

Proposal for a research & training centre to address water & sanitation needs in the South Pacific

Andrew Dakers
Bill Aalbersberg
Chris Tanner
Leigh Davidson
Tom Headley

Research & Training Centre for the South Pacific -Aims

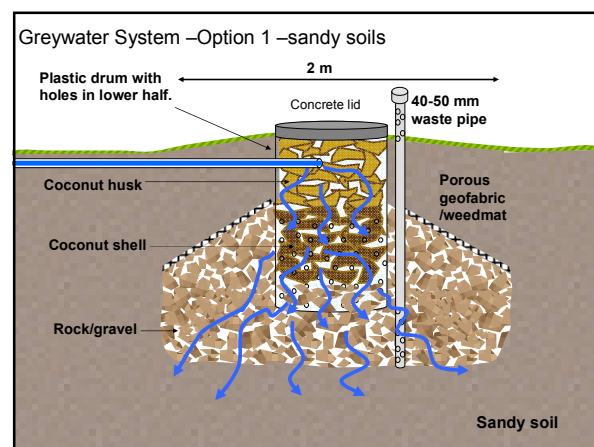
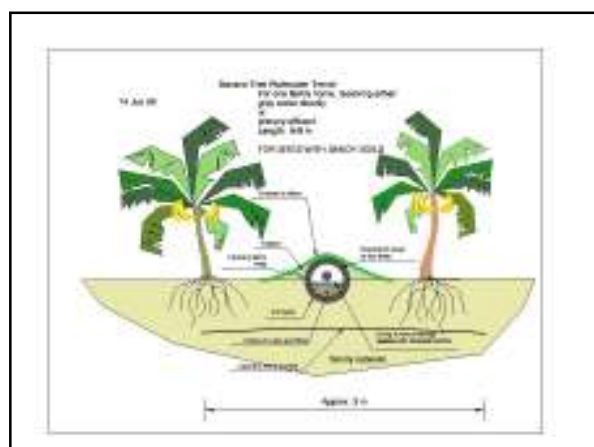
- Address specific PI water & wastewater issues & needs
- Support PI water & sanitation initiatives e.g. IWRM
- Resource, training & information centre
- Identify, develop, compare & test
 - New & established technologies
 - Encourage innovation and technology transfer
 - Different approaches
 - e.g. water-flushed vs dry toilets, decentralised cluster treatment
- Capacity-building, training & advise
- Attract & link local and international expertise
 - Visiting researchers & students

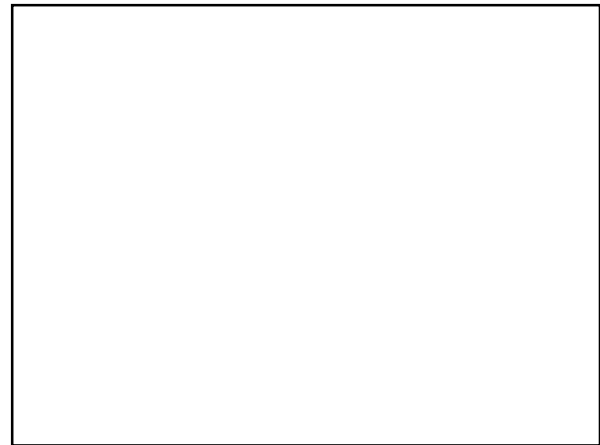
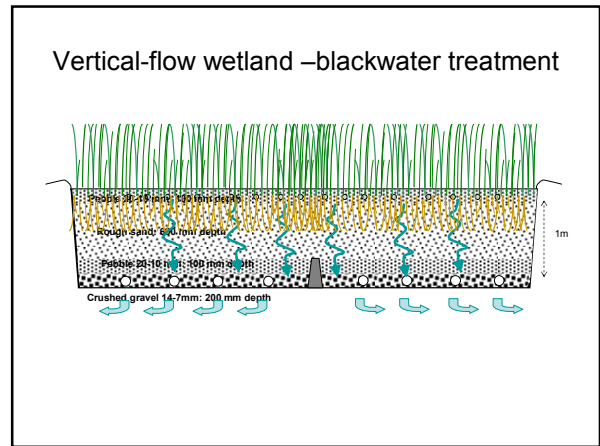
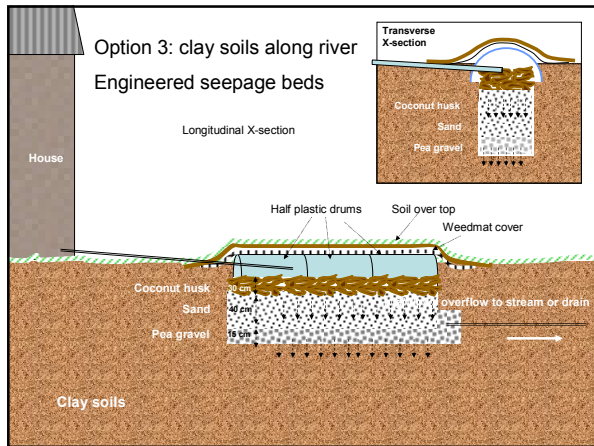
Specific needs of Pacific Islands

- Limited resources –financial and technical expertise
- Highly pollution sensitive coastal waters
 - Coral reefs and lagoons -Nutrients
 - Atoll groundwater lenses -Pathogens
- Many small dispersed coastal villages
 - unique cultures
 - Extended families, communal land
 - High reliance on subsistence & tourism
- Expanding urban and squatter settlements
- Low energy requirements
- Significant climate change issues
 - ↑ rainfall variability –drought/flooding/erosion
 - ↑ storm hazards

Proposal

- Centre based at USP in Suva
 - Aligned with Institute of Applied Sciences
 - Centre coordinator & support staff
 - Contribute to applied environmental science, engineering, environmental health and community development programs
 - Student, graduate projects, MSc and PhD theses
 - Step beyond static Sanitation Park
 - Contribute to technical training –e.g. plumbers & drainlayers
- Linked to partner institutes and agencies
- Linked to international networks & knowledge hubs
- Provide support for IWRM programs
 - Provide knowledge and technical back-up
 - Respond to identified knowledge gaps
 - Help run field experiments in countries around Pacific
 - Assist with performance monitoring and assessment
- Attract funding and international collaboration





**Wastewater treatment
Research needs**

- Need to develop systems and approaches appropriate to Pacific Islands
 - Ecotechnologies likely to be most relevant
 - Adaption of systems successful elsewhere
 - Creating & testing new treatment technologies
- Local input and testing
 - Well-grounded in local realities
 - Utilising local resources and knowledge
 - Sensitive to cultural needs
- Training and capacity building
 - Needs assessment
 - Appropriate treatment options
 - Implementation
 - Maintenance and management
- Important role for USP
 - Partnering with ecoEng, NIWA, Southern Cross University, UFZ