

Green Infrastructure Beats Grey Infrastructure Economically, Environmentally & Socially

The leadership from the RISE program, Community Representatives, teams from the Water Authority of Fiji, and my colleagues from the Dept. of Environment. A warm Bula Vinaka, Good Morning and Namaste!!!

I thank the leadership from RISE for giving me the opportunity to come and brief you all. My experience with RISE goes back to 2 years when I got involved with the leadership helping them put together the RISE program and its trial site (in Tamavua) within Informal settlement Sites here in Fiji.

Infrastructure is paramount to any economy and this is the case for Fiji's economic growth too. There is one infrastructure solution that can provide outstanding return(s) on investment – and that is nature! Or Nature-based Infrastructure

We humans... not often do we Consider forests, wetlands, coral reefs, and other natural ecosystems as forms of infrastructure. Ladies and Gentlemen for example Forests, for instance, can prevent silt and pollutants from entering streams that supply freshwater to our households and to the businesses. They are a natural water filtration mechanisms provided by nature. These “mechanisms” form a part of the Green Infrastructure – functionally they can serve and deliver much better outcomes economically, environmentally and socially in comparison to the grey infrastructure,” the human-engineered solutions oftentimes involving concrete and steel.

As our towns and city communities develop and the climate patterns shift (and not to mention of course the asset wear and tear), the implicit need to replace, rehabilitate, and upgrade our aging infrastructure will continue to grow.

Globally the world has heavily relied on Grey Infrastructure to manage water resources in the past. We are faced with the situation where a breakdown in our grey infrastructure will hold us hostage if we do not parallelly develop, establish and maintain an efficient Green Infrastructure.

Ladies and Gentlemen, green infrastructure reduces and treats storm-water at its source while delivering other huge returns to environmental, social, and economic benefits. Through its proper introduction, maintenance and operation, it will promote urban liveability and add to national bottom line. Unlike the Grey Infrastructure that is mostly designed for a 1-purpose – to move the storm-water away from the built environment.

Storm-water runoff dumps dangerous pollutants like pathogens, nutrients, sediment, and heavy metals into Fiji's streams, lakes, and beaches. We run the risk of pushing untreated sewage into our waters.

Studies indicate that Grey Infrastructure does not entirely mitigate the risks of flooding – it quickly drains storm-water into our rivers and streams, increasing peak flows and flood risk. A properly designed Green infrastructure can mitigate flood risk by slowing and reducing storm-water discharges.

Green Infrastructure like rainwater harvesting and infiltration enhance our efficiency in Water Supply. The water collected in rainwater harvesting systems can be used for outdoor irrigation and some indoor uses and can significantly reduce the strain on our ever-growing demand for water supply and of course the waste water treatment.

The Government is actively seeking ways and means to run such efficient (Green) Infrastructure mechanisms which has a huge potential for both Private and Public Cost Savings: This is because structuring storm-water management systems on green infrastructure rather than on grey infrastructure will often result in lower capital costs for developers. The savings result in lower costs.

Strategically looking at the Green Infrastructure modelling it can be designed to provide a myriad range of ecosystem services like water purification, air quality, space for recreation and climate mitigation and adaptation. This model will strongly support a green economy, creating huge employment opportunities and environmentally enhance Fiji's biodiversity.

Contrary to the single-purposed Grey Infrastructure, the Green infrastructure has several additional advantages at a fraction of the cost. One of the key attractions of green infrastructure is this multi-pronged functionality at a much lower cost. Studies indicate that it can contribute to a whopping 67% reduction in costs (e.g. construction of water Filtration Plant).

For example, I am informed that studies indicate planting trees and restoring wetlands is a great, viable alternative to building a new water treatment plant; restoring floodplains is much cheaper than and just as effective in preventing floods as building a new, higher dike. What is more, a restored forest, wetland or floodplain will also provide a much needed habitat for certain rare and endangered species of animals and plants and help us tackle erosion and climate change. These are all additional benefits at no extra cost.

Ladies and Gentlemen with so much going for green infrastructure in an era where a dollar saved is very much a dollar earned, I urge you to delve deeper into the Green Infrastructure concept- its establishment, maintenance and operations. This workshop opportunity could not have come at a better time than this – where Fiji is actively engaged in repairing and maintaining our grey infrastructure and seeking ways and means to achieve results our higher quality at more cost effective rate.

I wish you all the very best for the next 2-days and hope we can learn the most and take back the learning to our work spaced and deploy the same.

Thank you once more