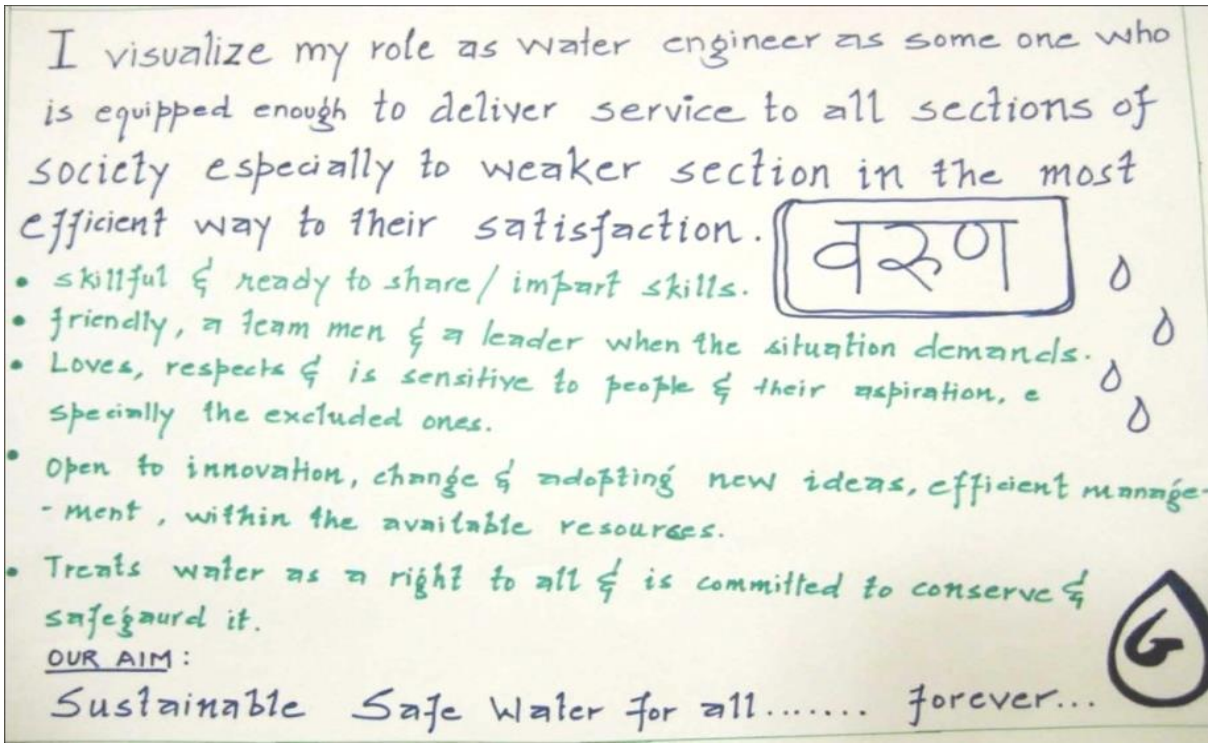
Glimpses From The Grassroots

Rajasthan Varun Group - C.A.N. Workshop, Jaipur, March 2012

I visualize my role as water engineer as someone who is equipped enough to deliver service to all sections of society especially to weaker section in the most efficient way to their satisfaction.



- Skillful & ready to share / import skills.
- Friendly, team men & a leader when the situation demands.
- Loves, respects & is sensitive to people & their inspiration, specially the excluded ones.
- Open to innovation, change & adopting new ideas, efficient management within the available resources.
- Treats water as a right to all & is commited to conserve & safeguard it.

Our Aim: Sustainable safe wate for all, forever…

Rajesh (Agriculture Engineering Department -Tiruvallur) had a somewhat different trajectory in the change process. He was the quintessential angry young man. Feeling a sense of helplessness by what he saw as work practices and ethics around him he was quickly sucked in to the system. Anger was his way of responding to any situation that challenged who he had become.

The change process workshop touched a raw nerve and predictably he lashed out with rage and cynicism. He recalls the long solitary road out, wrestling with a lot of personal issues, before he was willing to see the change that was possible.

Today, he believes that the key to solving a lot of problems in the field has to do with the ability to empathize! Identifying those who need help the most in any community and ensuring by all means possible within the system that they receive the benefits is what he tries hard to do. He admits to at time personally requesting well off farmers who show up for limited subsidies to give it up for the sake of those who need it more. His conviction works many times but not always he says but he is glad to make the effort.

Veda (Vedapuri), Water Resources Organization Engineer, from Tirutani confesses that he was an extremely introvert person when he began to participate in the change process, but slowly the conviction of that process has unlocked his potential to reach out to people and engage with them.

He recalls, once the change process at the individual level started to kick in, he found himself volunteering to take on more work. So when he was

given the additional charge of the maintenance of more tanks in model villages in Tiruvallur district, his colleagues at work regarded him strangely but he was not deterred. He found himself going regularly to these model villages and reaching out to the community.

He just continued to meet the community and spoke about the existing water crisis. Slowly, he convinced people to learn to use the records of the revenue department to locate and identify water bodies, to evaluate their current conditions, to try and rehabilitate these water bodies through the MNREGA scheme. Like someone who has found a magic formula to happiness, he says shyly that it has made him a better human being. The way he relates with people outside of the work space and at home has also changed. Thanks to CEC for this transformation!!

