## Valorising food waste as fish feed: a step towards circular bioeconomy

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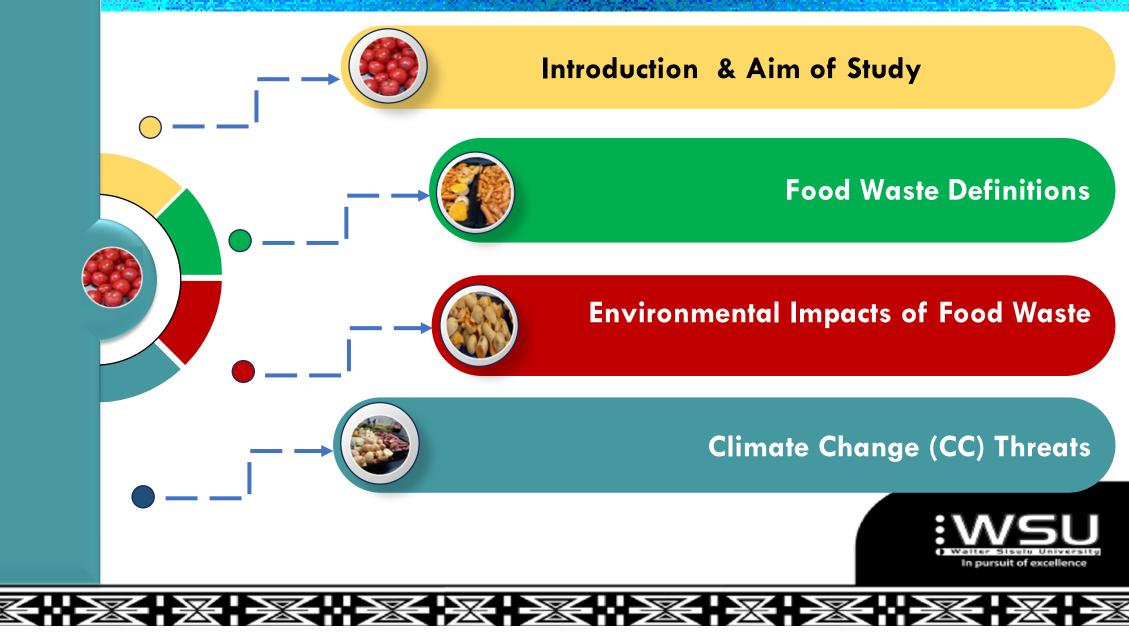
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#### **Presentation outline**



## Introduction

Climate change is a global phenomenon with wideranging impacts on natural resources - One of which is its effects on marine ecosystems and fish populations.



Marine fisheries are essential for the well-being of many coastal communities. \_Food security.

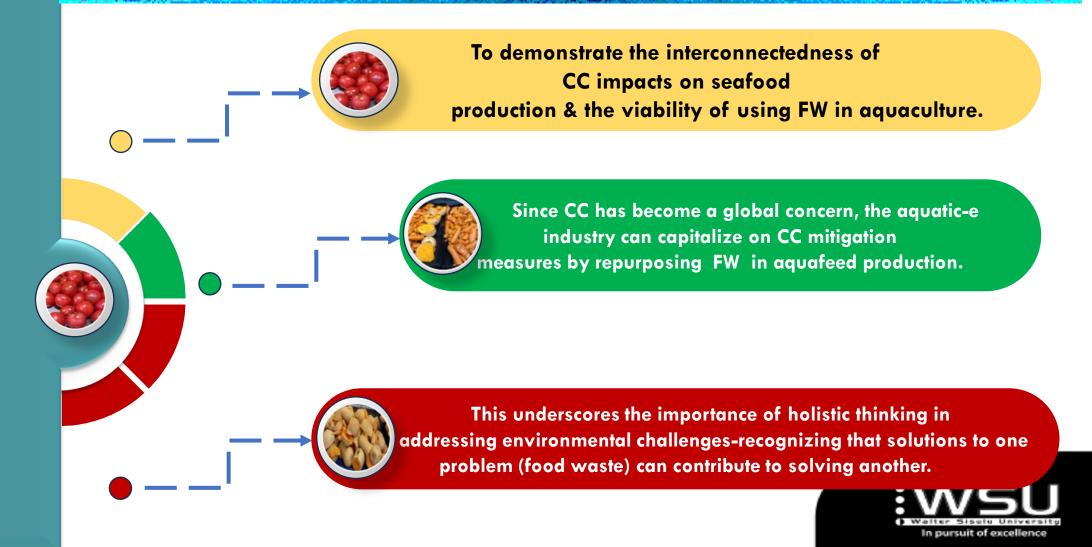


Coastal fisheries provide full- and part-time employment to approximately 260 million people, including many working in small-scale fisheries.

