

**Australian Government** 

Australian Centre for International Agricultural Research

# **Annual report**

## project Improved village scale groundwater recharge and management for agriculture and livelihood development in India

project number	LWR/2010/015
period of report	July 2015 – June 2016
date due	July 31, 2016
date submitted	July 31, 2016
prepared by	Development Support Center, Ahmedabad
co-authors/ contributors/	Dr Tushaar Shah,
co-authors/ contributors/ collaborators	Dr Tushaar Shah, Mr Sachin Oza, Mr. Dhavan,
co-authors/ contributors/ collaborators	Dr Tushaar Shah, Mr Sachin Oza, Mr. Dhavan, Dr YogeshJadeja and Mr BrijenThakar
co-authors/ contributors/ collaborators	Dr Tushaar Shah, Mr Sachin Oza, Mr. Dhavan, Dr YogeshJadeja and Mr BrijenThakar Dr Harsharn Grewal, Adj. A/Professor Roger Packham, Dr Maria Varua and Ms. Joycelyn Applebee
co-authors/ contributors/ collaborators	Dr Tushaar Shah, Mr Sachin Oza, Mr. Dhavan, Dr YogeshJadeja and Mr BrijenThakar Dr Harsharn Grewal, Adj. A/Professor Roger Packham, Dr Maria Varua and Ms. Joycelyn Applebee Dr Peter Dillon, Dr RaiKookana and Dr John Ward, ,
co-authors/ contributors/ collaborators	Dr Tushaar Shah, Mr Sachin Oza, Mr. Dhavan, Dr YogeshJadeja and Mr BrijenThakar Dr Harsharn Grewal, Adj. A/Professor Roger Packham, Dr Maria Varua and Ms. Joycelyn Applebee Dr Peter Dillon, Dr RaiKookana and Dr John Ward, , Professor R.C. Purohit, Dr K.K. Yadav, Dr S.R. Bhakar, Dr P.S. Rao, Dr S.S. Sisodia, Dr P.K. Singh, Dr H.K. Mittal, Dr Mahesh Kothari
co-authors/ contributors/ collaborators	Dr Tushaar Shah, Mr Sachin Oza, Mr. Dhavan, Dr YogeshJadeja and Mr BrijenThakar Dr Harsharn Grewal, Adj. A/Professor Roger Packham, Dr Maria Varua and Ms. Joycelyn Applebee Dr Peter Dillon, Dr RaiKookana and Dr John Ward, , Professor R.C. Purohit, Dr K.K. Yadav, Dr S.R. Bhakar, Dr P.S. Rao, Dr S.S. Sisodia, Dr P.K. Singh, Dr H.K. Mittal, Dr Mahesh Kothari Dr Hakimuddin, Dr A.S. Jodha. Dr PrafulBhatnagar, Mr Anil Mathur and Mr PrahladSoni

## Contents

1	Progress summary	3
2	Achievement against activities and outputs/milestones	5
3	Project Outcomes and Impacts	6
3.1	Research Impacts	6
3.2	Scientific impacts	6
3.3	Capacity impacts	8
3.4	Community impacts	8
3.5	Stakeholder engagement and communication	10
4	Training and capacity building activities	12
5	Intellectual property	13
6	Amendments to personnel and project activities	14
6.1	Personnel	14
6.2	Project activities	14
7	Problems and opportunities	15
8	Budget	16

### **1** Progress summary

The project LWR/2010/015 is in the advance stages of completion. The project was externally reviewed in February 2016 and was given an extension for final completion until June 2017. The highlights of the important activities and achievements are described in this report.

The project now has completed rich data sets through monitoring of rainfall, water table depths in dug wells and tube wells and groundwater quality in wells and water level fluctuations in selected check dams over the last four years. Some on-going monitoring of wells and check dams by BJs (Bhujal Jankaar) is still continuing. The main focus of the last 12 months has been to complete the data analysis, interpret data, present them to village communities and stakeholders in the state and central government agencies and initiate a dialogue to adopt outputs of the project and take the work to the next stage for longer term impacts beyond the tenure of this project.

