

**Kiribati National IW R2R Project Results Framework – Reviewed and Endorsed at PSC Mtg November 2019**

<b>Components</b>	<b>Outcomes</b>	<b>Indicator</b>	<b>Baseline</b>	<b>Targets End of Project</b>	<b>Source of Verification</b>	<b>Risks and Assumptions</b>
1. Local capacity for sustainable piggery waste management using dry-litter technology (DLT) stimulated through effective community engagement and training thereby contributing to reducing nutrients offload and contamination in Buota & Bonriki water reserves, underground water lenses, and adjacent coastal/ marine ecosystems	1.1 Volunteer piggery waste management networks are formally established towards increasing community awareness, maintaining cleanliness and hygienic status within communities and forming enhanced culture of environmental protection	Endorsed status of the volunteer network  Number of volunteers in the network attending scheduled events  50% of households in Bonriki and Buota communities increased their knowledge on DLT	No existing network for piggery waste and water related issues	Community based network for Piggery Waste Management is established and operational in delivering assigned tasks to the entire community around Bonriki & Buota water reserves	ToR, member lists, endorsement/registration of organisation, meeting minutes, attendance records, participatory interviews, activity outputs, meeting records or minutes and evaluation reports  Narrative reports (quarterly, annual or terminal)	Willingness of community members to be involved on a volunteer basis  Capacity of community members for training  Members of the Network resigning or unable to stay active and deliver on the Network TOR
	1.2 Improved donor support for increased householder uptake of dry-litter technology for sustainable piggery waste management	Number of projects secured for householder uptake of sustainable piggery waste management  Number of stakeholders trained in alternative financing  Number of stakeholders applying for alternative financing	No community access to donor funds for implementing domestic piggery waste management.	Traditional and non-traditional funding partnerships investigated and documented in support of wider uptake of sustainable pig waste management systems  1 government pipeline project up-taking or up-scaling or further trialling dry-litter technology to address animal waste pollution in the country	Options paper outlining funding streams and requirements  MELAD annual report or discussion papers, cabinet papers & minutes  Signed MOAs between government & partners  National Development Plan, Sector Plan and cross-cutting National Strategies for the Environment (and possibly, fisheries, agriculture, climate change)	Suitable community based organisations to assist communities with donor project requirements  Limited capacity to develop the prodoc to meet the requirement of the donor.  Complexity of donor's requirement for accessing fund.
	1.3 National uptake of sustainable pig waste management methods stimulated	Percent increase in target population or households with applied understanding	Limited awareness of alternative sustainable pig	Proportion of target community members In Bonriki & Buota with awareness of and	Consultation meeting and activity reports, training workshop outputs including details	Awareness and capacity building materials are sufficiently well

	through community awareness and training – e.g. interest on dry-litter technology as most cost-effective method, and/ or septic systems upgrade, and/ or waste treatment systems etc.	of pig waste management and options to remedy such environment threat	waste management systems	technical skills to successfully implement sustainable pig waste management systems increased to 50% through innovative participatory techniques	of trained builders and trainers, participatory interviews	designed to engage community members and resource users  Continuity of participation of target audience in awareness raising events  Costs and benefits of dry litter approaches appropriate to stimulate independent uptake
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2. Demonstration of innovative approaches to pig waste management through trialling and testing of Dry Litter Technology (DLT) composting systems	2.1 Improved domestic pig pen operations catalysed via piloting of locally appropriate methods for on-site pig waste management	Status of conversion of targeted pig pens  30 households adopt best piggery waste management practices.	Lack of pig waste management systems with all effluent reaching coastal or groundwater	Sustainable pig waste management approaches demonstrated through conversion of near shore wash-down pig pens to Dry Litter Technology (DLT) composting systems  More than 50% of households or local population in Bonriki and Buota interested in the DLT  30 pig pen constructed and monitored	Site selection criteria reports, consultation meeting reports, including agreements on design and roles of stakeholders  Construction and final report on Installed piggeries  Report on assessment of the operational status	Sufficient communities meet criteria for site selection  Willingness of community members to maintain functional operation of sanitation systems

	2.2 Environmental and public health safeguarded via targeted reductions in nutrient and pathogen contamination of coastal areas	Volume reduction in untreated pig pen effluent discharged into receiving waters	All domestic pig pen effluent is discharged directly in to receiving environment and represents a key threat to environmental and public health	Nutrient and pathogen loads from pig pen effluent discharging directly into the receiving environment reduced by 5% through demonstration of Dry Litter Technology (DLT)  955 kg/year (5.4%) TN reduction through construction of 30 DLT in demonstration area in Kiribati	Comparative studies on nutrient release and reductions of pig waste systems,  Report on assessment of the operational status [final year]	Design and operation of dry litter piggeries is effective in reducing untreated effluent entering the environment  Adopted procedures for waste management and composting result in desired reductions of contaminants
	2.3 National capacity for environmental assessment and water quality analysis increased	Number of training workshops and continuity of people trained in WQ data collection techniques  Status of WQ collection programmes at priority site	Limited existing knowledge and skill base in water data collection and analysis  About 3 people in MELAD trained and qualified or competent to carry out water quality monitoring and testing	WQ at pilot site characterised through participatory environmental data collection programme  More than 10 people in MELAD trained and competent to carry out water quality monitoring, data analyses and reporting	Training workshop reports including number of people  Monitoring results, analysis reports  Narrative reports	Willingness of national level staff to be involved in data collection and training  Resources are sufficiently available for reliable analysis and evaluation of coastal process to produce scientific results

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3. Information management and community awareness increased in support of sustainable animal waste management	3.1 Enhanced access to effective information relating to on-site waste management issues	Extent and continuity of community attendance at awareness raising events	Limited availability of effective information to stimulate understanding of waste management	Community Outreach Program for Improved Pig Waste management and related environmental and	Community Outreach Program  Educational films and documentaries, printed	Resources available for awareness materials  Awareness materials will be sufficiently well

	and linkages with environmental and public health to increase public awareness		issues amongst target population	health issues developed and implemented at pilot site	awareness material; radio/audio talk shows, project exchange reports;	designed to improve community understanding  Sufficiently well-designed education materials to improve community understanding
	3.2 Effective management tools developed to support sustainable uptake of piggery waste management technique	Number of people participating at workshop training	No guidelines/handbooks	Innovative and locally appropriate system operating and maintenance manuals available for sustainable piggery waste management	Operation and maintenance manuals for DLT Piggeries and Compost Maintenance and Use  Community consultation reports	Manuals will be sufficiently designed as to assist with daily, preventative and long term maintenance issues
	3.3 Improved knowledge base and access for effective decision making	Status of repository and amount of knowledge records collected	No central repository of information relating to waste and water management	Establish and population of ECD repository for knowledge on historical and current waste and water management, including traditional knowledge, with links to partner databases	Local network and/or online and hardcopy database, participatory TEK interviews, community consultation reports	Adequate staffing to manage system  Adequate internet service to allow staff to update an online database  Sufficient traditional knowledge available to populate database