As climate change intensifies, finding sustainable solutions for feeding and employment opportunities for the growing global population becomes crucial.



## Aim of study



## Food waste definitions

The unintentional decrease in edible food quantity or quality before consumption, including postharvest losses.



Initially produced for human consumption, but discarded, including still-edible food that is deliberately discarded.

The edible food produced, manufactured, retailed or served that humans have not consumed.



#### **Threats of FW**

Generates significant GHG emissions and other downstream environmental impacts due to their disposal, a GHG emission with a 20–25-fold higher warming effect than CO2.

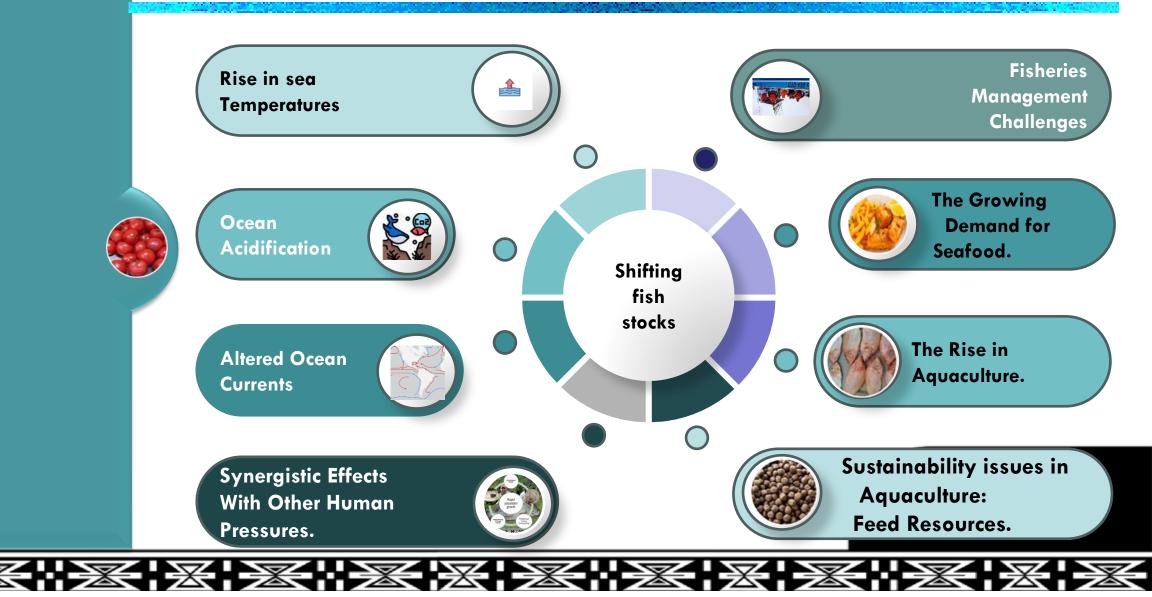
Exacerbates climate change.

Food Security: This food could be used to feed the world's growing population in regions with prevalent hunger and malnutrition.

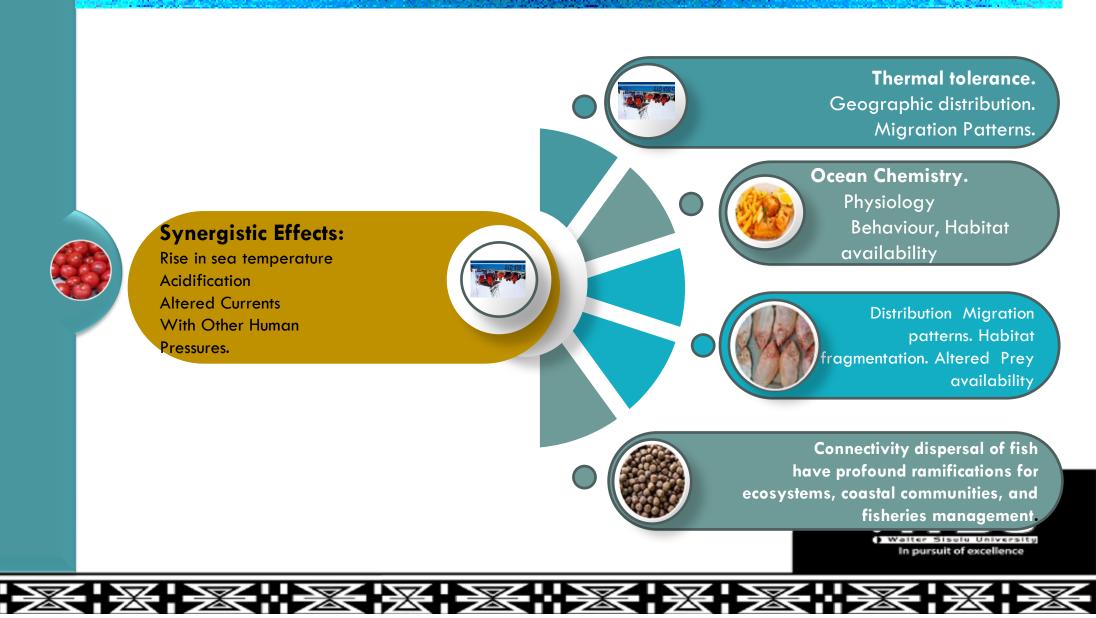
Socio-economic: The loss of food results not only in the loss of the the product itself, but also the resources used in the supply chain.