Specific efforts were made for the capacity building of BJs and Sujal Samitis, a village level institution governance governing around water agenda, through their visit to Andhra Pradesh to learn about participatory groundwater management. This visit and other engagement activities such as community based meetings, knowledge sharing with village community have helped to initiate a dialogue about forming 'Village Groundwater Co-operative' (VGCs) in the two villages of Meghraj block namely Navaghra and Intva out of which one would be control village where there is absence of MARVI project. The dialogue with the community has resulted in identification of a number of issues and challenges related to the sharing of groundwater among farmers. A total of two groups in the Meghraj watershed have been formed and the next step over 4-5 months is to progress the idea of VGC through the support of the State and Central government agencies.

The experiences of the MARVI programme were shared by the Bhujal Jankars from Gujarat and Rajasthan in the National Workshop on Community Managed Water Resources Development for Enhancing Livelihoods conducted by the Water Management Forum, DSC and the Aga Khan Rural Support Programme (India). Integrating Participatory Groundwater Management in mainstream programmes such as the Integrated Watershed Management Programme and MGNREGA was one of the key learning emerging from the workshop. The case study of the same has also been documented in the proceedings which were shared with policy makers, practitioners and the academia.

Mr. Basant Maheshwari with other members of project team members were invited to share the findings at the South Asia Groundwater Forum organised by IWA and the World Bank in Jaipur during 1-3 June 2016. This was a valuable opportunity to showcase the project findings at the national and the South Asia levels and helped to connect with the potential funders and implementing agencies to up-scale the project findings beyond the two study watersheds. The main messages delivered at the Forum were that participatory groundwater monitoring can successfully leverage the expectations of farmers and scientists and can provide a sound basis for participatory management in the semi-arid hard rock areas of South Asia. Managed aquifer recharge, which is already valued by farmers, requires government intervention and the BJ program could be used to assist in the development of localised groundwater management within the context of a whole of watershed or basin plan.

The project had significant coverage in the media at state and national levels during February to June this year. This included an article in the Gujarati weekly magazine, Abhiyan, about the BJ programme and two news stories in the Times of India about the need for participatory groundwater management and how the BJ approach can be used to improve the groundwater situation in India. Several leading Gujarati newspapers such as Divya Bhaskar, Gujarat Sandesh

also covered the story of Bhujal Jankaars (BJs). This has helped in sharing the project learnings and findings with a wider community and creating conversation on participatory use and management of local groundwater resources.

In summary, the major part of the data collection is complete in the project and the main focus now is to translate data into farmer friendly knowledge and tools that will help change the practices of farmers and save water while improving livelihood opportunities. The Bhujal Jankaar's (BJs) are contributing their knowledge to other projects being implemented in other areas of DSC. Apart from integration of Bhujal Jankaar's (BJs) into Gram Panchayats through Sujal Samities, over the next 12 months, the work in the project will also focus on strengthening the Village Groundwater Co-operative.

## 2 Achievement against activities and outputs/milestones

### **3 Project Outcomes and Impacts**

Key achievements and impacts emerged out of the MARVI (**M**anaging **A**quifer **R**echarge and Groundwater Use through **V**illage Level Intervention) project in this reporting period can be grouped into three areas:

- 1. Development in Bhujal Jankaar program;
- 2. Methodology for recharge estimation; and
- 3. Social attitudes and behavior research in groundwater management

The research outcomes and impacts in the above areas are elaborated in sub-sections below.

#### 3.1 Research Impacts

The research in the project is now leading to the change in knowledge and strengthened capacity of the stakeholders in a number of ways as summarised below:

- 1 A significant contribution of the Bhujal Jankaar (BJ) program is a successful participatory model/process that includes the assemblage of basic groundwater information at village level in a coordinated way. The monitoring through this program is at a density far greater than achievable currently through the Central Ground Water Board (CGWB) monitoring program, which is generally only a handful of observation wells at district level (a district has >100 village) with groundwater levels measured at three monthly intervals.
  - a This enables better precision in evaluating groundwater storage changes.
  - b A novel approach was generated in the absence of reliable well head elevations (a necessity for conventional groundwater modeling), to enable assessment of storage change during the Rabi season combined with ergonomically determined water use in the Rabi season, to estimate specific yield and hence the volume of aggregate recharge during the monsoon.
  - c This action-reflection learning approach is transferrable to other villages in overdrafted areas of Gujarat and Meghraj block and elsewhere in hard rock catchments of India where groundwater is an important source of irrigation supplies.
- 2 The social attitudes and behaviour research combined with the new groundwater knowledge has led to informing a palette of groundwater management strategies that will;
  - a Development and implementation of watershed-based development plan by the community for their respective villages to improve ground water conditions. During the initial phase,
  - b Enable broad based community support and be effective.
  - c Account for supply enhancement and demand reduction in an economically efficient combination and taking into account downstream water requirements.
  - d Be fully understood by villagers because of the observation based (scientific approach) generated by the efforts of BJs.
  - e Need to be implemented and tested in operational mode, and with government or NGO support mechanisms beyond the end of the MARVI project with evaluation in 5 years.
  - f Need to be extended via the same action reflection learning approach to other villages in over-drafted areas.

