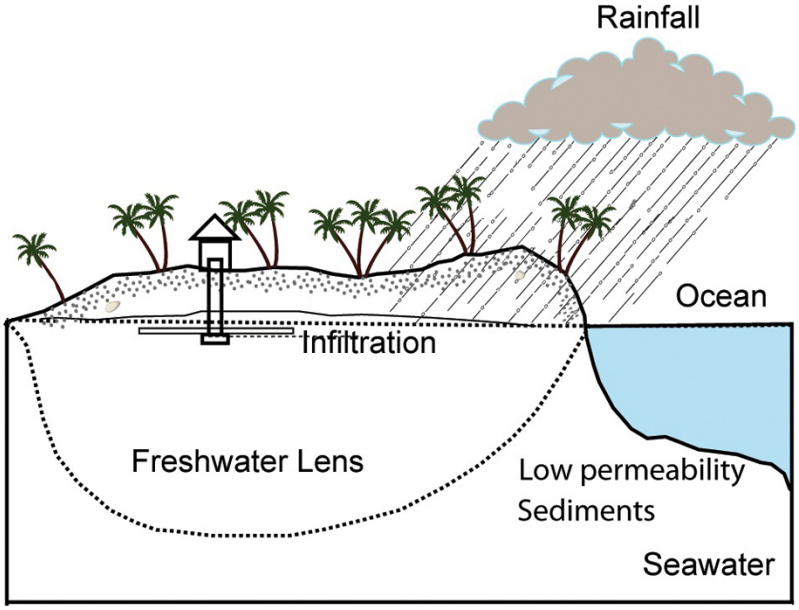
Project Description

Groundwater on atolls is often described as a ‘lens’ of freshwater ‘floating’ on more dense brackish water. This very thin and fragile freshwater resource relies on being regularly recharged by rainfall. Concerns over the



salinisation of these fragile water sources due to rises in sea level and changes in climate variability and extremes are increasingly raised by atoll communities and governments.

Whilst rises in sea level pose a longer term threat to freshwater lenses, the more immediate threats are from over abstraction and inappropriate land use activities, including poor sanitation practices, intensive cropping or animal husbandry in unsuitable locations. It is expected that population pressure and climate impacts will place the limited groundwater resources of atoll countries under an ever increasing threat.

Assessing and quantifying what will be the likely impacts under different climate and abstraction pumping scenarios is not well known. The successful development of behavioural and technological adaptation options will rely on an improved understanding of the unique freshwater lenses and quantifying the impacts on these lenses under a range of projected scenarios.

Improving the general understanding of the impacts on these resources, coupled with developing the concept of a sustainable yield for freshwater lenses for improved water resource management under the predicted climate and abstraction pressures, will improve the resilience of communities that rely upon these important water sources. The project will help address

specific problems associated with the following:

- Poor understanding of atoll hydrology;
- Applying the concept of a sustainable yield for groundwater resources in atoll environments;
- Quantifying the impacts associated with projected climate and abstraction scenarios;
- Access to relevant information on practical, technical and management techniques, and to options to improve the sustainability of freshwater resources.

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Partners

The Project is implemented by the ACP Group of States

USP
THE UNIVERSITY OF THE SOUTH PACIFIC

SPC
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Links

EuropeAID Cooperation office
http://ec.europa.eu/europeaid/index_en.htm

Delegation of EU for the Pacific:
http://eeas.europa.eu/delegations/fiji/

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