



India Water Partnership (GWP-INDIA)

Monthly Report

June-2014

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PART-I: CORE ACTIVITY REPORT

1.1 Study for Reviewing and Examining the State Level Regulatory and Institutional Framework of State Water Policy of Maharashtra, Meghalaya and Karnataka to Operationalize the National Water Policy- 2012

India Water Partnership is supporting Indian Environment Law Offices (IELO) to review and examine the state level regulatory and institutional framework of state water policy of **Maharashtra, Meghalaya and Karnataka** to operationalize the National Water Policy- 2012 (NWP-2012). In the month of April, 2014, the IELO finalized common assessment framework for carrying out the study which has been prepared based on the thematic areas covered in NWP-2012 and undertook review of Maharashtra State Water Policy.

During the month of May 2014, the IELO study team took up the review of the State Water Policy of Meghalaya which continued in June, 2014 too.

- Meghalaya State Water Policy (2013) is in draft stage which has been prepared keeping in mind the National Water Policy-2012.
- Meghalaya State Water Policy move towards an integrated and more sustainable management of the State's water resources by applying an integrated water resources management (IWRM) approach.
- It recognizes that access to safe and adequate water to meet basic human needs is a fundamental right of all people without discrimination. It also recognizes that supply of drinking water must be given the highest priority, over any other use.
- The draft State Water Policy states that minimum ecological water needs must be given higher priority than other uses, except drinking water.
- The policy recommends that when water uses are in conflict, the greatest common good to society will be given priority.
- The mechanism for water pricing in municipal areas is by charging of water tax under Meghalaya Municipal Act, 1973. The water tax forms part of the annual value of holding/house for supply of water by the Municipality. The taxes that are levied are assessed as per the Act and the Meghalaya Assessment of Annual Rental Value of Holding Rules 2004 on the basis of unit area value of the property and rates recommended by Valuation Committee of the Municipal Board and approved by the state government. Presently, there is no metered connection in the state, though as part of Phase III of Greater Shillong Water Supply scheme for Shillong under JNNURM the new connections are going to be metered.
- The draft Meghalaya state Water Policy, 2013 aims at developing a tariff and fee system which will ensure recovery of full operation and maintenance cost for providing water and sanitation services.

- Meghalaya doesn't have a Water Regulatory Authority.
- The Water User Associations in Meghalaya are not involved in the process of fixation of water rates/charges.
- In context of principles of equity and social justice being applied for water allocation, the draft Meghalaya State Water Policy, 2013 states that water allocation in irrigation systems would be equitable and distributed on a rotational and volumetric basis.
- With regard to the prioritization of the water use, the draft Meghalaya State Water Policy, 2013 lays emphasis on the water allocation priorities broadly on:
 - Drinking water ecology
 - Irrigation
 - Hydropower
 - Agro-industries and non-agricultural industries
 - Transport and other uses

However, the priorities may be modified or added if warranted by the area/region on the basis of specific relevant considerations. Also no procedure is prescribed in the draft Meghalaya State Water Policy, 2013 for allocation of water between sectors.

- With regard to management of flood and drought, there is no institutional setup for flood forecasting using real time data acquisition. Though, draft Meghalaya State Water Policy, 2013 talks about the need for development of flood and drought forecasting models.
 - The Water Resources Department is implementing one new initiative which is the Integrated Water Resources Management Programme (IWRMP) which covers the activities under the Water Mission under the aegis of the Integrated Basin Development & Livelihood Promotion (IBDLP) through the Meghalaya Water Resources Development Agency (MeWDA). IBDLP was launched as a State Flagship Programme during 2010-11 with the aim of promoting optimal and effective development and utilization of basin resources for ensuring livelihood security and inclusive growth within a sustainable framework.
 - Meghalaya water mission states as one of its objectives to conserve wet-lands/ rivers/ lakes and rejuvenate & restore different water bodies, and promote need-based ecological and economic development. Institutional mechanism to implement water mission is MBDA which is responsible for carrying out IBDLP.
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1.2 Reviewing the State Water Polices of Bihar and Gujarat in line with National Water Policy - 2012 in the context of climate change

India Water Partnership with the support of Institute for Resource Management and Economic Development (IRMED) is reviewing the state water polices of **Bihar** and **Gujarat** in line with the National Water Policy, 2012 with regard to climate change. In the previous months the IRMED study team had carried out detailed discussions with officials of Bihar State Water Resources Department pertaining to the draft State Water Policy of Bihar.

In the month of June, the IRMED organized a workshop on “**Approach to Bihar State Water Policy with Special Reference to Climate Change**” in collaboration with A. N. Sinha Institute of Social Studies, Patna. Fifty(50) participants attended the workshop which included government officials, academicians, scientists, media personnel, etc.

The workshop started with a welcome address by Prof. NilRatan, Professor & Registrar, A.N.Sinha Institute of Social Studies, Patna. Thereafter Prof. Kamta Prasad, Chairman, Institute for Resource Management and Economic Development, Delhi explained objectives of the project taken up by IWP. He spoke on the importance of having a state water policy and also gave a brief account of the efforts taken towards formulation of Bihar State Water Policy since 1993.