The public sector is routinely pilloried for being inefficient, unresponsive and worse beyond redemption. We at CEC believe that careful nurturance, Training And Capacity Building Programmes can alter this situation and bring about the desired transformation amongst people (both officials and the community) and system alike leading to effective service delivery.

Where should behavioral exploration start? At the top, if that is where the change is incubated, or at the bottom where citizens feel, touch and experience the insufficiencies on a daily basis. The frontline epitomizes the barefoot bureaucracy which is generally bureaucratic in its attitudes and processes but has the potential for change in its shared culture, values and proximity with the citizens.

PHED engineer (Participant) says, 'I visualize my role as a water engineer – as someone who is fully equipped to deliver service to all sections of society especially to weaker sections in the most efficient way and to their satisfaction".

As Settu, a Drinking Water Engineer, explained: "It was only in the change management workshop that I became sensitized to looking at myself and the way I responded to villagers. I realized that I had internalized the notion that as the engineer I knew more than the villagers and that I should keep a distance from them. I would only interact with the Panchayat President and leaders of the village; I rarely visited the houses of people and related with them as human beings with their own feelings, values and experiences. It was painful realization that I had actually distanced myself from the people and that unless I changed the way I related to people no change is possible. I also needed to be sensitive to the sentiments of dalits and their inherited problems of social exclusion by actually interacting with them socially and in their spaces"

II.CHANGES ON THE GROUND

PERSONAL AND OFFICE LIFE

Several of the workshop participants under TN -IAMWARM Project during August 2014 recounted the impact the training had on their personal and office life which are detailed below, in their own words:

- "After the training, I think I have learnt to balance my work and my home. Earlier, I would carry a lot of stress to my home. I was angry

all the time. Now I have developed a sense of calm and politeness to deal with the community. I am now able to answer any question that the farmers ask me.

- “Prior to attending the training, I was only confined to my duty. Now my mindset is that I should go beyond the call of duty. I do not see things as a target. I have brought it upon myself to go to the community repeatedly, communicating till I see the results. I am prepared to spend any number of hours till I see the result. Previously I would get satisfied even I helped 1-2 farmers. I used to think I have done my job. Now I persevere. At a personal level, too, I think there has been a change. Earlier I would get angry very often. I have realized now that anger is of no use”.
- “Before the training, I was an officer. Now I am friend of the farmer. I have also learnt how to control my anger. I was a very short-tempered man before this exercise”.
- After learning about water conservation, a Veterinary Surgeon stated: “I am willing to stand in the queue like all those women do for water. I have stressed the importance of water to my children as well and have told them to use water judiciously. In fact, my daughter participated in an oral competition in her school and spoke on water scarcity. She was awarded the first prize!”
- “The foremost lesson I took from the training is that I should be more effective. I should help the community without thinking so much about rules. It has also taught me to be conscious about time.”
- “Earlier, I delivered my work like a postman. Now I talk about sustainable change. On values, I would say I have learnt the importance of honesty, truthfulness, empathy”.

- “I have learnt about co-working and communicating with people”.
- “I think what has changed the most is our friendliness towards each other. We have developed friendships with officials from other sectors with whom we would not have interacted otherwise. The fact that we are now craving to work together as a team is quite unique”.
- “Prior to the training, if someone approached me for pipelines, I would say ‘this is not done by me’. Now I take his problem and connect him to other officers”.
- “I am of the water department, but I am still in the minds of all line department officials. To me, that has been the main impact of this training. There is a lot of gap that exists between the needs of farmers on the one hand and department officials on the other. I wanted to bridge these gaps. I got an opportunity to work as a liaison officer in IAMWARM. I have now attended five trainings and now I am a master trainer. I now try and change the attitudes of the officials as well as the farmers. I try to change their mindsets from ‘what is the government doing for us?’ to ‘what can I do to preserve my assets’. I remember one training workshop where one engineer, after going through all the sessions, said that he was ashamed to be an engineer and he wept. He said that the training had helped him feel the difficulties of the farmers. I also realized that engineers too can feel.
- “I think the training has brought about significant changes in my personal family. For example, my whole family has now taken an oath that we would not go to a water theme park. Earlier my daughter wasted so much water while bathing. I used to tell her in humor that she bathes like Cleopatra. One day she shot back: ‘You may have had water scarcity when you were a child. But you were somebody else’s son. I am your daughter and we face no water problems.’ But

she has changed over time. I have also made small changes in my house. For instance we use the RO waste water (which would be around 8 liters) for our washing machine. I have also tried to educate my neighbors on the need for conserving water. Once one of my neighbors had gone for a wedding, and they left their motor running. When I saw the water overflowing, I tried calling them, but they wouldn't pick up. So I took the risk and climbed over their gate to switch off the motor. I was wearing a new dhoti (traditional lower garment worn in Southern India). When they returned, they were very upset that I had broken into their house. And I did this at the cost of tearing my new dhoti! Still, it made me unpopular among my neighbors. But I don't care."