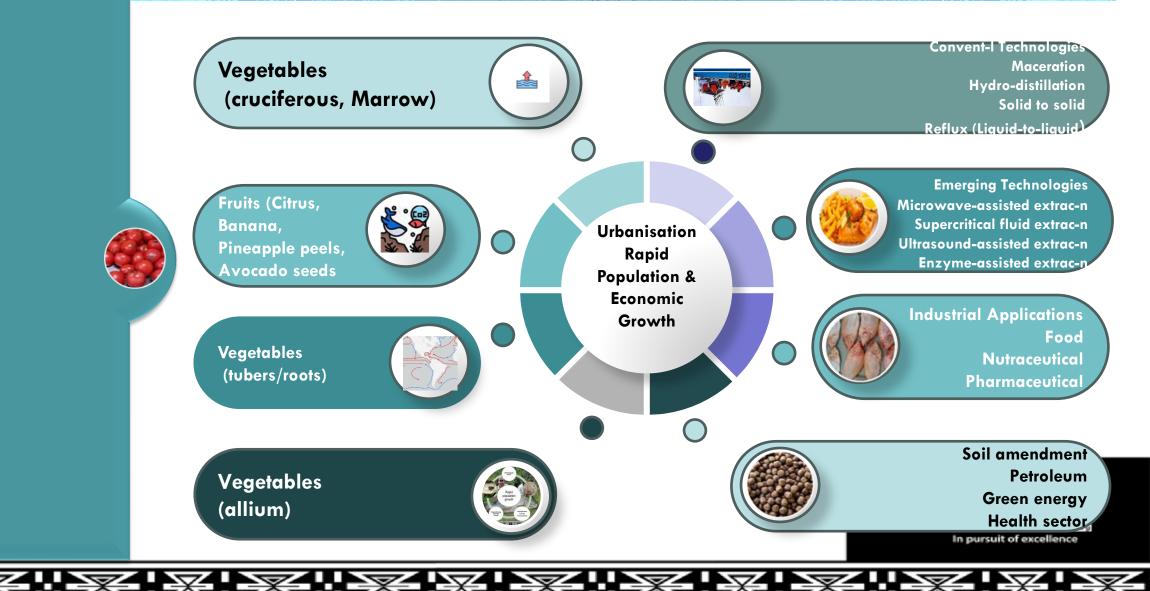
#### Threats of climatic events in the fisheries sector