After the inaugural session, Mr. A.B.Pandya, Chairman, Central Water Commission spoke on the National Water Policy -2012 and also on the importance of the inclusion of impacts of climate change on the water resources in the draft State Water Policy of Bihar. Mr. Pandya pointed out following main issues of concern to be looked into:

- Water availability
- Temporal variation in rainfall pattern
- Water conservation issue
- Demand and Allocation
- Resilience of society due to climate change
- Water regulatory authority to fix the water rates for various uses /users

Thereafter, Mr. Ram PukarRanjan, Engineer- in-Chief, Water Resource Department, Govt. of Bihar presented the Bihar State Water Policy, 2014 (Draft) in detail. He also emphasized on the need of building capacity of the manpower for sustainable water management and stressed upon the need for policy to preserve the wetlands.

Mr. VijoyPrakash, former Principal Secretary, Planning and Development Department, Government of Bihar suggested that water should be treated as a social issue. He added that basics of water management should be introduced in school curriculum and water issues should be made a part of mass movement. He also stressed upon the need for action plan for policy.

With regard to finalization of the draft State Water Policy, Mr. Prakash indicated the next course of action should be approval of draft State Water Policy by Water Resources Department, Govt. of Bihar and then it should be sent to all the concerned departments for their opinion and departmental

approval after which the draft policy will be put up before the State Cabinet for final approval. Mr. Prakash indicated his readiness to initiate the process.

The next session was chaired by Dr.Santosh Kumar, former Professor of Water Resources Department of Civil Engineering,University of Patna. Prof. Kamta Prasad briefly appraised the participants about the findings of the study conducted by IRMED during May, 2014 in Samastipur district of Bihar which showed lack of awareness about the water policy and climate change among people as well as local level functionaries. Based on his study he indicated the need for including awareness generation as a part of State Water Policy.

Mr. S. N. Tiwari,Director, Ganga Flood Control Commission (GFCC) (Retd), expressed the need for regulating human interventions in flood plains for its proper management andpreparing a data base management system and keeping the data in public domain. Mr. T.K.Bhaduri of Water Resources Department, Government of Bihar, emphasized the need for a review of design of culverts, bridges, embankments etc. in the light of climate change.

Mr. Bashir Ahmed Khan, Chief Conservator of Forests, Forest Department,Bihar told that wet land management should be incorporated in the State Water Policy. He also emphasized the need for sustainable management of water. Mr. Jai ShankarChowdhary, the Engineer-in Chief, Public Health Engineering Department, underlined the need for inclusion of pricing of water and metering its supply in the State Water Policy.

In the penultimate session Mr. InduBhusan Kumar, Chief Engineer, P&M, Water Resources Department, Govt. Of Bihar summarized the draft Bihar State Water Policy, 2014.Mr. Jay Kishore,Superintendent Engineer, Water Resources Department, Govt. of Bihar informed the participants that Bihar was the first state to formulate the State Irrigation Policy in the year 1993 in the line of National Water Policy, 1987. But it could not be finalized. He also told that the draft of Bihar State Water Policy, 2014 will be uploaded on the website of Water Resources Department, Govt. of Bihar for public comments. This will also be published through newspapers for comments from all stakeholders.

Mr. I. C. Thakur, Reader,Water and Land Management Institute told that Policy is a broader guideline for action. If some aspects need legal backing then Acts and Rules will be framed.

The workshop concluded with unanimous recommendation that the draft of the Bihar State Water Policy should be revised in the light of the comments and suggestions offered in the workshop. There after Prof. Kamta Prasad will send a consolidated list of the recommendation to ShriMurlidhar Singh of WALMI who was nominated by Principal Secretary, Water Resource Department for finalizing the draft State Water Policy. Thereafter, the Bihar State Water Resources Department will send the draft to other relateddepartments such as Environment department, Minor Irrigation department, Agriculture department, rural development department,etc. The draft will be again modified in the light of comments received from the abovedepartments. ThereaftertheWater Resource Departmentwill send the final draft for approval by the State Cabinet.

1.3 Development of participatory decision support tool for water resources assessment in 15 quality affected villages of Warangal District, Andhra Pradesh

The Safe Water Network India (SWNI) with the support of India Water Partnership is undertaking the above activity in water quality in 15 affected villages of Warangal District of Andhra Pradesh. This activity has two broad objectives (i) Map the water resources through application of GIS by adopting micro-watershed approach and estimating water balance in the 15 selected project villages of Warangal District, Andhra Pradesh; (ii) Develop simplified IEC (Information Education & Communication) tools for raising awareness among users on water scarcity.

In the previous month (April, 2014) the study team analyzed the data on cropping pattern of all the 15 villages. Also the team had calculated the total usage of chemical fertilizers used for agricultural purposes in these villages.

During June 2014, the team collected pre-monsoon water level data from the observation wells from all the 15 project villages. These data will help in analyzing the seasonal water fluctuation in the area. Besides this, the team was also engaged in collecting the information about the surface water structures available in the selected villages. This information will help in estimating the quantity of water stored. All the above information will be applied to carry out water balance study of the area to be done in the month of July.