- "Before coming to the training, my ideas were confined to the 150 acres assigned to me. And I used to think: how can I improve this area, my research station. Now I have come out of my research station. I want to work for the community. I am meant for the community. There is also a lot of cross learning. Now I know some technical words. The process has provided me that space for leaning. Also, initially I was hesitant in sharing my phone number with the villagers. Now I give my number easily."
- "The training gave me technical information on methods like SRI. How can you cultivate a new crop by sandwiching it between two crops? I brought about these changes in the villages assigned to me. I am the nodal officer for 90 villages and I can say that I have full job satisfaction. The people in these villages welcome me now when I go there. They call me Sir or refer to me as their elder brother."
- "I think the most important thing the innovation has done is to create leadership within the community. Change cannot stop at me. It needs

to be dynamic and needs to go beyond me. We may move on, but the farmers can now lead this initiative. They know how to do water walks, water budgeting."

- "When I first attended the workshop, it disturbed me. I was thinking: 'How can I fight companies like Coke and Pepsi on the issue of water conservation as an AE?' But the workshop made me realize that I need to see the problem differently. Fighting them means that we stop consuming Coke and Pepsi. If we see the problem in another dimension, solutions are possible. Another change has been that instead of merely responding to big documents in my inbox, I have started preventing the issue by working with line officials in the field. For example, in Krishnagiri, a model village, while doing a water walk we were crossing a school. We were told that students could not attend classes as they had to fetch water from long distances. The borewell in the school was not functioning. However, water was available and the bore needed to be fixed. The water walk helped us identify the problem and fix it."
- "Previously, we had a perspective of achieving a target set by our department. Now we define our own personal targets and try and achieve them. Convincing people about micro irrigation was the toughest. There was resistance even among engineers. But when our perspective changed to water conservation, the response was very good. Now there is so much demand for micro irrigation, that we are unable to fulfill it."
- "During my entire career, I was a technocrat. I would just prepare MIS tables for my own use. I didn't know anything about water management. Now I feel ashamed about that. I feel that with this training, I have been able to understand the traditional wisdom of the

community, their views, their needs. I have decided that I would dedicate the rest of my life serving the community."

- "I had committed to mobilizing farmers for drip irrigation in the villages I cover. My target was to cover 36 hectares. So far, I have brought 10 hectares under drip irrigation. But I keep visiting them and talking to them. I have even tried to take some farmers to areas where we have successfully launched drip irrigation. The idea is for them to see what other farmers are doing: seeing is believing! I am confident that I'll be able to achieve my goal of 36 hectares".
- "I had resolved that I would go to the villages/SWIK centers that fall under me according to a pre-determined schedule. Often times, I have faced problems in holding meetings in some villages. The atmosphere at times is not very friendly. The group that gathers tends to get quite vociferous in their demands. But I haven't given up. With repeated visits, now the villagers have confidence in us. I realize that what I do is not enough to redress all their problems, but at least I am reaching out to the community. I also know that it isn't enough to solve problems only of those who come for help at the SWIK center. There might be those who can't come to the center. However, in my visits I actively try and look for people who need help".

And, epitomizing the new-found personal confidence, a young female junior engineer with the Water Resources Department had the following the response:

- "I am an Asst. Executive Engineer and I can say that people are very happy with my work. Like me, every official is trying to do his or her best. Initially I used to be annoyed and I used to ask myself 'Why am I going to the field?' Now I enjoy it. Also, although I am only an Asst.

Executive Engineer this training has given me the confidence to speak even to the Chief Engineer."

LEADERSHIP AT THE 'BOTTOM OF THE PYRAMID'

Another issue that was consistently mentioned in the anecdotes was of junior officers, working at the field level, going out of their way to devise innovative ways to address problems brought to them by the village community. The inspiration in all these cases, they feel, is the CM training and programme.

An Agricultural Training Officer in Madurai talked about his personal initiative to spread SRI paddy,[1] following the training:

- "I first attended a water budgeting training in 2009. Our workplace was an urban area near Madurai. Under the CCMG approach, we gathered women who were farmers and did a water budgeting exercise. We first documented the various sources of water in the village as well as the level of rainfall. In the second session, we did the water budgeting exercise. We encouraged them to maintain passbooks about water. We gave them the analogy of a hotel. We said that assume you have Rs. 100, how would you spend it over a given number of days? In the first year, we undertook SRI in 20 hectares. We have now expanded it to 282 hectares (refers to the clipping in the CEC film where a farmer exclaimed how they were getting Rs. 50-60,000 with just 5 kgs of seeds…a miracle! It was shot in the village she works in. The village's name is Villacheri. It is traditionally dependent on tanks, which fill up during rains. Besides

[1] **System of Rice Intensification or SRI is a method to grow paddy using only around 25% of the water needed for traditional flood-irrigated paddy cultivation.**

SRI, I also undertook the initiative of making the irrigation system, non-tank dependent. In 2010, I got the National Bank for Agriculture and Rural Development (NABARD) to adopt the village. I am now a trainer and travel to other model villages to do the same innovations there. I have also started a soil testing van (other officials chipped in to say she had done this purely through her own initiative). I had a choice. Either I could do something or I could keep idle. I chose the former."

Another Agricultural Officer spoke of his experience in restoration of village water bodies.

- "I tell the farmers that instead of complaining about issues; think about how you can resolve them yourself. For example, in a village that I was working on, the tanks had an undergrowth of some shrubs. I told the farmers that I would work with them on their removal. I told them that if each family could remove at least 10 shrubs, the tanks would be clean. We have to change mindsets of people to restore water bodies for the future of our children. You would ask me why I work so much on water when I am an Agricultural Officer. Recently a minister visited our block and asked us, is this your department's work. But I said it is a collective effort. The CM training has given me the ability to approach higher officials and zero in on what needs to be done, where, when and how. I have convinced collectors to work for the village. I have also asked NABARD to give some funds for social development."