#### 3.2 Scientific impacts

There is anecdotal evidence as to how the ACIAR project has scientifically impacted the village communities. The Meghraj watershed had widespread use of the surface irrigation method but in

the last 3-4 years, there is a clear indication that more number of farmers have installed drip irrigation systems in the watershed and adopted crop varieties and agronomic practices that use less water. This change in farming practices is partly due to groundwater science literacy developed as result of the ACIAR project, particularly through community forums, field trial demonstrations, groundwater monitoring and the constant presence of project staff in the study area.

The absence of state regulations or markets to coordinate the operation of individual wells has focused attention on community level institutions such as Sujal Samities for sustainable groundwater management. Socio-economic, cultural and attitudinal data collected indicated that livelihood strategies, groundwater management and the propensity to cooperate are associated with the attitudinal orientations of well owners. The project tested the hypothesis that attitudes to groundwater management and farming practices, household income and trust levels of assisting agencies were not consistent, implying that a targeted approach, in contrast to default uniform programs, would assist communities craft rules to manage groundwater across multiple hydro-geological settings. The study revealed four statistically significant discrete clusters, supporting acceptance of the hypothesis. Further analyses revealed significant differences in farming practices, household wealth and willingness to adapt across the groundwater management clusters. This means there is a need to account for attitudinal diversity and associated framework while designing groundwater management policies and instruments to sustainably manage local aquifers.

A survey was conducted in five secondary schools located in Meghraj to assess student perceptions about groundwater scarcity issues and the impact of the scarcity on their educational opportunities. School absenteeism was found to be linked with gender; female students missed schools more frequently than their male counterpart. The gender difference in absenteeism in all schools was statistically significant. The study highlighted that groundwater scarcity in the study area, and consequent demand on their time for household work including fetching drinking water are contributing factors towards limiting their educational and economic opportunities. Groundwater scarcity can be one of the key factors that can limit inclusiveness and so the potential benefits of access to groundwater need to be considered in the empowerment of women.

The examination of the relationship between groundwater institutions, management attitudes and subjective wellbeing of households has substantial potential to reveal initiatives that jointly improve aquifer sustainability and household wellbeing. Subjective wellbeing was calculated as an index of dissatisfaction (IDS), revealing ranked importance and the level of dissatisfaction of individual factors selected from economic, environmental and social/relational wellbeing dimensions. The analysis of data demonstrated that reliance on initiatives to improve household income alone is unlikely to result in improved individual subjective wellbeing for the study watersheds. This means, it is important to design participatory processes at the village level by taking into account specific factors that are likely to jointly improve aquifer sustainability and household wellbeing.

The results from field trials on the selection of crop varieties that have low water demand, the use of mulches to reduce soil evaporation and the application of vermicompost have significantly helped the community. In particular, the findings from the trials provide local data and recommendations for water saving through practices such as the use of straw and plastic mulch for conservation of soil moisture, water saving and improvement in farmer income through adoption of selected crop varieties. Also, the recommendation has some indirect sustainability benefits through the use of organic manures management, carbon sequestration and greenhouse gases reduction emissions in soils by preferential use of organic manures, vermicompost, green manure and inclusion of legumes in crop rotations. The research on gender aspects in Meghraj is another area of scientific impact. The study reveals that although women are mostly considered to be domestic users of water while men are the productive users, women make significant use of water for productive purposes as well. The results further confirm that women have to travel many times in a day to collect water for various uses. For drinking water collection alone, women have to travel an average of three times in a day which take between 50 and 77 minutes depending on season. It was inferred that if domestic water supply is improved, it not only saves women's time but also reduces the hard labour and time which could be used by women on livelihood activities that will increase their household income and improve wellbeing of families.