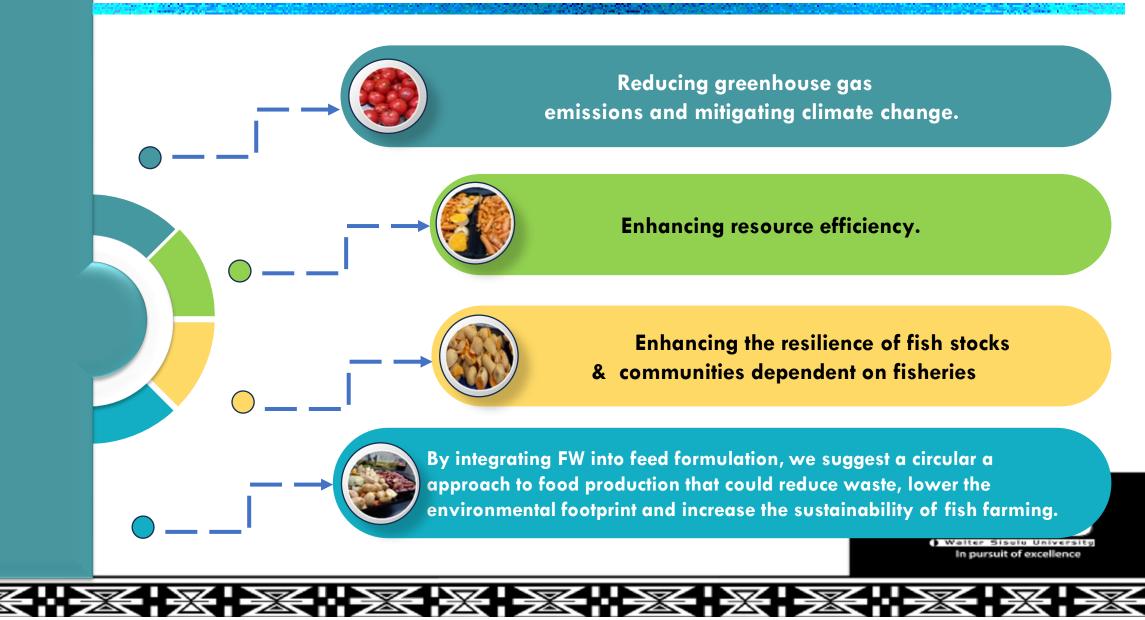
### Threats of climate change on fish



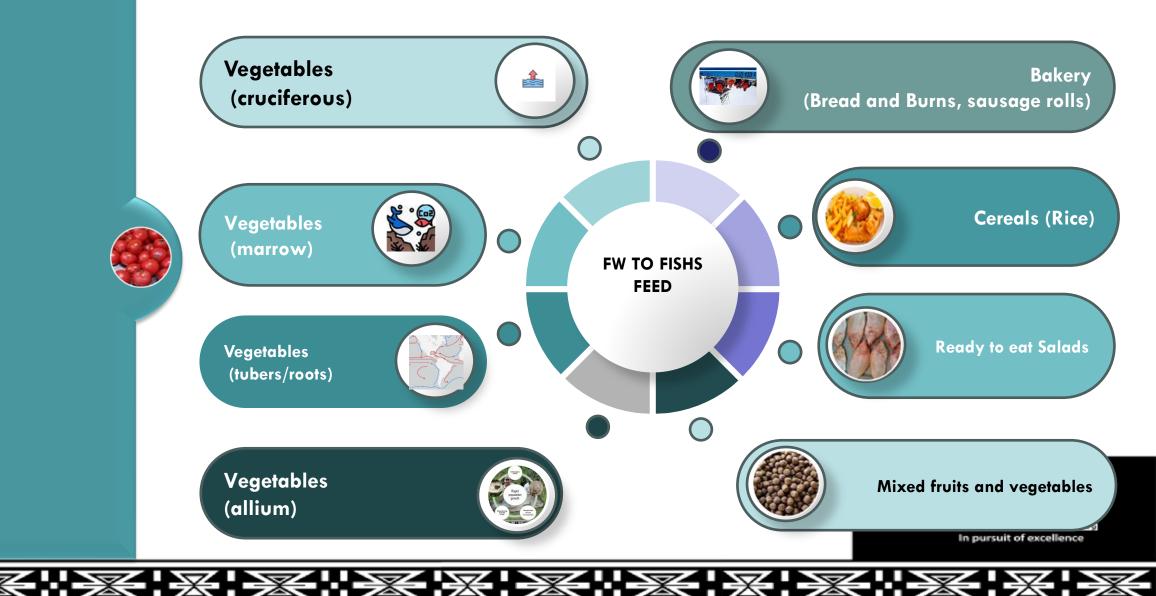
## Adaptation strategies: the potential of FW