1.4. Meeting on New Perspective and Plan for Ganga Cleaning in leadership of Kanpur Nagar Nigam (KNN) by Jajmau Area Water Partnership (AWP)

The Jajmau Area Water Partnership formed by IWP with the aim of making Ganga river free from pollution, organized a meeting on “New Perspective and Plan for Ganga Cleaning in leadership of Kanpur Nagar Nigam (KNN)” on the occasion of World Environment Day (5th June, 2014). A total number of 20 persons from different agencies participated in the meeting.

The main objectives of the meeting were:

- To consider steps for developing a positive action plan by Kanpur Nagar Nigam to ensure that Ganga river is not polluted in Kanpur by discharge of domestic sewage, industrial sewage, solid waste and dead bodies etc. into the river.
- To clarify the roles and responsibilities of important stakeholders for preparing and implementing a river oriented city action plan for prevention of pollution of Ganga river in Kanpur.

Mr. Dayanand Saraswati representative of district administration of Kanpur appreciated the concerns and issues being consistently raised for preventing the pollution to Ganga River in Kanpur by Jajmau AWP. Other key participants were Mr. Rakesh Jaiswal of a local NGO ‘Eco Friends’, senior journalist Mr. Mahesh Sharma and former Councillor Mr. Madan Lal Bhatia.

The participants discussed how Kanpur Nagar Nigam can help in preventing pollution in the Ganga river. It was also discussed that KNN should explore opportunity to work with National Ganga River

Basin Authority, State Ganga River Conservation agency and other organizations like Uttar Pradesh (U.P) Jal Nigam, U.P. State Pollution Control Board and Kanpur Development Authority.

The participants also discussed that there is need to engage local people and unearth the traditional knowledge and wisdom to resolve the issue of Ganga pollution and city sanitation. Also the participants opined for creating mass awareness among school children as it will ensure sustainable management of water resources in the future.

1.5. Participation in Meetings/Seminars, etc.

a) Interactive Session on “Need of the Hour in Water Resources Sector” on 20th June,2014 at Centre Water Commission (CWC)

There are several challenges being faced by the India’s water resources sector. The issues are adding up as the time passes. Keeping this in view, an interactive session was organized jointly by India Water Partnership and Indian Water Resources Society on the topic “**Need of the Hour in Water Resources Sector**” on 20-06-14 at Central Water Commission, Govt. of India, New Delhi. The following two issues were taken-up for discussion and deliberation:

1. River Development – scope & way forward
2. Benefit-Cost Ratio for deciding upon feasibility of Water Resources Projects in the context of new laws and acts

The former one was considered as the Government has coined the new phrase “River Development” and it was considered to explore definition, scope and way forward which it may encompass. And the later one for reviewing methodology in practice for taking investment decision on the techno-economic viability of water resources projects which are a necessity for water security and in turn food security of the country. About 100 experts, academicians and eminent persons actively participated in the session.

A. **Inaugural session:** Chaired by Mr. A.B. Pandya, Chairman, CWC & President, IWRS flanked with Mr. K.N. Keshri, Member (River Management), CWC; Mr. S.M. Hussain, Director General, NWDA; Dr. VeenaKhanduri, Executive Secretary, IWP; and Prof. Deepak Khare, Head WRDM, IIT Roorkee & Executive Vice President, IWRS. Vote of thanks was delivered by Mr. Ashok Kharya, Director, CWC & Convener, IWRS (DC);

The initiative of IWRS-DC and IWP was appreciated by the eminent water professionals, policy makers and academicians on the dais. It was emphasized that there is a need for well- informed discussion based on actual data and positive frame of mind. It was urged that IWRS, IWP and other such organizations should continue to organize such sessions.

B. **Session-I Panel discussion on ‘River Development’ – scope & way forward:** The session was chaired by Mr. A.B. Pandya, Chairman, CWC. The other panelist were Mr. S.M. Hussain, Director General, NWDA; Mr. P.C. Tyagi, ex-chairman, CPCB & Chairman-cum-Managing Trustee, IDC Foundation; Mr. Indra Raj, ex-Member, CWC & Member, KWDT; and Prof. Deepak Khare, Head WRDM, IIT Roorkee.

Mr. Ashok Kharya, Director, CWC made a presentation to introduce the subject. He formulated a definition of the subject, summarized the present situation, initiatives taken by the Government, judiciary etc., likely issues in river development, approaches to address the issues, institutional mechanism, financial mechanism etc. A concept note was shared with the participants.

The distinguished panelist deliberated on the various aspects of the River Development. The participants were given sufficient opportunity for sharing their point of view. The concept note has been modified after suitably accommodating the views of the house. The accepted definition is as under:

The development and management of river waters both in quantity and quality be improved in such a way so that people, in general, are drawn back to its fronts/banks near cities, towns & villages for their religious, cultural, social and recreational needs during most of the time in the year without compromising with the water requirements for irrigation (essential for food security) industrial development (essential for economic growth of the country) in a major way. The riverine biota would be restored as the quantity and quality of the water is improved.

C. Session-II: *Benefit-Cost Ratio for deciding upon feasibility of Water Resources Projects in the context of new laws and acts:* The session was chaired by Mr. R.C. Jha, ex-Chairman, CWC and co-chaired by Mr. V.K. Chawla, ex-Chief Engineer, CWC.

