RDIS
Rural Development Inter-Diocesan Service
A Holy Soul in a Healthy Body

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Report of the Training in India/ ADATS-Bagepalli

Kora district, Karnataka

1. Purpose and highlights

The training of RDIS staff in India was meant to equip the personnel of RDIS with knowledge and skills about the construction of Biodigester carbon project such that the organization can tap on other opportunities that benefit more the end users in Rwanda and help to contribute to the reduction of global warming at global level.

1.a. DURATION

The duration for the training was scheduled from 13th to 27th May 2025.

1.b. Venue

India/ ADATS-Bagepalli

Kora district, Karnataka

1.c. PARTICIPANTS

Participants to this training are as follow: Mr. MANIRAGUHA Eric, qualified Civil Engineer; Mrs. UWIKUNDA Diane, RDIS-Veterinary; Mr. NSABIMANA Jean Chrysostome, RDIS-Deputy Executive Director and Pastor NTARINDWA Viateur, RDIS-Executive Director.

1.d. STAKEHOLDERS OF THE TRAINING

The Rural Development Inter-Diocesan Service as sending Organization; ADATS, Agricultural Development & Training Society as Trainer and, Brot für die Welt - Evangelisches Werk für Diakonie und Entwicklung e.v. as financial Partner.

2. INTRODUCTION

As underlined in the strategic document, annual plans and RDIS staff capacity development plan, the organization is fully committed to enhance the leadership, administrative, management and technical capacity of its personnel to serve professionally, contribute to the visibility of the organization and make a huge and sustainable impact in the lives of the individuals that the organization works with and for.

To this end, in 2023, the Executive Director of RDIS requested Mr. Ole Meier-Hahn from Bridges Builders to connect RDIS to a professional practitioner of the biodigesters carbon project to learn from. Ole introduced RDIS to ADATS which, in return, had expressed the willingness to train the staff of RDIS; training duration and timeline, overall goal of the training and all costs were agreed upon. It is in that perspective that, 3 staff of RDIS plus a civil engineer travelled to India/ ADATS-Bagepalli; Kora district, Karnataka.

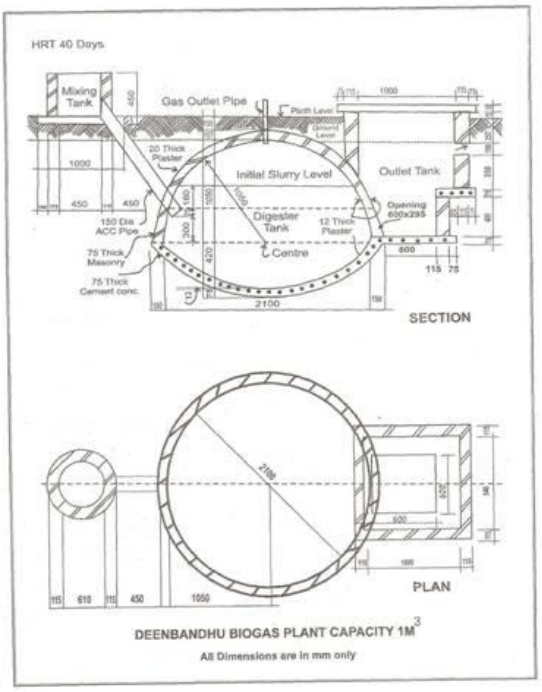
Upon arrival, the 14th a short introduction was made to get to know who is who; then, a brief explanation about the installation process of bio-digester project was made by RAM ESTVES with soft drawing to better understand each and every single step. Straight after, in the afternoon we travelled to the site under the guidance of Mr. Mukheem, at Anantapur site a village where ADATS had built 3,356 domestic Biogas units.

3. COMPLETED ACTIVITIES

The initial plan was adjusted, we did not stay there for the whole installation process, rather, we happen to travel everyday back to Anantapur/ ADATS Campus in Bagepalli, and, we traveled to Anantapur on daily basis until the completion of the bio-digester. Currently, 9,985 small and poor peasant families are active Members in 445 functioning village Coolie Sangha Units.

A local Mason by name Hayatha khan led the construction/installation process in close collaboration with Tk muniraju Mukheam Pasha who works for ADATS at community level as an Enumerator monitoring the work and programs of ADATS within three villages. Building the dome with burnt bricks; cement, fine coarse sand, fixing ironware – outlets, gate valves, pipes, and, drawing gas pipe to the kitchens and fixing the stove.

Participants in the installation process are: Staff of RDIS, Members of the Village, 4 staff of ADATS. The training was practical in which the staff of RDIS was witnessed/ involved in: Excavation; Casting mass concrete at the Base , Build Elevation of the dome with burnt bricks; cement, fixing the pipe connect to inlet.



