



Stakeholder involvement in the Construction of the Garbage trap and Farmers activities

WASPA Asia aims to involve a wide range of stakeholders in developing and testing solutions for sanitation and decentralized wastewater management, and mitigation of health risks from wastewater use in agriculture.

In the WASPA Asia project- Kurunegala, one of the central beneficiary groups are the farmers who use wastewater for their paddy cultivation. Wastewater flowing from the city to their irrigation canal is the only water source for these farmers as rain water cultivation is not a feasible option for them.

The wastewater combines faecal matter, grey water from households and commercial establishments, black water, oil and grease from service stations that is unhygienic for the farmers who engage in cultivation without taking any protective measures. Moreover, as the water looks clean at times, most of the farmers do not pay attention to possible health risks associated with wastewater use. Another issue the farmers faced while irrigating their cultivations were the solid waste such as pieces of plastic, polyethene, tin cans and syringes and needles etc. that flows into their fields with the water.



Farming being their sole occupation, they have also formed a Farmers' Organisation (FO) that represents three smaller farmers' alliances for the three different *yayas*¹. The FO is the mother organisation that deals with their *Kanna*² meetings and other related issues.

Baseline surveys and field observations revealed that there is lack of awareness among the farmers on the potential health risks associated with the use of wastewater. Moreover although they were aware of some of the polluters of the canal water, they did not know what could be done. Their complaints to the Irrigation officers and Agriculture department had not been effective enough to trigger any action.



November 2006

The idea of constructing a garbage trap to prevent floating solid waste entering into the irrigation canal was brought forward by the WASPA Project team based on their observations and experience and was presented to the Farmers for their comments in November 2006.

Once the farmers gave their enthusiastic approval on the idea, in mid November 2006 discussions were held between the Farmers Organisation (as the beneficiary) and the Irrigation Department (as the responsible government authority) facilitated

¹ Yaya – a section/ strip of cultivated land in one area

² Seasonal

by the WASPA team to decide the appropriate location for the garbage trap, the design and the size of it. During these discussions the Senior Irrigation Engineer expressed that the Irrigation Department have received no formal complaints from the farmers regarding such an issue, but nevertheless suggested placing the garbage trap in the main drainage canal before the anicut³. But the farmers suggested constructing the trap at the beginning of the irrigation canal, which is a smaller canal that diverts inland just before the anicut, pointing out the ease of garbage removal. The officials of the irrigation department promptly questioned back as to who will be responsible for the trap and its Operation and Maintenance (O&M).

In this preliminary discussion the Farmers Organisation agreed to take over the responsibility of O&M of the garbage trap for the future and they will also take over the construction work by outsourcing it to a builder. The irrigation department officials also agreed to place the trap at the beginning of the irrigation canal as suggested by the farmers.

Once the irrigation department agreed to the size specifications and the location, designing of the garbage trap and cost estimation was done by the COSI Engineer and Technical Assistant (TA) with the guidance of the irrigation engineer of the Irrigation Department. It was then presented to the irrigation department for approval.

April 2007

Meanwhile the Learning Alliance of Kurunegala was established and the members were beginning to show their interest in WASPA activities. The irrigation department director, the engineer and the TA were keen on WASPA activities and readily agreed to help with the garbage trap.

But unfortunately while these connections were being established, the said officials of the

irrigation department were transferred, hence the WASPA team had to build and renew their contacts with the irrigation department personnel. This led to a delay of approval of the garbage trap design and also the construction for over three months. The WASPA team had to create awareness and interest in the new officials of the irrigation department to receive their maximum cooperation for WASPA activities.

Construction was again delayed as the farmers requested to wait till the end of the crop season to commence construction work, as the blocking of water from the canal or opening the anicut gates for construction will result in lack of water that would have bad effects to the crop growth.



February 2008

As the process took some time the WASPA team conducted a meeting presented the uses of the garbage trap to the farmers' organisation just before the construction began in early Yala⁴ season 2008. Another meeting was also held with committee members to fix a date for commencement the construction work.