A detailed presentation was made by Mr. R.K. Gupta, Chief Engineer, Project Appraisal, CWC which included complete historical development of emergence of benefit-cost ratio concept for taking investment decision w.r.t. techno-economic viability of water resources projects. He informed that there are various factors including Flood Control, Recreation, Inland fishing. Improvement in life of the people etc. which are not considered on benefit side and therefore the correct picture is not reflected. He raised a few questions for discussion which are given below:

- Can we afford not to achieve the available command area potential?
- Aren't irrigation projects essential for maintaining food self sufficiency ?
- Why the irrigation projects cannot be treated similar to defense preparedness, climate change, sewage treatment plants, pollution control etc.?
- Irrigation projects cannot be compared with any other infrastructure projects such as highway, metro etc.
- Can BC ratio be used for prioritization of projects? We cannot have the concept of with and without projects.
- BC ratio at revised cost estimate approval stage has not much relevance as a huge investment has already gone into the project and we cannot afford to abandon the projects.
- The period of completion of projects and funds allocation needs to be reflected on realistic basis and need not be linked with other factors.
- The planning of the projects should be on reliable data with detailed survey and investigation so as to have any impact on BC ratio on account of change in basic data.

After detailed discussion, the house was of the view that the criteria of B.C. ratio should continue.

b) National conference on “Preserving Rivers in India” jointly organized by IWP & PHD Chambers of Commerce

India Water Partnership provided non-financial assistance to PHD Chambers of Commerce for organizing a one day National conference on **“Preserving Rivers in India” on 25th June, 2014** at PHD Chambers, New Delhi. The conference was also supported by Ministry of Drinking Water & Sanitation, Government of India. The objective of the conference was to initiate and put in place a scientific protocol, centered on the protection of river Ganga and other rivers through scientific practices. The conference also aimed to bring attention for the revival of the dead streams and water bodies.

Ms. Uma Bharati, Honourable Minister of Water Resource, Government of India was the Chief Guest of the event. In her speech Ms. Uma Bharati emphasized the need to empower the children and the youth about the importance of conservation and preservation of the environment. She requested various stakeholders for their support in the rejuvenation of rivers. She praised the efforts of IWP and PHD Chambers of Commerce for organizing a conference on such an important issue. She also expressed her interest in receiving the recommendations of the deliberations.

The workshop was divided into two technical sessions and one panel discussion. The first technical session focused on the roadmap for cleaning and preserving Yamuna and Ganga rivers through new technologies and also through Public-Private Partnership. Prof. Vijay Paranjpe, Former Board Member, India Water Partnership and Chairman, Gomukh Environmental Trust for Sustainable Development and Dr. Veena Khanduri, Executive Secretary, IWP were part of the session. Prof. Paranjpe opined that there are enough laws in the country regarding management of water resources but due to non-implementation of these laws, the condition of the water bodies has worsened. Dr. Veena Khanduri shared the concept of Area Water Partnership with the participants and explained how IWP is applying the IWRM at sub basin level for management of rivers in a specific area. The session ended with a presentation by Er. R D Singh, Director, National Institute of Hydrology on how different technologies can be applied in treating the Ganga river.

The next technical session focused on the following topics such as; (a) extending waste service coverage (b) Developing and applying methodologies for country-level river monitoring and (c) Best practices on Clean Technology. Mr. V.U. Koundanya, representative of IWP and Executive Director (Planning) WAPCOS Ltd. spoke on how the waste water generated in the corporate office of WAPCOS Ltd. is treated through a Phytoid treatment for non-domestic usage. Mr. Koundanya also shared his proposal of using Phytoid treatment to treat waste water of Nazafgarh drain (New Delhi). His proposal was appreciated by the participants.

The conference ended with a discussion which was chaired by Mr. Pankaj Jain, I.A.S, Secretary, Ministry of Drinking Water & Sanitation, Govt. of India. In the debate, the participants discussed on probable solutions that can be applied for rejuvenation of the rivers and also on methods to save the natural water bodies of the country.

The conference was attended by more than 70 participants from government bodies, private sectors, NGOs and the media. Recommendations of the conference have been sent to the Ministry of Water Resources, Government of India for further necessary action.

c) 24th Meeting of the Board of Governors of India Water Partnership

24th Meeting of Board of Governors of India Water Partnership was organized on 23rd June, 2014 at WAPCOS Head office, New Delhi. Mr. D K Manavalan, I.A.S. (Retd.), Vice-President, IWP chaired the meeting as Dr. R K Gupta, President, IWP had to attend an urgent meeting with Secretary, Ministry of Water Resources, Government of India.

In the meeting, various issues related to governance and program implementation (Core & WACREP) were discussed and suggestions of the Board of Governors were noted down for necessary action. A condolence message was read by the Chair on the sad demise of Mr. N S Samant, former Board of Governor of IWP and Joint Secretary, Ministry of Water Resources, Government of India on 27th May, 2014. Dr. VeenaKhanduri, Executive Secretary, IWP presented the progress report of activities undertaken by IWP from March to May, 2014.

During the meeting, a documentary film on **“Water Harvesting for Climate Resilience – The Maharashtra Story”** produced by IWP with the support of Institute for Development Initiatives, New Delhi under Water & Climate Resilience Program (WACREP) was shown to the participants.