On a different day, the staff of ADATS have also shown the staff of RDIS how they monitor using the tristle Biogas solution which is an Information Management System to check the Construction; Actual Usage; Breakdown & Repairs following geographical classification. It's a wider classification that covers different aspects:

- Date of installation of the biodigester,
- Individuals' details, village's code,
- Start date of use, when restore energy were already available in the dom (mostly 15years from the completion of the construction process). We were informed that, at the completion, depending on the urgent of the family to use the system, cow dung, crops waste could be provided in a sufficient quantity as to accelerate the start date of its use.
- General Information: commissioned biogas units; total usage days (calculated for each unit from the commissioned date to today)
    - Less: Days lost due to major problems as per breakdown log, actual usage days
    - Emission reduction generated per unit per annum, PDD value verified emission
    - Carbon Revenue: Financial year, village, end user, carbon revenues

Throughout the presentation, questions were raised, and answer provided, only one question was left unanswered given, the system could not provide related specific figures to it (what is the Amount of credits generated by just one unit per annum?).

The fairness in terms revenues sharing from the sale of carbon credit from 31st April 2015 when the commitment to the Carbon Investor to deliver 136,871 GS CERs got completed. Surplus generated 102,741 GS CERs, received equals to ₹ 6.23 crore (₹ 10 M = 1 Crore) to End User women as a reward for environmental services they provided to society at large is also a kind of social benefits that, users of biodigester receive, and, a typical motivation and complement for the users of the biodigesters.

4. Lesson learned and resolutions

- The construction of biodigesters by ADATS involves members of the village, staff of ADATS and trained led mason with experience of 15 years
- Raw materials are sourced nearby within the village or the nearest shopping center to avoid high transportation costs
- High precision of measurements as part of quality standards applied
- The family contributes land, cattle, daily usage and regular maintenance including the whole cleaning of the whole system after six years whereby, a person cleans inlet, inter the dom to clean it from inside. We discussed the cleaning practice with the personnel of ADATS; from the view point of RDIS staff, and, for the security and safety of the cleaner,

we committed to look for or design a more advanced cleaning technique for that, nobody enters the dom after 6 years of usage as his or her health can negatively be affected. The advanced cleaning technique should even make the cleaning better than, when it is done by person using container to empty the dom.

- Concerning the mixing of raw materials, we , personnel of RDIS have observed that, although, the mixing ratio is know and documented by mason of ADATS, it is not fully respected because, they use containers of different sizes and worsen more, when they Bing the raw materials closer the system where they are mixed up, the quantity of raw material mixed up (grounded stones, cement, sand, …) was not sufficient to complete the dom, hence, they added extra raw materials regardless the ratio. It happened to add just grounded stones without adding other recommended raw materials; this is seemed to be a high risk of violation of mixing ratio by RDIS.

  Resolution One , it is a must to prepare a place and cement it as to avoid the penetration of unwanted quantity of soil" and, ensure the whole amount of mixed raw materials is sufficient for the completion of the biodigester; and, if it happen the quantity is not sufficient, the master mason is responsible for the second round of mixing ratio , as he is for the first round , and, should ensure there is no violation of the protocol.

Resolution number two

The pilot phase made of five units of biodigesters is planned to start in July and end up in August 2025 in the district of Muhanga, Gisagara, Nyaruguru, Nyamagabe and Rusizi districts whilst, during the scale up phase, we plan to add Kamonyi, Nyanza, Huye and Nyamasheke District. The Budget of the pilot phase is already available and, was completed at the end of the training.

Resolution number three

A business plan of RDIS Biodigesters for Combatting Global Warming and Securing Environmental Safeguard, A Small- Scale Project and the related budget should be completed by 30th May 2025, be shared with investors and potential partners.

Resolution number four

A risk assessment plan is to be written down, discussed by the management team of RDIS latest 10th June 2025, and, then be filed for use and whoever of the investors or potential partners who may need, shall be shared.

Resolution five

For the success and performance of the project, and, given RDIS is already familiar with applications and software for the professional, we resolve that prior to the scale up phase of the project RDIS Biodigesters for Combatting Global Warming and Securing Environmental Safeguard, A Small- Scale Project, RDIS should set and put in place an relevant application to easy the implementation, monitoring of the project.

RDIS is very thankful to ADATS for knowledge and skills sharing which, undoubtedly is sufficient for RDIS organization undergo with biodigesters project and meet the high performances and standards.

Done by Pastor NTARINDWA Viateur

RDIS Executive Director

On 26th May 2025