The experience also convinced one young scientist at the Tamil Nadu Agricultural University (TNAU) – a partner in the TN IAMWARM Project – to become a government official:

- “I have trained farmers in saving water for irrigation. Initially, farmers would let a part of their land lie fallow in the summers. Now they grow crops on the entire land. Farmers are themselves able to innovate on new things. I have never attended a training, but I have been impacted by a scientist under whom I work, who has attended the training. I have realized that people do not appreciate each other’s concerns. Take the water user associations. They exist, but are not functional. This project makes these institutions more effective. They provide a space where everyone can come and their grievances would be addressed. I am currently a scientist, but with this experience, I want to become a government officer.”

A veterinary surgeon spoke of the transformative effect of the CM programme on his work:

- “I work in Bannikulam which is a model village. One person in the village owns 5 acres of land in his private capacity and runs it as a poultry farm. The farm had become a breeding ground for flies. Nearly the whole village had been affected. In fact, in the evenings things would be so bad that people had to cover their plates with a piece of cloth, put their hands under the cloth and then eat. They complained that the flies were such a menace that no relatives would come for a feast, not even during a marriage or for a death ceremony. The SWIK center was also not functional because of this problem. The veterinary department had given up saying that since it was a private farm, operating in a private property they could not intervene. To avoid house flies, the residents usually sprayed pesticides around their farms and houses. One day, a cow ate a patch of grass that had been sprayed with pesticides and died. This led to a furor. People were so angry that they did not bury the cow. They put it in the middle

of the road and blocked all vehicular movement. I was called then to do a post mortem. We found pesticides. I realized that it was serious issue and may affect other cattle and so narrated this incident to the Joint Director. I had heard about another poultry hub near Namakkal veterinary college which apparently did not have a fly issue. The Joint Director allowed me to go there to study the processes they were following. Simultaneously, we took water, poultry feed and soil samples from the village and tested them in a lab. We found a high level of toxicity in all. The water was contaminated with *e. coli*. We found later that some of the birds had a bowel disease. The wet droppings when mixed with protein were becoming a medium for fly breeding. We suggested a toxic binder and water medicines. The flies have reduced now by over 90%. The training taught me that I needed to take the initiative. That I had to go to the farmers."

And other officials spoke of the first time they stepped outside 'official boundaries' to help farmers:

- "I was working on a program for installing solar pumps in one village. In order to avoid any maintenance problems, the average level of groundwater should not be below 180 feet. Farmers in the village requested that we increase it further by 20 feet. This was so that they could get more water for sugarcane farming. I was initially hesitant. But then I came for this training and I started empathizing with their problems. I went to the village and tested the groundwater level at different places. I realized that the level was in fact inconsistent and so in some places we could dig further. I have now allowed an increase in some areas. We have been able to save nearly 4 acres of the sugarcane crop. This is the first time I have done something like this, which I initially thought would be quite tough to do."

- “I work in a village that is affected by Naxalite (political extremists) activities and conflict between Scheduled Castes and the Most Backward Castes. The first time that I visited the village, I thought there was no scope for doing anything. Then I attended the training and revisited the village. It was almost as if I heard their problems afresh or for the first time. They wanted tractors, threshers, solar panels. The first time I approached the Panchayat president, he gave me a list of 5 households that should get solar panels. When I went to the District Collector with the list, he asked me the basis of selection. I said that honestly I think the panels should be for the entire village. Eventually that Panchayat passed a resolution for 100% free solar panels for the whole village. But for the *muttram* training, I would not have taken that step”.

CONVERGENCEIN PRACTICE

Getting to know their colleagues from other Departments during the CM workshops, forming district and block-level teams to work together on IAMWARM project activities has led to unprecedented inter-departmental cooperation and practical ‘convergence’ of effort on the ground. Mr. Vibhu Nayar, IAS, Project Director of IAMWARM explained the approach:

> “Water and interventions around it are provided through a multidepartment structure. The idea for this initiative was to develop a shared ethos and thinking around water. In other words, we wanted to help an official isolate himself from the department and his team, and work around water.
>
> How does it work? Each block in a district has about 15 villages on an average. We have 7 departments that work under the project. So

we make the official from each department the captain of two villages. The single window information centre in the village has the mobile numbers of all officials on a chart pasted on the wall. Further, there is a predefined program of when the officials would visit. This is all informal. It is interesting though to observe the dynamics among officials. While the Water Resources Organization (WRO) housed within the Public Works Department (PWD) has about 70% of the money compared to a pittance that the animal husbandry department gets, often times it is the officials from animal husbandry who are closer to the people. Officials from other departments in fact ride on the veterinary official's popularity to get issues resolved in their village.

Usually all officials are not able to visit each village every week. However, the official visiting [the captain] notes down all grievances and conveys to his colleagues. Overtime we have seen that this has developed into a culture of officials batting for their colleagues from other departments. I remember the case of one irrigation engineer who pestered us to set up an agricultural produce procurement centre in a village, even though it didn't directly concern him. This is something unheard of. Similarly non-engineers have taken to doing water budgeting. That technical domain has now been demystified for them. In fact, we have one data entry operator named Senthil who has been part of these trainings. He is now good at water budgeting!