Dr. VeenaKhanduri also reported the following to the Board of Governors:

- (i) The next Regional Council and General Assembly meeting of GWP-South Asia to be held at Colombo, Sri Lanka from 8th to 12th October, 2014;
 - (ii) Participation of IWP in Aquatech-2014 as “Non-Financial Supporter” which was held from 6th to 8th May, 2014;
 - (iii) Participation of IWP in WaterEX-2015 as “Non-Financial Supporter” to be held from 28th January to 31st January, 2015 at Mumbai;
 - (iv) Association of IWP with SAARC Disaster Management Centre, New Delhi under WACREP for organizing a Regional Conference on “Strategic Review of Regional Issues in Water Management: Science, Policy & Practice” for all SAARC countries to improve regional cooperation on tackling climate change effects. The conference is tentatively scheduled to be organized in January, 2015. The budget issue for this conference was also discussed in the meeting.
 - (v) Participation and facilitation of IWP in India Water Week-2015 which is tentatively scheduled to be organized in January, 2015 at New Delhi.
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d) 2nd Central Advisory Board Meeting of WaterEx-2015

WaterEX-2015, an International Conference would be organized from 28th to 31st January, 2015 at Mumbai. In this event, the IWP will participate as non-financial supporter. Thus it will act as knowledge and technical contributor. Theme of the WaterEx-2015 is "**Water forever, Water for all**". Dr. R K Gupta, President, IWP, Dr. VeenaKhanduri, Executive Secretary, IWP, Mr. D V Manavalan, I.A.S. (Retd.), Vice-President, IWP and Mr. S C Jain, Regional Council Member of GWP-South Asia have been nominated as members of Central Advisory Board of WaterEX-2015. The 2nd meeting of Central Advisory Board was held at Central Water Commission, Government of India on 24th June, 2014 under the Chairmanship of Mr. Atul Jain, Director, Central Water Commission. Dr. VeenaKhanduri along with Mr. D V Manavalan, I.A.S. (Retd.), Vice-President, IWP and Mr. S C Jain, Regional Council Member of GWP-South Asia attended this meeting.

In the meeting Dr.VeenaKhanduri said that the theme should be more focused from the point of view of industry perspective. She also mentioned that the outcome of the present meeting should be clear and transparent.

Mr.Atul Jain mentioned that the present conference is focused primarily on Industry and it should be dedicated to recycle, reuse and domestic water. One eminent member suggested about the agriculture to be included. However,Mr. Jain maintained that agriculture will be taken up by the Government of India on different platforms.

Mr. Mahesh Gupta, Chairman, Kent RO Systems Ltd. stressed upon the drinking water to be an important focus and also whether we should consider, if inter-river linking, Ganga Water Cleaning etc. are pertinent in this forum.

Mr.HemantShetty, CEO, Chemetch Foundation pointed out that Ganga water cleaning has assumed a very important priority as the Ganga project is looking for technology providers for cleaning the Ganga. Therefore there would be technology involvement in the cleaning the river. On the doubts raised by a member in getting the interested audience, Mr.Shetty pointed out that the Conference being highly technology-specific; there would be a large number of technologists who are expected in the conference.

PART- II: REPORT ON WATER & CLIMATE RESILIENCE PROGRAM (WACREP)

2.1 Capturing lessons and reflecting for learning - A study on coping mechanisms adopted by rural communities on their traditional wisdom and their relevance for adaptation to climate change, examining how science can add value to traditional/indigenous wisdom and vice versa in the States of Meghalaya & Mizoram

Institute for Development Initiatives (IDI) had completed one of its activities under WACREP during May, 2014 i.e, Knowledge and technical support made available for further development of specific investments (Compiling a set of no/low regret investment options). Under this activity, the IDI has produced a documentary film under the guidance of IWP on “**Water Harvesting for Climate Resilience – The Maharashtra Story**“. The film has been uploaded on the Youtube and IWP website. The IDI has also sent the draft report to IWP which is under review for providing final comments/suggestions.

In June, 2014, the IDI has planned to undertake a study in areas of indigenous/local knowledge relevant for climate resilient actions in the states of Meghalaya and Mizoram. Under the study, IDI has undertaken the following activities during the month of June 2014:

- A preliminary visit of Meghalaya state was completed to shortlist potential areas of indigenous/local knowledge relevant for climate resilient actions.
- Potential areas of indigenous/local knowledge relevant for climate resilient actions include sustainable fish harvesting and rearing practices of “War Khasi” tribe, indigenous potato storage systems, traditional herbal medicine system, split bamboo, drip irrigation and drinking water supply systems.
- IDI will make efforts towards partnerships development with resource institutions like Martin Luther King Institute of Social Work, North Eastern Hill University, Meghalaya Mission for Indigenous Knowledge and the Integrated Basin Development Programme for collaborating on expert knowledge.