In the last 12 months, considerable work was done on GIS mapping and modelling to develop groundwater contour maps, understand groundwater flow direction and estimate groundwater recharge during the monsoon season. The GIS maps and modelling carried out in this project will have scientific impact as they will be useful for the government agencies in planning and implementing watershed development works.

#### 3.3 Capacity impacts

A number of training programs have been conducted over the span of this project period for staff members, Bhujal Jankaars (BJs) and village institutions such as Sujal Samities which have significantly helped the community to gain knowledge on technicalities of ground water management. Crop demonstrations have helped the community to adapt to more eco-friendly way of agriculture.

A number of trainings programs have been conducted by Arid Communities and Technologies (ACT) in the last the 12 months for project staffs on the use of GIS and for Bhujal Jankaars (BJs) on water management planning at the village level. The trainings have further equipped project staff and BJs in the analysis and interpretation of data being collected. This is now enabling researchers to develop GIS map layers and BJ's to help the village communities and the village level institutions such as Sujal Samitee to access local data and have a dialogue on the need to manage groundwater co-operatively.

Installation of automatic machine and rain-gauge in two schools of Bhatkota and Tarakwada villages have continued to build the capacity of villagers to understand the rainfall amounts and patterns and get some sense of the magnitude of rainfall. Overall, the practical experience in measuring weather parameters by BJs and sharing with village communities has helped in water literacy. The children are recording regular reading of rainfall and temperature.

Demonstrations of high yielding, less water using hybrid crops, viz., maize, wheat, and mustard crops helped to demonstrate to farmers that using improved varieties of these crops has the potential to increase their net income within the water available when compared with the varieties they currently use.

#### **3.4 Community impacts**

Bhujal Jankaars, equipped with scientific knowledge, are continuously disseminating information and knowledge to the community with institutional support of Sujal Samiti for better water governance. Crop demonstrations have helped the community to adopt scientific agricultural practices and this has led to increase in use of vermicompost. These activities brought significant motivation among farmers and local communities to use groundwater more efficiently and showed them that it is possible to improve water productivity with some practical changes in their farming practices such as changes in crop variety or introducing moisture conservation practices and improve their family's income in the long term.

Before the project interventions, community did not have the idea of relation between recharge potential and depletion of ground water by extracting it. Since BJs have gained the scientific knowledge, they have been sharing in all community forums. Due to this the community has understood the importance of water conservation for future generations.

#### 3.4.1 Economic impacts

Improved irrigation and agronomic practices, including the use of drip method, mulches, improved high yielding varieties, organic manures and Zinc application has been promoted in the project areas by conducting on-farm trials at farmers' fields to achieve water savings, improve crop yields and increase income of the farmers. These activities are expected to bring significant economic benefits to the farming community locally and in other parts of the two states.

Crop diversification by farmers in Meghraj watersheds is occurring and the ACIAR project has partly helped in this change. The mass awareness in Meghraj has brought the groundwater scarcity issues in the forefront and influenced over 3,700 farmer families in 18 villages out of which 12 villages are non-project area. There is some anecdotal evidence that farmers have started to explore and adopt crops and varieties that use less groundwater. For example, more farmers during Rabi season 2015-16 adopted the GW-11 variety of wheat the Meghraj. The change in crop variety or crop type has resulted in less number of irrigations and improved economic returns to farmers.

It is worth mentioning that 56 farmers from six villages in the Meghraj village have adopted drip irrigation in about 100 ha of land and they received about Rs. 97 lacs in subsidy from the Government of Gujarat. The encouragement for the farmers to adopt drip irrigation was partly due to the community forums, creating awareness about the groundwater situation and field demonstration in the watershed through the ACIAR project.

#### 3.4.2 Social impacts

The Bhujal Jankaars have been meeting regularly with the farmer groups and are participating in the meetings of the Sujal Samitee to continue the dialogue on future water availability, the role of village groundwater cooperatives and options to secure water supplies. They used their weekly water table data and the estimates of crop water requirements to explain the total water consumption in the area and illustrated the need to choose suitable crops so that they can match the water demand with water supply. This way they were able to draw the attention of the community towards demand side management and importance of groundwater recharge.

