Sustainable Island Futures VI

Program Sustainable Island Futures, May 10, 2023

Name	topic	time (AST)
Eric Mijts	Welcome and introduction	9.00 - 9.05
Keynote: Ragnheiður Bogadóttir	Social metabolism in the Faroe Islands and the cultural logics that organize it – implications for sustainability and resilience	9.05 - 9.30
Ratu Tevita Rarokolutu	Multi-Hazard Risk Assessment of Small Islands Developing States: A case study of Labasa, Vanualevu, Fiji	9.30 – 9.55
Edoardo De Paola	Sustainable Water Reuse in Gozo, Malta: Assessing Farmers' Access to reused water	9.55 – 10.20
Discussion		10.20 – 10.30
Break		10.30 - 10.40
Wendy Wuyts	A Political-Industrial ecology of houses and mining infrastructures in Svalbard.	10.40 –11.05
Shannon Henry	Circularizing Organic Waste of SIDS to Enhance the Global Circular Economy	11.05 – 11.30
Discussion/feedback		11.30 –11:40
Closing		11.40 –11:50

Author: Ratu Tevita Rarokolutu. (Academic Staff (Teaching Assistant) - University of the South Pacific: PaCE-SD - Pacific Centre for Environment and Sustainable Development)

Title: Multi-Hazard Risk Assessment of Small Islands Developing States: A case study of Labasa, Vanualevu, Fiji.

SIDS are amongst the most vulnerable groups to hazards such as tropical cyclones, earthquakes, tsunamis, landslides, volcanism and flooding. With the changing climate, the intensity and frequency of hazards have increased leading to constant disaster events. People are often not only exposed to an individual hazard but to multiple hazards simultaneously or in short succession to each other. Disaster events can put extreme pressures on government resources and logistical capabilities. With limited time in recovering from a disaster before the next already strikes, countries can get to the edge of their economic viability. It is no surprise that the notion of multi-hazard is gaining momentum. COVID-19 impacted Fiji in March 2020, eight months later Fiji experienced TC Yasa, with 6,000 (TC Harold), 23,000 (TC Yasa) in evacuation centres in the midst of COVID-19 and social distancing. A multi-hazard risk assessment was crucial to investigate the relevance of concepts that see specific vulnerabilities. The study then focused on such social science assessments and approaches on multi-hazard exposure and relates them to community engagement, government policies and resource allocations. This introduced a multi-level perspective from local, regional to national perspectives and actions. The study found that multiple hazards have great relevance to people living in Labasa. However, the concept of multi-hazard was never part of disaster management legislation. It recently has been included in policy frameworks, where it mainly focuses on early warning systems. There are institutional, financial, technical, and capacity challenges to the current disaster management. To enhance multi-hazard perspectives in DRR the study recommends to engage communities to a greater extend in disaster management policy formulation. There is a need to have a distinct orientation to the protection from multiple hazards to ensure effective disaster management and to provide better security to individuals and communities.

Author: Edoardo De Paola (Master student at KU Leuven, Belgium)

Title: Sustainable Water Reuse in Gozo, Malta: Assessing Farmers' Access to reused water.

Small islands face significant challenges in ensuring water security and sustainability, given their limited freshwater resources and vulnerability to climate change. In response, water reuse has emerged as a promising approach to reduce water demand, promote resource efficiency, and enhance resilience. This study explores the case of Gozo, a small island in Malta, where the government has invested in a water reuse scheme (called "new water") to provide farmers with treated wastewater for irrigation. The study aims to assess the farmers' access and adoption of the new water, as well as the factors that influence their decision-making process. The research design employs a mixed-methods approach, combining a survey of 38 farmers with semi-structured interviews with key stakeholders and a review of relevant policy and regulatory frameworks. The findings show that farmers in Gozo have a positive attitude towards water reuse and perceive it as a reliable and cost-effective source of irrigation water. However, the uptake of reused water remains limited due to several challenges, including the perceived quality and safety of the water, the lack of information and technical support, and the economic barriers to access. It is found that particularly the distance of each farmer to the nearest new water output is essential to define who could access the New water and who could not.

Author: Wendy Wuyts (Advisor, OmTRE AS (project leader of SirkTRE-consortium))

Title: A Political-Industrial ecology of houses and mining infrastructures in Svalbard

Svalbard is a Norwegian archipelago which was first used as a base by the whalers who sailed far north in the 17th and 18th centuries. Coal mining started at the beginning of the 20th century, and several permanent communities were established. The Norwegian Store Norske and the Russian Arktikugol remain the only mining companies in place. Currently, new building materials are imported over a long distance by boat, and the demolition waste is shipped back for incineration. Together with Store Norske, LPO is working on the Elvegrenda project, where we are redeveloping today's Elvesletta Nord into a larger, better utilized residential area with the help of moving and reusing existing housing modules in the area and one building from Lia. The housing modules will be placed on new foundations with new "bases" of family homes. This "dance" is planned for 2023-2025 in which each building gets new foundations and is moved, so that we can keep as many homes in use as possible throughout the process. The aim is to repurpose the buildings in their entirety to reduce emissions and costs and to preserve the identity of the area. The development is part of SirkTRE, a Norwegian Green Platform project that aims to establish a fully circular wood industry. As a researcher of the intermediary actor (project manager) I am interested how to reset ecological-economic relationships through these environmentally driven experimentations. This research takes a political-industrial ecology approach, which is integrative, complementary and critical research to understand the context-specific challenges and opportunities.

Author: Shannon Henry (Prospective Industrial Ecology PhD Candidate)

Title: Circularizing Organic Waste of SIDS to Enhance the Global Circular Economy

There is a growing interest in the development of circular economies that connect north-dominating industries with the global south. This talk will discuss opportunities for developing circular economies on small island developing states (SIDS) via industrial symbiosis (IS). It is clear that the existing body of knowledge on the circular economy needs to be advanced for individuals, corporations, investors and policymakers in making informed decisions. This talk advocates for a dialogue on circularizing organic waste of SIDS to develop value-added products that bridge SIDS with north-dominating industries to combat the harmful effects of climate change on islands. We will focus on the collaboration between the agricultural industry of SIDS and the global textile value chain. Textiles are a significant pollutant, contributing about 1.2 billion tons of global GHGs annually. While SIDS are not major contributors to this pollution, they are the most vulnerable to the effects of climate change caused by core pollutants; carbon and methane. Preliminary data shows that SIDS are rich in organic waste but lacking in data, education and finance necessary to have a stake in the global textile value chain. Can circularizing organic waste of SIDS decrease their vulnerability to climate change? Overall, this talk will encourage research topics for the enhancement of island social metabolism via the circularization of organic waste of SIDS to contribute to the global textile value chain and in turn, the global circular economy. Key Words: SIDS, Circular Economy, Global South, Social Metabolism, Industrial Symbiosis.