Following prior agreement, the construction work was handed over to the Farmers Organisation, which gave the construction work to an outside contractor. This was also a capacity building experience for the Farmers Organisation.

³ A small dam built to control the water flow

⁴ March to August

The estimated cost of construction work was transferred to the FO account from the project funds where the Divisional Officer of the Agrarian Service Centre released the money according to the progress of the construction. WASPA team had several brief meetings to create awareness on how to maintain transparent and accurate financial records, how to deal with transactions etc.

First the COSI engineer together with the Technical Officer of the irrigation department 'set out' the location of the trap to start the construction. The clearing of the site was done by a "shramadana"⁵ campaign. Supervision during construction was done by the COSI engineer and TO of Irrigation department. They were also involved in monitoring and evaluation of the construction work.

When construction was underway the required unskilled labour was supplied by the Farmers Organisation, but the supply was neither systematic nor continuous, which slowed the process.



During the construction the anicut gates were opened to prevent the water flowing into the irrigation canal. But, after a few days the anicut had to be closed due to lack of water for the paddy field, which delayed the construction work for another week.

⁵ Voluntary labour campaign

The Farmers Organisation was able to complete the construction work within three weeks, and now the trap is functional. All floating solid waste gets trapped at the beginning of the irrigation canal and the farmers get water free of solid waste for their crops.

June 2008



The FO is glad that they were able to finish the construction work of the garbage trap in a relatively short period of time despite the obstacles. They also conducted the financial transactions and record keeping in a professional manner. The FO committee members provided their maximum support and effort to complete the construction work as soon as possible and at good technical standards. The project team observed that there was very little contribution from the farmers who were not part of the committee. However, with the construction of garbage trap farmers and the rest of the village community are more aware of WASPA activities and have a positive perception towards the WASPA project.

The Learning Alliance (LA) has provided the farmers, the irrigation department and the agrarian services a platform to communicate and work together in common issues, a situation that was not seen before. Interactions between the farmers and officials of the Irrigation Department, Agrarian Services Centre and the Agriculture Department have improved and the officials show more concern towards the farmers' community and issues around wastewater agriculture.

The Farmers think the LA is a good concept and they expect it will support solutions to reduce of the wastewater as much as possible. Hence at the LA meeting held on 25th July 2008, they stressed that they will continue to act as the pressure groups for the LA, along with the Wilgodapura CBO and will participate in the LA meetings continuously.



To promote good hygiene practices among the farmer community, a workshop was conducted on “Hygiene Promotion” for wastewater farmers on 28th of August 2008 at the FO Hall. An almost equal number of men and women participated in the workshop, the women said they represented their husbands, who are wastewater farmers.

The first session was Hygiene & Public Health by Dr. Asoka Padmakumara, who is the MOH of the Pradeshiya Sabha. The session ended after lengthy discussion on the rapid spread of Leptospirosis which is carried by field rats, a virus that proves fatal if not treated immediately.

The next session which was conducted by Mr. Wijeshinghe Bandara, the Agriculture Instructor of the Department of Agriculture was on how to increase the crop yield and on fertilizer management in wastewater farming. This interactive session was quite useful to the farmers as the AI explained the merits and demerits of using machines for ploughing the fields, use of incorrect tools and also the comparative economic and environmental benefits in use of organic and inorganic fertilizers to their crop.

The final session for the day was aimed at strengthening the Farmers’ Organisation as an institution and conducted by Mr. K. Jinapala of IWMI. The farmers evaluated their Farmers’ Organisation using “features of a good institution”. There were energetic discussions and several issues were identified that the participants felt the FO should address. For example the Treasurer of the FO mentioned the absence of a road to bring her yield from the fields to her house. By unravelling this issue the members started to understand that there are many things that the Farmers’ Organisation should address collectively for the well-being of the farmers. Further discussions also revealed that the leadership of the FO is traditional and that it has been revolving around the same group of people without being passed on to anyone else.