With on-going presence of project staff and regular meeting with farmer groups, there is an increased evidence that farmers now accept that groundwater is limited (previously many of them opined that there is an underground stream or the aquifer is connected to ocean) and the falling water table is a village level issue and it needs to be tackled at the village level. The effort by individual farmers will not work and they are quite aware that deepening a well or installing a deeper tubewell can affect the neighbour's access to groundwater. They feel helpless about their current groundwater situation but recognise that the solution needs to be developed and owned by the village or at least by a collective of farmers. The farming community in the six villages is now debating the concept of sharing groundwater through village groundwater cooperatives. The concept of water productivity (rather than crop productivity) is gaining momentum among the farmers.

The project team has involved farmers and other groups of all castes, rich and poor and men and women in demonstrations, field days, training and other activities of the project, this assisted in

strengthening the ownership of groundwater issues and possible solutions at the village level. The project is also helping social cohesion among the local communities.

#### 3.4.3 Environmental impacts

The project has made the community realise the importance of water conservation which has led the community to prepare perspective plans with special focus on natural resource management. The Bhujal Jankaars had collaborated with Sujal Samiti to plan and prepare labour budget (shelfof-activities) under MGNREGA during last financial year. This year, significant efforts were made to leverage and implement shelf-of-activities in the project areas. For example, in Navagarah village, two defunct check-dams were repaired and de-silted under MGNREGA scheme. This has helped to increase water harvesting capacity of village leading to increase in ground water level.

The village community has started to develop the understanding of their water environment and one indicator of this is that they are now requesting project staff to access temperature, wind velocity, rainfall and humidity data recorded by weather stations in the study areas. With rainfall information displayed in villages and school on daily basis, village communities are now thinking rainfall amount more in terms of quantity (mm) rather than qualitative terms they are used to earlier.

Some of the crop demonstrations and on-farm field trials were focused on the use of organic manures and reduce the use of inorganic chemical fertilisers in agricultural production systems. Farmers were also advised to grow pest resistant varieties and use pesticides based on target pests. These activities are expected to significantly contribute in reducing the water pollution and to a marked improvement in environmental protection by reducing the nitrite emission from the soils.

#### 3.4.4 Policy impacts

A two day long (15-16 December 2015) National Workshop on Community Managed Water Resources Development for enhancing livelihoods was organized by the Water Management Forum (WMF), the Aga Khan Rural Support Programme, India (AKRSPI) and the Development Support Centre (DSC) to share the learning across geographies and institutions. The workshop was inaugurated by Dr Jayanti Ravi, Principal Secretary and Commissioner Rural Development, Government of Gujarat. The key note address was given by Dr R Parthasarthy, Director, Gujarat Institute of Development Research and the concluding remarks were given by Mr R Sundar, Chief General Manager, NABARD, Gujarat. There were 129 participants from 8 states and comprised of Community Based Organisations, NGOs, Government Depts, Academic Institutions, Funding Agencies and the Media. There were presentations by representatives from CBOs and facilitating agencies covering seven thematic areas and 15 case studies related to water management. A panel of experts provided feedback and also derived the key learning from the presentations.

The experiences of the MARVI programme were shared by the Bhujal Jankars from Gujarat and Rajasthan in this Workshop. Integrating Participatory Groundwater Management in mainstream programmes such as the Integrated Watershed Management Programme and MGNREGA was one of the key learning emerging from this session. The case study of the same has also been documented in the proceedings which were shared with policy makers, practitioners and the academia.

#### 3.5 Stakeholder engagement and communication

BJs Resource Book (in preparation; in English, Hindi and Gujarati; completion expected in November 2016)

- School Resource Book (in preparation; in English, Hindi and Gujarati; completion expected in November 2016 with collaborative schools in February 2017)
- Stories of water governance: case studies (in preparation; in English and Gujarati; completion expected in September 2016)

## 4 Training and capacity building activities

A number of capacity building programs were organized for staff on data analysis, modelling and GIS application. Further efforts were made during the last 12 months to engage community about participatory groundwater management and to explore future options for groundwater use that matched with annual recharge volumes.

Bhujal Jankaar's (BJs) from the project are becoming part of other projects being implemented in Meghraj for engagement process and data collection activities. This indicates an increasing level of acceptance and capacity of BJs for implementing watershed development works and research. The BJs continue to be an important link between the project team and the village communities for mobilising farmers for project meetings, field demonstrations and dissemination of research findings from the project. The next challenge for the project is find the mechanism and approach to transform the BJ program so that it can become a mainstream resource for implementing agencies at the village level.