We tell them that if you want to do a good job, here are your 100 fields. They are available to you at one place, the single window centre. It's a win-win for you. Now does this bind you up or free you

up? Think that you can cover the entire village's concerns by just visiting them once a month.

We apply an easy test to check how comfortable officials working under the aegis of a Centre are. We ask them whether they can call each other anytime or whether they have the phone numbers of other officials on speed dial!"

The Single Window Information and Knowledge (SWIK) Centre set up in the village is a practical example of how convergence can be achieved in the field.Originally an idea that came from a field-level official, the idea of providing a single meeting place in a village where officials from all participating departments came together to meet the community and address their various issues, the idea of a SWIKC was later adopted throughout the project, with considerable success. An agricultural engineer working in at the village-level summarized the concept:

- "Previously, we were not coming together regularly. However, with the setting up of the SWIK centre, we meet at least once in a fortnight. We don't have an agenda. We just ask people what their problems are and respond accordingly. Even if we all can't meet together, we inform each other if there is a grievance concerning a particular department. Earlier, there was no coordination between departments, but now we are all willing and ready to come together."

Another official supplemented this view:

- "We are taught how we can work with people from other departments. Because of this convergence, we know about issues that we didn't know of earlier. In the training as well as in the SWIK center, the first

step is sharing of a matrix where we circulate what each department offers and what we expect from each other".

The trainers at CEC believe that such cooperation not only results in a healthy competition among officials in the field but also allows 'convergence' outside the region and project space, with officials celebrating a local festival of lights (the *Karthikeya Deepam* festival) by lighting lamps around water bodies in villages, along with friends and families.

The officials themselves are more outspoken:

- "I am part and parcel of my colleagues now. I know their difficulties."
- "This training has taught us that people can become a bridge between professionals. Once the professionals see results from the community's side, then the commitment to do more increases".
- "Now any official can explain the work of another official and vice versa.

Officials working together also celebrate each other's successes, as D. Santhi, an Assistant Executive Engineer, explains:

- Once I was in a village, and a community member praised the work of my colleague, Revathi, who works as an agricultural officer. I felt proud. In fact now we are all on WhatsApp and we are good friends.

A scientist from the TN Agricultural University adds:

- "Teaching and research have been our traditional mandates. Now I know how to involve my team with other line officials. Otherwise we researchers are far removed from the community. In fact, it was during one of the meetings that we realized that a demand for SRI existed in the community – the demand emanated from that meeting.

Now I make it a point to take one day off each week from my campus and visit the villagers. It helps me evaluate the effect of the technique, whether it is helping farmers, whether there is a demonstration effect etc. I wouldn't have been able to do all this had I been behind my desk and had not been meeting farmers through these convergence meetings. I also started visiting the village more often. I shared the technology on drip irrigation with the villagers. Drip irrigation has certainly picked up in this village. Also, I have the courage now to address public gatherings. The training also helped increase the sense of togetherness among sister departments."

A remarkable feature of this cooperation is that one official is now able to support and supplement other colleagues in the field. Thus, for instance, Dr. Vasanthakumar from the Animal Husbandry Department stated:

- "The training gives you a platform to interact with your colleagues from other departments, and get information about their schemes. So when farmers ask me my ideas about farming, I can tell them: 'why do you just do paddy? Why don't you diversify into other crops?' I wouldn't have been able to provide this advice without convergence training. I didn't know for example that bananas, rice and sugarcane need more water. Now my foundations about agriculture are solid.
- I also try and convince the villagers to use a public latrine. I don't have direct access to them like other big departments (e.g. the PWD), but I try my best. I remind them that while milk is Rs. 30 a liter, water is close, about Rs. 25 a liter. So save it. These trainings have created change in me. Now I am not just an animal husbandry expert. I am a social engineer."

Another official from the Agricultural Department described the process on the ground:

- “I have been training farmers in crop diversification within a single plot of land. The PWD has been helping in water conservation. Agriculture department is providing information at the animal health camps. We all meet each other at least once in 3 months. There were initial hiccups, of course, but if you persist then appreciation starts to flow in, both from the community as well as higher officials. This experience combines practical use with passion.”

Vibhu Nayar recalled the simple ways in which they addressed some common problems of coordination among government officials:

> “I remember one of the first issues we faced was in getting these officials to villages. There was a shortage of vehicles and the usual complaint was how they would go to the village. In the trainings, we spoke to them and suggested if they could all use one jeep. This would save petrol costs for everyone. The training therefore was the precursor. It broke boundaries and enabled an environment of sharing. The officials started visiting villages more often; they started listening to PRIs, to farmers. It was a simple solution that created feedback loops all around.”

The trainings, the team building and the convergence on the ground are reflected in the work done in the field, among the village communities targeted under the IAMWARM project. The next section describes some of these impacts.[2]

WINDS OF CHANGE IN COMMUNITIES

Although there are several stories from the field of successful interventions by the project – many of which are published in CEC (2015) – three selected stories of community impact are presented here to

[2] A recent publication by the project, TN IAMWARM (2015)

illustrate the impact of the CM Programme on the communities. The contrast is with villages where responsible government officials have not undergone CM training – and hence where there are relatively fewer visits by officials and several hurdles faced by villagers in approaching government officials and benefitting from the various schemes available for their development.