Work Plan for July 2014

- Secondary review of all available literature on areas of indigenous/local knowledge relevant for climate resilient actions in Meghalaya.
 - Partnerships with resource institutions organizations in North east will be firmed up.
 - Contacts with concerned department of Mizoram Government will be established and all other preparatory activities for undertaking the study in Mizoram will be done.
 - Field work and film shooting after 15th August 2014. This is planned keeping in mind the heavy rains in the region during June and July.
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2.2 Assessment of vulnerability to climate change on water resources, commons, agriculture system and animal husbandry in Sinhar watershed in Bhinder Block in Udaipur district of Rajasthan

In continuation to the tasks undertaken during May, 2014, Action for Food Production (AFPRO) completed the following activities in June, 2014:

1. Village level Meetings of Core Group Members: Five village meetings for the core group members were organized in Dhawadiya, Nangaliya, Kheda Fala, Rayala and Fusariya on WACREP objectives, activities and way forward. These meetings were facilitated by selected field associates involving select cluster core group members for smooth implementation of project activities.

The meetings included discussions on climate change issues and their impact on agriculture, livestock and water. Detailed discussions were facilitated on protection and initiation of the physical works of Soil and Water conservation measures on private joint pasture, strategies for enhancement of productivity and quality of fodder from pastureland, existing coping mechanism for water, crop and livestock due to climate variability like high temperature, unpredictable and late on-set of monsoons during the current year and protection and conservation of water bodies, forest, land and animal for human livelihood enhancement.

2. Participatory Technology Development Approach (PTDA): The project team facilitated a survey and organized planning discussions on Participatory Technology Development Approach (PTDA) with reference communities of respective common pastureland from Rayala village on 27th June 2014. As a part of the demonstration on common and private pastures, 1 common and 2 private pasture lands were discussed in detail. After detailed discussions with the core group members, village elders, leaders and the land owners, the pasture development activities for pasturelands of villages Kamaliya and Chunakakheda has been initiated. Matters relating to ownership and legal issues were discussed and all necessary documentation process has been checked, verified and completed with the help of beneficiaries of respective villages. During the topological survey, the activities identified as per different site situations include construction of Continuous Contour Trenches (CCTs), Thawala, Thor fencing (Vegetative fencing), Gate with Bamboo material, Gradonis, Box trench, bolder gully plug, plantation and Grass seeding. It was decided that the fencing work will be undertaken by accessing funds under the Mahatma Gandhi Rural Employment Guarantee Scheme (MGNREGS).

3. Physical work on selected private Pasture: The physical work in both the private pastures is completed. For the proposed community pastureland in Rayala village, the physical work on Soil and Water Conservation work like fencing, CCT, Thawala making has been initiated in the 1st week of July 2014 with 20-25 beneficiaries.

4. Cultural programme for Mass Awareness Campaign on Climate Change: A mass awareness programme was organized in six project for villages – Phusariya, Nagaliya, Kheda Fala, Dhawadiya, Bhopa Kheda and Rayala from 2-5th June 2014. From these six villages, 1685 people got benefitted from the awareness programme. The awareness programme culminated with the celebration of World Environment Day at Patiya village on 5th June 2014 in the presence of 200 people.

5. Visit of IWP representatives to Udaipur: The project team facilitated the M&E visit of IWP representatives to AFPRO, Apna Sansthan and operational villages under WACREP from 13-14 June 2014. Dr. Veena Khanduri, Executive Secretary, IWP shared the detailed information about IWP and GWP and its functions for managing different projects. AFPRO representatives also shared briefly about their works as well as the WACREP project progress. A 'cluster meeting' with the 19 selected core group members from all project villages was held at Bhavyadhara Training centre,

Rayala on 14th June 2014. The team visited Chunakafala for overseeing the physical soil and water conservation measures on the hill slopes and on pastureland. The team discussed the implementation issues and benefits from the activities with the reference communities. The team interacted with 20 women from the Women's group in Chunakafala hamlet on WACREP and role of women in the project.

6. Farmers Field School: A Farmer Field School (FFS) have been formed under WACREP by selecting 23 farmers from all the 10 project villages for Kharif 2014 season. A one day meeting with FFS group of Agriculture was organized at Rayala on 24th June 2014. For conducting of FFS on Kharif field crop, a series of meeting were facilitated with the core group members. After discussion with the group members, it has been decided to form three groups on the basis of climate variance i.e. Maize and Urd (Green Gram), Maize and Ragi (Finger Millet – *Eleusinecoracana*) and Maize and Soyabean adopting alternate line sowing methods. For facilitating the FFS activity, an understanding has been developed with the MaharanaPratap University of Agriculture and Technology, Udaipur. Another Farmers clubs was formed in Patiya village with the help of 12 active farmers. FFS is working with a select group of farmers which are being facilitated by extension workers or skilled farmers. They meet once in every week to discuss crop management issues for an entire crop growing season. Applying non-formal education methods, the field is used as the primary resource for discovery-based learning. The process is facilitative and respects the experience that farmers bring with them. Prof. S.N. Solanki (Agronomist) visited the operational area and provided on-farm training for the group members with package of practices like soil preparation, seed treatment, seed rate, sowing methods, seed selection, etc with reference to climate change. Prof.Solanki will support the farmers on a weekly agro advisory service through mobile technology.

7. Climatic Vulnerability Assessment: A format has been developed for assessing the climate variability. Raw data is being collected and will be analysed for the operational villages.

8. Climatic Vulnerability Matrix: A template has been developed for assessing the climate vulnerability. The Climatic vulnerability matrix will be completed with field data on each and every sector relating to climate vulnerabilities.