## **5** Intellectual property

## 6 Amendments to personnel and project activities

#### 6.1 Personnel

There has been no significant change apart from Mr. Bharat Parmar leaving the post of Team leader, Meghraj and Mr. Kiran Patel is now functioning as a Meghraj team leader. Mr. Dhavan Nagar, Mr. Chanchal Pandey and Mr. Kiran Patel are the key staff for field work in the Meghraj.

#### 6.2 **Project activities**

Following the project review in February 2016, the activities listed below have been included for work over the next 12 months:

- 1 Adoption of the BJ Program beyond the study areas:
  - a Development of BJ training Manual
  - b Development of groundwater monitoring kit
  - c Effective partnership with the Agriculture, Horticulture, and Panchayati Raj & Rural Development agencies at the state level for adoption of BJ Program;
- 2 Development of pilot 'Village Groundwater Co-operatives' (VGC) in selected villages.
  - a Facilitate the develop framework for formal social regulation amongst the farmers having good access to groundwater, farmers having limited access to water, and non-well owning farmers.
  - b Technical and institutional capacity building of BJs
  - c Capacity building of Gram Panchayats on groundwater issues.
- 3 Translation of research and knowledge generated from the MARVI work for the use by:
  - a BJs to make sense of water-table and water quality data;
  - b BJs and farmers help in crop planning and groundwater use, especially in 'Groundwater Co-operatives' to be trailed in the study watersheds.
- 4 Technical and institutional capacity building of BJs and BJ Facilitators
- 5 My-Well SMS system, My-Well Smart Phone App and Adopt-A-Well website.
- 6 Pilots of dug well recharge and monitoring
- 7 Promoting 'groundwater literacy' through continued engagement with Panchayats and schools.

## 7 Problems and opportunities

- There is a scope to integrate and scale-up MARVI initiative with other existing projects of DSC. One such example is integration of MARVI initiative into IWRM project funded by Hindustan Unilever Foundation in 22 villages of two districts of Gujarat. A proposal has been put on with the Arghayam to scale-up in other 46 project villages in Meghraj.
- There is a significant opportunity to work with Central Groundwater Board (CGWB), and Ministry of Water Resources at the national and State levels for the adoption of project outputs and outcomes.
- The presentation of project work at the South Asia Groundwater Forum in Jaipur during 1-3 June 2016 has opened up some new pathways to link with the major project currently under development between the Government of India and the World Bank. The task over the next 4-5 months is to translate the outputs from the project in a form that can help in communicating the key points effectively to the decision makers and funding agencies.
- Two units of dug well recharge structures have been constructed in Navagarha village of Meghraj block and are being monitored for their effectiveness for groundwater recharge through individual wells. If they are successful, they can be one of the means to increase the recharge at the local level and help in the groundwater cooperative movement.
- A web-site, Adopt-A-Well, will be designed to attract individual donation to adopt a defunct well and provide financial support to individual farmers to construct dug-well recharge structures.

## 8 Budget

Development Support Centre, Ahmedabad					
International Water Management Institute					
Improved Village Scale Groundwater recharge and Management for Agriculture and					
livelihood development in India					
Grant Utilization statement from 01.04.2011 to 30.06.16					
Total Budget - \$52800					
1. Total Amount Received from ACIAR					
Particular	Amount ( in AUD )	Amount in Rs			
Receipt –A					
First Installment	6742.00	353820.00			
Second & Third Installment	12905.00	715357.00			
Fourth & Fifth Installment	13041.00	754161.00			
Sixth & seventh Installment	13326.00	624064.00			
Interest on Saving Account		31695.48			
Total Amount Received	46014.00	2479097.48			
2. Total Expenditure till 30 June 2016					
Expenditure-B	Amount ( in AUD )	Amount in Rs			
DSC - Field Research co-coordinator (Gujarat)		945062.24			
DSC - Data collection and collation		1188263.45			
DSC - domestic travel to field sites		179642.00			
DSC - subsistence for travel to local field sites		84443.00			
DSC - allowance for infrastructure costs		403552.14			
DSC - Travel Expenditure during Hyderabad		16180.00			
exposure visit					
Total Expenditure		2817142.83			
Balance @ 1 AUD=50.12 INR	(6,744.72)	-338045.35			