was tried in 2012 in Nepal is that of the "participatory video" that offers the opportunity for local people to raise their voices and share their perceptions and knowledge of this issue with a large audience. The results of this are summarised in a Case Study Section. The film screenings received positive responses and enhanced the awareness of the audience on some issues commonly faced by farmers in Nepal such as the impact of climatic variability on livelihoods, men's migration and women's status or inequitable access to groundwater for irrigation. The training also increased the self-confidence of the women participants. To enhance the gender and social differentiation work, in late 2012, IWMI started a targeted gender activity that will extend into 2013. The purpose of this entirely gender-focused activity is to analyse patterns of vulnerability and adaptive capacity for women, with a focus on agricultural water management in Nepal, North India and Bangladesh. It is expected that a theoretical framework to analyse gender and vulnerability, adaptation, adaptive capacity, and resilience at a macro and local level - will emerge from this work and will be tested in the field. It is also anticipated that fill-making activity may be extended to some of these areas.