On the 11th of September, the first in a series of group discussions with the wastewater farmers was held. The discussions were expected to enable improve their hygiene behaviour. These discussions were conducted using picture cards that will help them understand the health risks and the chain reaction related to each good or bad behaviour.



Over the months, the project team identified the need to conduct other programmes relating to livelihood development. These new ideas were based on the experience gained by interacting with and visiting the farmer community and they were not in the original PAP activities.

Quality seeds are a necessity for crop development, and in turn for the livelihood development of the farmers. Based on the

discussions between project team and the members of the FO, a seed paddy producers' committee was established within the Wilgoda amuna farmers' organisation with the support of provincial DOA and ASC. A revolving fund was established to purchase certified high quality seed paddy when necessary and to maintain the sustainability of this committee. The fund was financed for 60% by the farmers and 40% came from project finances.



The first distribution of the Certified Seed Paddy from the Department of Agriculture was held on November 3rd with the presence of officers representing Provincial DOA, and Agriculture Research & Promotion Assistants. The SPPC consists of farmers who are at the secondary leadership level of the FO and this was expected to provide them an opportunity to increase their experience and skills.



On the 15th of October, an onsite demonstration in making a silicone rich charcoal fertilizer using Paddy husk was held. As a result, there was demand for 8 more charcoal making units

(barrels), which were distributed among the three *yayas*⁶ according to the farmers under the supervision of AR&PA. The units were sponsored by WASPA as further assistance to the farmers. Seeds for weir cultivation were also distributed among the farmers by Agriculture Research & Promotion Assistants.



To build the capacity of the FO officers, a full day training course on bookkeeping practices was held on the 29th of November. For this training, FOs that are outside the project area were also invited. The training programme was arranged by Mr. Aruna Munasinghe, Development Officer in the Agrarian service centre in Kurunegala.

December 2008

In the months of November and early December the whole country suffered from sudden outbreaks of heavy rain. This brought about an unforeseen situation to the garbage trap as the water flow direction of the irrigation canal was changed and water began flowing towards the garbage trap. Hence large and heavy debris such as parts of trees were carried into the irrigation canal and have clogged and damaged the garbage trap. The farmer organisation who has already agreed to take over the operation and maintenance of the garbage trap together with the WASPA team decided to make slight modifications to the garbage trap design to allow the heavy debris to flow through in emergency situations as this.

⁶ Yaya – a section/ strip of cultivated land in one area

In the month of December the second and final workshop on Capacity Building for farmers of the catchment area will be held. This will be followed by another workshop for AR&PAs on how to coordinate effectively with FOs in future.

The Provincial DOA, has also extended a proposal to WASPA on establishing a study unit for wastewater agriculture, as there is none present in Sri Lanka. For this they have requested the assistance of WASPA to draft a proposal, which expresses their interest in maintaining a data and resource centre for wastewater agriculture in Sri Lanka. While there is a need to build capacity of these extension officers in preparing a suitable proposal it is very encouraging to see their interest in the 'new' subject of 'wastewater agriculture'. This study unit, headed by the Provincial DOA and the AIs will also be an excellent opportunity in mainstreaming the concept of wastewater agriculture and related areas.

Conclusion



The Farmer community, being one of the major stakeholder groups in WASPA Kurunegala project, has developed within the project period and been able to widen their horizon. Through WASPA they became aware of the risks and benefits related to wastewater farming. At the same time, through the LA, they were able to establish connections with many government and non-government officers that could prove beneficial for their

future activities. The Farmers Organisation of Aswedduma along with the other three smaller FOs also received direct benefits where they were able to develop their capacity as organisations as well as individuals.

This short article relates the Findings and Learning's of WASPA (Asia) Project, which is funded by the European Commission under its Asia Pro Eco II Program.