Periyakalakkadi: Transforming the lives of Dalits[3]

Dr. Jayalakshmi, a scientist from TNAU who worked in Periyakalakkadi summarizes the problem prior to the intervention and what she and her team managed to achieve:

"The Dalit lands were lying fallow. We organized the farmers into 6 groups of 10 farmers each. No farmer had a title deed – without which they could not apply for the subsidized drip irrigation kits being supplied by the state government. The challenge was: how do you get drip irrigation? So the university taught farmers about modern scientific techniques. In one year, we harvested nearly 20 lakh watermelons. The farmers are now growing okra, brinjal, curry leaves and watermelon. They are sending their children to schools."

Periyakalakkadi is a village in Kancheepuram district on the outskirts of Chennai with around 280 households and a population of around 1000. Being 15 km from the Trichy Highway, not many government schemes had been implemented in such distant villages (as opposed to nearby villages) and were less visited by government officials. In 1984, around 90 acres of landbelonging to the Vinobha Bhave Bhoomidhana Board in the village wasassigned by the government to 60 Scheduled Caste (SC)

[3] 'Dalit' is a term referring to a group of people traditionally regarded as untouchable in the Indian caste system and part of the Scheduled Castes listed in the Indian Constitution.

families living in the village, each family being assigned 1.5 acres to cultivate. ASSEFA, a localNGO, helped the farmers develop 5 open wells, install 6 pump sets and form 6 groups to utilize the well water on a community basis. Farmers could now cultivate a single crop (paddy) in 10-15 acres with available water and grew pulses in the remaining 35-40 acres that were entirely rain-fed. Although this was definitely an improvement, it did not help much as farmers often cultivated only short-term crops and the lands were bone dry in summers due to the falling water table. Over time, cultivation became negligible forcing many of them to leave their lands and either become agricultural laborers or migrate to towns for work.

Periyakalakkadi was taken up as a model village by the TN IAMWARM project in 2012 and work began with street meetings and informal gatherings in the SC community area where project officials informed them about the project. But the villagers said they did not have individual titles to the land and therefore could not claim any government subsidies (as access to government subsidies, e.g., for drip and sprinkler systems, requires a farmer to have a clear title deed for owned land).

The Executive Engineer of the Agricultural Engineering Department (AED) took this as a challenge, approached the District Collector on his own initiative and managed to get a special order allowing these 60 SC households to get subsidies for drips and sprinklers.
But convincing the farmers was not easy and finally a scientist (Senior Research Fellow) from the Water Technology Centre of TNAU was appointed to stay in the village to educate the youth and motivate farmers to adopt micro irrigation. Mr. B.J. Pandian, Nodal Officer and Director, Water Technology Centre, recalls that it was not easy:

> “Achieving this was not easy.We had to meet the farmers many times, explain to them how the new technology would help them earn money. We stationed a specialist in the village to meet the farmers and instill confidence in them. The woman started talking to the village women every day. After some days, she was able to make some of them convince their husbands to accept the new technology. The rest was quite easy for us.”

A group of 20 farmers were taken to Udumalpet, Coimbatore and Athur as part of an exposure visit. This group returned and convinced others to come together and share the available water. In addition, the AED designed a holistic irrigation network system covering the entire 90 acres by using the existing 5 open wells on a rotation basis to supply a drip irrigation system laid out in 60 acres and sprinkler systems in 27 acres. The AED also dovetailed other ongoing programs and constructed a check dam to recharge the wells. The project team formed 6 farmer groups, operating 15 acres each where all 10 members of each group do all cultivation activities together and divide the proceeds after sale. They opened bank accounts for each group and put the proceeds from sale into each.

Immediately after installation of the new micro-irrigation systems, the farmers began to cultivate watermelons, ash gourd, drumstick and maize. One group (of 10 farmers) harvested nearly 16 tons of watermelon which were sold at a profit of around Rs 90,000. Another group of farmers raised pumpkin in 3 acres, which fetched a profit of about Rs. 96,000. Vegetables like brinjal, bhindi, cluster bean, moringa, curry leaf and tuberose are now being grown in the village and by 2014, farmers were earning a daily income of more than Rs. 1000. Residents who had migrated to as far as Dubai are returning.

Mr. Subramanian,the Executive Engineer who started the work in Periyakalakkadi, explains the efforts made by the team:

> “We were able to achieve the transformation on these Dalit lands with the cooperation of all officials working on the project. I always wanted to do something for these villages, but couldn’t within the confines of my department. I have been working for 35 years. But the period between 2010-2014 has been the most satisfying of my career. The SWIKC provided space for the officials and the community to come together. Initially, I started with a PRA exercise to identify issues around water. The water budgeting exercise proved that there was scarcity. I then suggested SRI as a technique to the farmers. Now farmers are undertaking SRI without expecting government assistance. I have now lost my status as an officer and have become a friend of the farmer.”

Summing up the case of Periyakalakkadi, Mr. Vibhu Nayar, IAS, Project Director, TN IAMWARM, explained the significance of the case of Periakalakkadi:

> “In a typical government structure, we would have been the dark about what we can do. However, the officials working in the village took upon this as a challenge. The Agricultural Department would not only distribute seeds, but with the help of others would help farmers in sowing, weeding, fertilizer application etc. Its role shifted from that of being a distribution agent to something bigger. Similarly, water engineers became water managers. This is not the typical government approach.”