9. Climatic Data Analysis: The project team collects various climatic data including the rainfall pattern of Udaipur district. The monsoon rainfall of Udaipur district does not show any trend and seems mainly random in nature over a long period of time. The presence of pockets of significant long term changes in rainfall has been recorded. Areas of increasing trend in the monsoon seasonal rainfall are found in Dharyawad block in Udaipur.

Work planned for the following month of July 2014

- Initial climatic vulnerability assessment as per PRA and group meetings.
 - Finalization of compiled PRA report and preparing assessment report.
 - Continue monitoring of ongoing physical work at private as well as community pastureland at Dhawadiya, Kherafala and Rayala villages.
 - One village level meeting with core group members for planning the demonstration activities in their village.
 - One day training programme for FFS (Agri) on PoP of crop cultivation, especially after sowing practices.
 - One day training programme on household survey.
 - Monitoring of household data collection.
 - Selection and orientation of a new group for FFS on Livestock and basic data collection.
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- Testing of adaptation Matrix format at village level meetings as well as individual interactions.
- Climatic data analysis and interpretation.
- Meeting with Women's group members on safe drinking water and climate resilience.
- Monthly village level meetings planned for field associates involving village and cluster core group members in project villages.
- Finalization of Vulnerability Assessment report and Adaptation Framework.
- Exposure visit of core group members.

2.3 Climate Adaptive Planning, Capacity building and training programs in Bundelkhand Region of Madhya Pradesh

Development Alternatives (DA) with the support of India Water Partnership undertook the following activities in the month of June, 2014:

1. Village strategy meetings were conducted to develop climate adaptive plans for Nauner and Kamherpanchayats.
2. DA organized a one day district level consultation on "Integrating Climate Change Adaptation in Development Planning". The meeting was conducted in association with District Planning Committee and Government line departments of Datia district on 13th June, 2014 at CSWCRTI, Datia. This stakeholder workshop was a knowledge sharing and capacity building workshop. The Government authorities were sensitized on climate adaptive planning. Interactive discussions with government authorities helped to engage them in development of mock climate adaptive plans.
3. A meeting was conducted with the Chief Executive Officer (C.E.O), Datia district to organize a one day district stakeholder consultation. The objective of the consultation is to build the capacities of district officials on climate adaptive planning and implementation.
4. Meetings were conducted with scientists and academicians to strategize a round table scientific exchange workshop on "Drought Proofing Strategy for Semi-Arid Region of Bundelkhand".
5. A Draft Adaptation guide has been prepared.

Work planned for the following month – July 2014

- Finalization of Adaptation Guide.
 - Finalization of Vulnerability and Adaptation Assessment Report of Datia.
 - Finalization of Climate Adaptive Plans for Kamher&NaunerPanchayats.
 - Scientific Exchange Workshop on "Drought Proofing Strategy for Semi-Arid Region of Bundelkhand".
 - A district level workshop to launch the knowledge products, tools and plans developed under the WACREP initiative at district level. The objective of the workshop is to sensitize Government authorities on various climate adaptation tools and community climate proofing plans endorsed by District Planning Committee.
 - A state level workshop to share the findings of WACREP is planned at Jhansi, Madhya Pradesh on 4th July 2014.
 - Final version of training modules for Capacity Building Training of Elected Panchayat Representatives and Core Group members of WACREP on "Integrating Climate Change Adaptation in Development Plan" will be completed.
 - 150 farmers will be trained on sustainable farming and irrigation practices.
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2.4 Rehabilitation of water storage tanks with the aim of promoting the technology on a larger scale - Augmenting Water security and food security of small farmers in the Gundar Basin by rehabilitating or constructing water harvesting tanks

DHAN Foundation has been spearheading the rehabilitation of traditional irrigation systems predominant in south India like Minor irrigation rainfed tanks, drinking water ponds (Ooranis), watershed development schemes and household water treatment through bio-sand filters in highly climate vulnerable and drought prone regions in South Indian states. DHAN Foundation with the support of India Water Partnership undertaken the following activities as a climate resilience programme in the month of June, 2014.