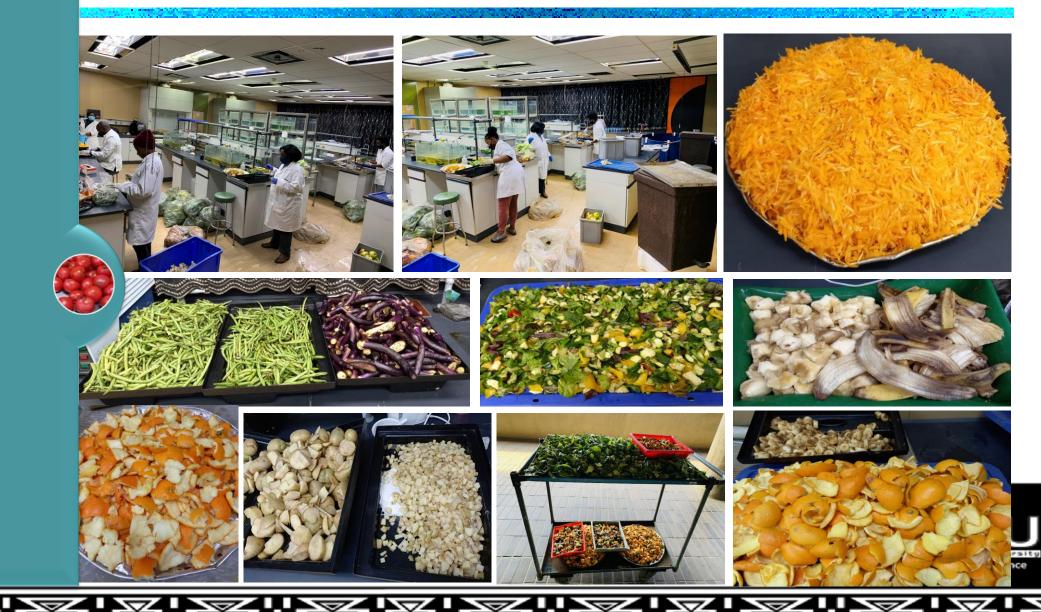
## Significance of valorising FW into fish feed



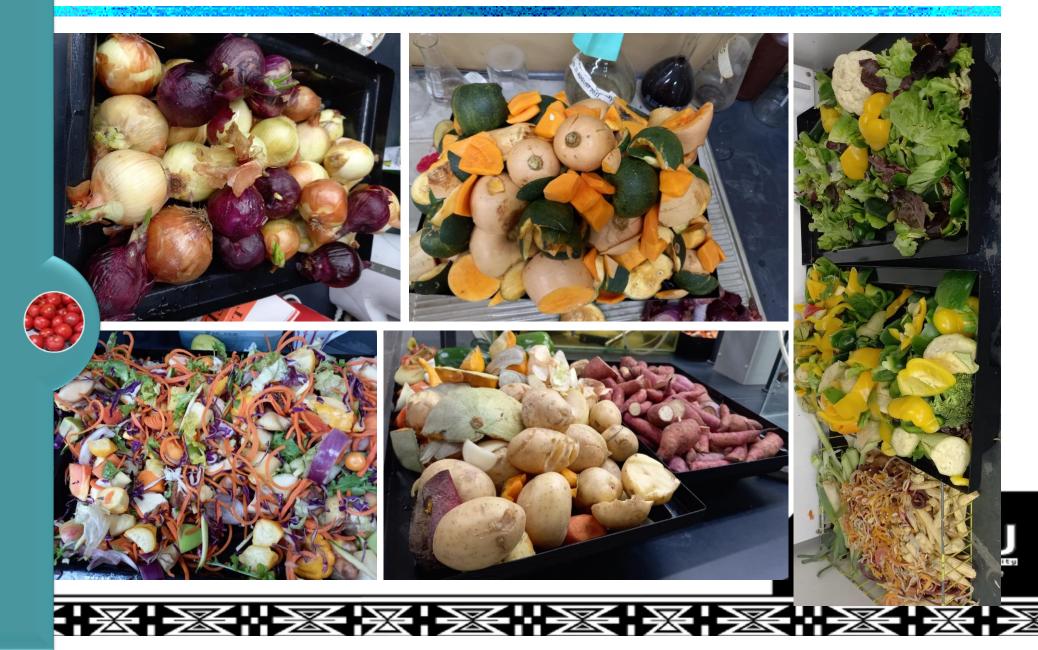
#### **Case study**



#### PREPARATION FOR DRYING



## FW SORTING



#### Feed Formulation and Feeding trial



## **Conclusions & Recommendations**

Creating or strengthening laws and regulations that support capacity building and promoting entrepreneurship in the field of study.
Identifying and implementing Best Management Practices is crucial to ensure the aquaculture fisheries sector grows sustainably.

Proposing policy measures to encourage adopting sustainable aquaculture practices, focusing on using food waste as fish feed.

This will foster economic development and diminish poverty adopting a fair and inclusive approach to aquaculture.

> Walter Siselu University In pursuit of excellence

#### Acknowledgments









#### science & innovation

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# **ASANTENI SANA**



# **THANK YOU**

**ENKOSI**