Morapakkam: re-engaging with the government

Morapakkam village in Kancheepuram district has a population of more than 3000 people living in 950 households. The village cultivates nearly 750 acres of land, growing mainly paddy (600 acres) and casurina (50 acres) with other crops such as black gram, vegetables and flowers accounting for the remaining land. The village is fed by two irrigation tanks but water levels in both tanks have reduced over time. Morapakkam villagers, who are mostly either agricultural workers or small landowners owning 1-2 acres, complain that while water in the two tanks was earlier sufficient for growing 3 crops, it is now insufficient for even irrigating one full paddy crop. Besides falling water levels, inflow channels have been encroached upon and in disrepair. The water shortage and consequent decline in cultivation forced many families to migrate to urban areas looking for work – thus reducing labor supply in the village and making the remaining farmers rely on expensive machinery (tractors, threshers) to work their land.

Morapakkan is not the best example of “change management” around water. In fact, in the visit by this reporting team, except for complaints around improvement of inflow channels not being met; most demands focused on issues like roads, provision of agricultural equipment, toilets etc.

The SWIK centre set up under the TN IAMWARM project has been leading to small but significant changes including a much evident increase in productivity. One farmer described his personal gains:

> “SRI has increased the paddy crop on my 5 acre farm to 32 bags from 22 bags. But besides SRI, techniques I also picked up several other things, such as the use of wide square planting which has helped improve aeration and pest resistance, and reduced my fertilizer usage by about 50%. I now want to move to organic farming, but unfortunately it is going to take time to replace the inorganic fertilizers completely.”

Some residents have also come together in a commodity group which motivates farmers to grow other crops, besides paddy. During the field visit in August 2014, the group was devising a method of circulating prices to all farmers in the village via SMS.

Many of the changes taking place in Morapakkam are in fact outside the direct ambit of water conservation. A case in point is the project’s setting up of a revolving fund for households to supplement the subsidy available under the Nirmal Bharat Abhiyan for constructing toilets. Nearly 20 families have accessed the fund and have constructed toilets under the scheme. Moreover, the loans have been repaid and 20 other families have availed the facility. Besides money for the toilets and dissemination of agricultural techniques, the CEC has been funding the cleaning of overhead tanks, toilets and has even set up a small reverse osmosis (RO) unit to provide drinking water. CEC officials describe the village as a classic case of officials using the project as a platform for serving the community in whichever manner possible, from toilet provision, to spreading awareness about horticulture to even the convincing the forest department to give the villagers samplings for trees. Or as Mr. Nayar puts it, “It’s a case of social workers taking a lead from the environment in water and sanitation”.

The project has also put in place a Community Change Management

Box 3: The Blue Green Movement and the Community Change Management Groups

CEC produced a booklet for the TN IAMWARM project encapsulating the idea of Model Villages for a Blue Green Movement, with the following characteristics:

- Shared water vision
- Protection and preservation of all water sources
- Drinking water for all
- Preservation of 'every drop of water'
- Improvement of water and crop productivity
- Improvement in farm incomes
- No open defecation
- Clean and green environment
- Transparency, accountability and participation

It details the need for a multi-stakeholder and multi-sectoral approach to address the challenges facing water, food and environment and advocates a collaborative approach of community and government officials working together to 'reorient development programs towards sustainable outcomes'. The booklet states the objective of the movement as follows:

'The Blue Green movement is focused towards improving water availability, accessibility and productivity to address multiple needs of the people, making villages a hub for sufficient food production, eco-friendly space to live in and regenerative in its natural resource utilization and sustenance'.

The movement also believes in 'bringing community engagement into the whole process from decision-making, executing and sustaining village water and environment development' ... depending on the 'traditional water management wisdom of the community and modern scientific practices of water management'.

The rest of the booklet outlines the various steps to be taken by project officials to create such model villages – including creating SWIK Centres, evolving a Village Vision after carrying out a Water Walk and Street Walks, doing a Water Budgeting Exercise with the villagers and carrying out a long list of activities with the village community to achieve the vision, including the following:

- Painting the Village Vision (or Dream)
- Painting the Water Budgeting results
- Cleaning at least one water body in the village
- Cleaning the area around water drawing points of wells and water bodies
- Putting up sign boards banning open defecation
- Digging waste disposal pits for degradable and non-degradable waste
- Increasing the area under SRI and diversifying the crops grown
- Increasing the number of farmers taking up micro-irrigation systems
- Carrying out awareness campaigns for school children and SHG women
- Planting trees in schools
- Detailing department-wise government schemes and action plans

An important part of the Model Village work is identifying volunteers, forming them into a Community Change Management Group (CCMG) along with project officials, to motivate villagers to continue the process further. A Village Captain is appointed as the focal point and catalyst for community activities, their organization and for communication, and is thus a key member of the CCMG.

Source: CEC (undated)

Group (CCMG) which comprises of 13 members (see Box 3).

Describing how the group was facilitated in their village, a teacher had this to say:

> “The Blue-Green movement wanted volunteers. I gave my name to the Panchayat President and joined the Community Change Management Group. We were all taken for a training on water – on its conservation, its use and how not to pollute it. We discussed water budgeting, went for a water walk and learnt techniques like drip irrigation and SRI. I now know that water is a scarce commodity that needs to be used judiciously. In fact, you need water even for accessing some subsidies. For example, you cannot get subsidized inputs for cultivating a dry area. The training made me realize why water was so important”.