1. **Drinking Water Oorani:** Three drinking water ponds (Oorani) were to be renovated under WACREP Project. Out of this two Ooranis at Kadamankulam and Rani Sethupuram were completed in May, 2014. During the M&E visit to Rani Sethupuram Oorani (drinking water) by the IWP team, the villagers requested to take up further work in constructing retaining wall in the supply channel to properly guide the rainwater from catchment without being wasted. A technical estimate was prepared for the construction of retaining wall and inlet in the structure. Rs.1,20,000/- is the estimated amount. DHAN Foundation has released Rs. 50,000/- from WACREP.
 2. **Construction of Farm Ponds:** Under WACREP 25 Farm ponds were to be constructed on individual farmer's farm land. 11 farm ponds work has been completed and for 5 farm ponds, fund has been released to the tune of Rs.50,000/- as first installment. 6 farm ponds have been completed in Karnataka state. In Chittoor district of Andhra Pradesh, the project team had scrutinized the technical estimates and released funds to construct 5 farm ponds. The physical construction works on all these five farm ponds have been completed in Chittoor. The WACREP Project facilitation team mobilized requests for construction of five more farm ponds from the farmers owning land in dry lands. The estimates have been prepared, scrutinized and sent for funding support.
 3. **Project review:** A monthly project review was conducted by the DHAN project team on June 21, 2014 at Madurai to assess the progress of the project as well as understand the social issues. A detailed action plan was prepared for Quarter 3.
 4. **Project Dissemination to Primary Stakeholders:** DHAN Foundation promoted a people led conservation movement viz. "Vayalagam (Tank Conservation) Mutual Movement" during 2002 in close collaboration with Mr. Anna Hazare (Social worker) at Madurai. The Annual General Body of the people movement comprising of the leaders nominated by each tank federations across Tamil Nadu, Andhra Pradesh and Karnataka used to be convened at Madurai every year. For 2013-14, the 13th Annual General Body of Vayalagam Mutual Movement was held on 17 June 2014 at Madurai. 45 farmer leaders from 21 districts in South India participated. In the Annual General Body meeting (AGBM), Mr. A. Gurunathan, Chief Executive, DHAN Foundation briefed about the WACREP project, its purpose and its current status to the members present. The farmers mentioned that the WACREP Project is timely one and the project activities and strategies are more appropriate to combat climate change risks. The AGBM resolved that the WACREP if continued in the Phase II, DHAN Foundation should include construction of more water bodies and include more project locations.
 5. **Rehabilitation of a tank feeder channel at Mugavur village:** The project team coordinated with two district administration viz., Virudhunagar district and Sivagangai districts for eviction of illegal farm occupants from the supply channels. The desiltation work on the supply channel has
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been completed by the tank association. The entire process of rehabilitation of a tank feeder channel at Mugavur village of Virudhunagar district in Gundar river basin is now completed.

- 6. Resource mobilization:** The Project Coordinator visited and appraised on the estimate shared by NaryananThevanOooraniVayalagam of Rajakkalkudirruppu village in Gundar basin and the drinking water pond in the village was deepened two years back with the philanthropic fund from Canada. Now the tank association of the village (Vayalagam) wanted to protect the drinking water pond by constructing barbed wire mesh fence. The association has already mobilized their contribution and deposited in their bank account. The No Objection Certificate from gram panchayat and block development officer was received. On recommendation of the project coordinator that the drinking water pond in the village compliments drinking water supply to 130 households amidst climate variability of long dry spells between effective monsoons, the amount of Rs.1,00,000/- has been released to the respective Vayalagam and go for construction of the fence.

Work planned for the following month, July 2014

- Release of Fund to Farm Pond work in Chittoor
- Q2 Fund Utilization Preparation and submission
- Field visit to assess the tank rehabilitation estimates and monitoring the progress
- Review of Progress in Madurai during the Monthly review.

2.5 Enhancing the knowledge and capacity of GWP-South Asia Country Water Partnerships and the Regional Water Partnership to promote climate resilient development in the water sector

Gomukh Environmental Trust for Sustainable Development (Gomukh Trust) with the support of India Water Partnership undertook the following activities during June 2014:

1. A Meeting was held with Executive Engineer (EE) Balaghat on 11th of June 2014. A power point presentation was made by the Gomukh Trust team, indicating the current status of flood management. The Executive Engineer appreciated the presentation. Issues relating to sharing of meteorological data in the Balaghat and Seoni Districts were discussed. The EE has agreed to send a soft copy of an abridged version of the ROS currently in use to GomukhTrust.
 2. The final note describing the demands of the fishermen has been signed by the representatives of the fishing societies and sent to the Minister for Fisheries Department with a copy to the Fisheries Department. Preparation and signing of the demand note from 15 Fishing Societies for the proposed changes/suggestions in the Government Resolution (GR) on fishing lease was completed.
 3. The project team organized meetings in three villages in ArjuniMorgaon and Gondia for awareness generation on climate resilience techniques/mechanisms and counter such freak phenomena as hailstorms. The village *Sarpanch* shared the lack of response from the Revenue Department regarding the compensation to farmers on the crop losses due to recent hailstorms in Maharashtra.
 4. The reference communities in the project villages have started entering the climate information in the Community Water Resources Registers on a weekly basis. The
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Kohli(fisher folk community) households in particular were excited about the programme since they would be required to recollect information about the past generations. The “identity issue” of the Kohli community is now given more importance and widely recognized in the larger civil society. The Kohli community has also taken up the responsibility of analyzing and documenting the information.

5. The president of the Fisheries Co-operative (District Federation) had sent a representative for the meetings to enquire about the response of the Government to the petition sent related to the modification of the Government Resolution.
6. A soft copy of the Petition was sent to the Chief Minister, Government of Maharashtra. An acknowledgement has been received. The Government's response to modifications/additions demanded by the Fishing Societies is awaited.

2.6 M & E activities by India Water Partnership under WACREP during June, 2014

- One M&E visit to AFPRO and implementing partner ApnaSansthan, Udaipur on 13th and 14th June 2014. Dr.VeenaKhanduri and Ravi Shankar Behera represented IWP. The M&E report has been prepared and shared with the partner.

Activities planned for July 2014

- Participate at the State level Workshop on sharing of learnings from WACREP, 4th July 2014 at Bhopal, Madhya Pradesh organized by AFPRO.
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