

1. **TITLE** – *Twinning Exchange (American Samoa) – Piggery Waste Management*
2. **PROJECT TITLE** – *IW Regional Ridge to Reef Project. Country - Tuvalu.*
3. **PROJECT DESCRIPTION** - *Testing the Integration of Water, Land, Forest and Coastal Management to Preserve Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods in Pacific Island Countries. The Time is three years 2016 to 2019.*
4. **BACKGROUND TO THE LESSONS LEARNED** - *The initial problem was identified as municipal waste water which has impacted the islands natural environment. The probable causes identified are from unmanaged waste water from farming and domestic use. Focusing on animal waste, piggeries on Funafuti are the main causes in which the using of the wash down systems with no proper management of waste water. From the new introduced system the Dry Litter Piggery, it is envisioned that the strengths that it holds may be a solution to the ongoing problem. While there has been an engagement with the local communities in understanding the concept, the Local Council has developed a new proposed municipal pig pen to adopt new technologies that are environmental friendly. Political support has been sought with the expected materialization of the undertaking to be in the very near future.*
5. **LEARNING EXPERIENCE**

5.1 Summarize your learnings from the exchange.

- Which institutions, legal and regulatory frameworks, rights, ownership, informal agreements have management mandates for pig waste management (PWM)?
 - The American Samoa Environment Agency. Other than the Health Department, they are the regulators and managers of the key regulatory frameworks, respectively as to;
 - **Air** – The Clean Air Act (CAA)
 - **Land & Sea** - Resource Conservation and Recovery Act (RCRA), Federal Fungicide, Insecticide and Rodenticide Act (FFIRA), and the Beach Act.
 - **Water** - . The Clean Water Act (CWA), Safe Drinking Water Act (SDWA).
- Are those management mandates in conflict with each other and are they supportive of achieving the desired PWM outcomes?
 - After sitting through each stakeholder's testimonial presentation, it seemed there is an overlapping and uncertainty between the ASEPA and the AS Health Department (ASHD). The ASHD once mentioned they have the full authority to shut down a system once they see it unhealthy and unsafe to human health (on the sport), however the ASEPA one mention they do also in respect to the regulations etc. Looking from an external perspective it may seem in conflict but commonsense wise it all boils down to humanities safe livelihood. So I won't see it in conflict but in collaboration, *'one person cannot see all, but two people will make it easier'*. And yes they all contribute to achieving the desired PWM outcomes.
- Are there other actors, e.g., private sector or non-governmental organizations that may influence the PWM?
 - As mentioned above, the AS-EPA and the AS Health department seem to be the only actors in PWM.
- What is the relative power and impact of government, the private sector and civil society in affecting the condition of the PWM system?
 - There is not impact from government and other relative sectors in affecting the condition of the PWM systems.
- Are the practices being used by the targeted stakeholders in line with the institutional mandates or is there a failure in enforcement?

- Out of the 160+ targeted stakeholders only a small number are in line with the institutional mandates, however most of them fall victim of limited resources (like dry materials) to sustain the system therefore they turn to what is available which is water flushing. It's a huge challenge for the enforcer of the mandate (ASEPA) to monitor or maintain the practice.
- Are there mechanisms for stakeholders (identify the stakeholders) to be involved in decision making, are there procedures in place for resolving conflicts that may arise between stakeholders and are they being effectively applied?
 - Yes, there are mechanism in place by the ASEPA to resolve conflicts and they are working just well according to presentation from the ASEPA management team. However the final say is from the Justice Office.
- What kind of outreach strategy and tools have worked in American Samoa?
 - The following outreaches tools below;
 - Advocate over the local radio
 - Reach out to each villages with stickers and posters etc
 - Reach out the congregation in churches
 - Reach out to youths in sports and activities.
 - And the strategies was through environment and health perspective. Sharing the causes and the improvement data's that was monitored over the years (more than 15ys is a long time, a lot of change may/did occur).
- How has the AS maintained a sustainable model of operation and compliance?
 - This all come to the commitment of the staffs and most of all methods and strategies they practiced throughout the years.

5.2 What was your most significant learning?

- I personally admire the pathway they the EPA journeyed throughout the beginning up until today, in particularly the lessons learned and the methods to improve/overcome those challenges.

6. REPLICATION –

6.1 Identify what learnings you can *replicate* in your project/country?

- The integrating of the wash down (similarly to the bio gas) and the dry litter concepts, we in Tuvalu are gearing up to establish these two technologies with the same goal to protecting the environment resources etc.

6.2 Highlight specific factors or conditions needed for effective replication. What support will you need from the Experts/PCU to ensure effective replication?

- First of all is the Government of Tuvalu's support, if their will can be turned to our best interest this idea/initiative will be successful.
- Secondly is the technical expertise technically and scientifically and most of all the administrative personnel to run this project smoothly from the starting stages all throughout tot the final stage.

7. LEARNING EXCHANGE IMPROVEMENT – What more would you like to learn? How could the design of the learning exchange be improved for future application?

- It is vital to having participants from Tuvalu be involved in all the implementing stages of the project mainly in the design and installation.