Besides the CCMG members, exercises around water invited enthusiastic participation from the village as a whole. Nearly 100 people participated for instance in the water walk. On being asked what made her participate in the walk and eventually join the CCMG, a female SHG member remarked:

> “I have a motto of continuously developing myself and helping others to develop and become more prosperous. That principle attracted me to this training. Also, this was the first training where we weren’t asked to contribute money. So it was not as though I had to pay Rs. 100 or some such amount to attend the training! We started with a water walk followed by a PRA exercise where we shared with each other the location of the tanks, channels and encroachments. This allowed us to chalk out a plan on what needed

to be done. The project accordingly funded many activities like cleaning of tanks, strengthening of bunds, setting up a revolving fund for constructing individual toilets etc."

During the field visit, there was a healthy questioning of officials by the community, an early indication that official accountability was taking root in the village. In fact, the moment the meeting started, people came up with a litany of things they wanted from officials: tractors, threshers, better roads for transporting their produce, for transporting machinery, a vacancy to be filled in the local veterinary centre etc.

Some even openly questioned an Agricultural Engineer to whom they had recently submitted a petition (signed by 200 residents) for improving the inflow channel in the village. One resident asked: "We gave you an application a month ago. Where is it? And where are the tractors?" The official was later seen making a phone call and returning to the meeting, apologizing that the tractors were not immediately available, but he would try to arrange for machinery as soon as possible.

There was also a sense of brotherhood among officials. Upon seeing his colleague being interrogated, a PWD official remarked: "We agree that there is a problem here. But where no problem exists, do you do anything about it? Have you taken any action, for example, to de-silt tanks? Previously you would all get together and clean all field channels every Amavasya (moonless night) before release of water. Now you wait for the MGNREGA workers to de-silt them for you!" of this, the female SHG member remarked, "But one thing has changed for sure. Earlier we went to meet the officials; now they come to meet us". The PWD official

responded: “But you should also come to meet us. Let us also serve you tea and coffee.” And so the banter continued….

THROUGH THE EYES OF THE BENEFICIARIES

Individual farmershave felt the difference too and are now not only eager to diversify away from paddy cultivation but are also ready to adopt less practiced and costlier methods such as micro irrigation. And while they have undoubtedly had to make the effort, a major factor in this change has been the efforts to spread new ideas by the IAMWARM project.

- V. Deivendran of Annamapalaipatti near Morappur in the water-starved district of Dharmapuri was, till nine years ago, one of many rural youth, armed with degrees and going to cities in search of a job. When he couldn’t find one, he took to farming, by necessity. Deivendran who owns about 3.5 acres of land, initially went by the conventional method of raising paddy, even though Morappur, the block under which his village comes, is identified as an area over-exploited for groundwater. A chance meeting with officials from the IAMWARM center made him reflect upon the way he had been doing farming. The officials advised him to raise horticultural crops and adopt micro irrigation. They also helped him gain access to the government subsidy scheme for micro-irrigation.
- J. Parthasarathy of Perumperkandigai near Melmaruvathur of Kancheepuram district sees benefits in the adoption of concepts such as system of rice intensification, which involves less nursery area, water and labor and fewer seeds. When officials visited his village to disseminate information regarding the alternative cropping method, he was one of the first ones to respond positively. “There is

an increase of at least 25 percent in yield," he says. Parthasarathy, who has raised only paddy for the last 18 years, is planning to grow maize in a part of his 30 acre land. "I would not have done it but for the CEC officials' advice, which was rendered at my doorstep."

- Selvi and Ponmalar, young mothers with two children each, hail from agricultural families in Sandaipatti village near Morappur town in the water-starved Dharmapuri district. Further, Morappur block is notorious for over-extraction of groundwater resources and has been chosen by the Union Ministry of Drinking Water and Sanitation for a two-year long project to achieve drinking water security in a holistic manner. While Selvi is an agricultural worker and a beneficiary of the MGNREGS, Ponmalar's family owns about 2.5 acres of land. They differ from each other on several matters – for example, on the impact of the MGNREGS. But when it comes to water, they are together. They are not just conscious of scarce availability of water in the village, but they are also aware of using tools such as water budgeting to draw up a water security plan. In 2012, they went around their village as part of the community water walk to identify water resources. The interest shown by Selvi and Ponmalar is not surprising given the water scarcity in their block. What is refreshing is that even in areas known for high rainfall or better water availability, the idea of water conservation is catching up.

- A. Govindaswamy, president of the Water Users' Association in Kilathivakkam village of Acharapaknam block in Kancheepuram district feels that better water management practices not only lead to saving water, but also save money, especially for farmers. After

taking to the System of Rice Intensification (SRI), he now uses three kg of seeds per acre whereas, till recently, he was using 30-35 kg.

- In the nearby Keezhmaruvathur, Bhaskara Reddiar and his entire family are an example of how higher productivity can be achieved, using less water.

Today, terms like micro irrigation, precision farming and drip fertigation (a practice of conjunctive application of fertilizers and water to crop plants) are no longer Latin to Govindaswamy, Bhaskara Reddiar, Selvi and Ponmalar – thanks, in large measure, to the efforts of the motivated officials of the TN IAMWARM project.