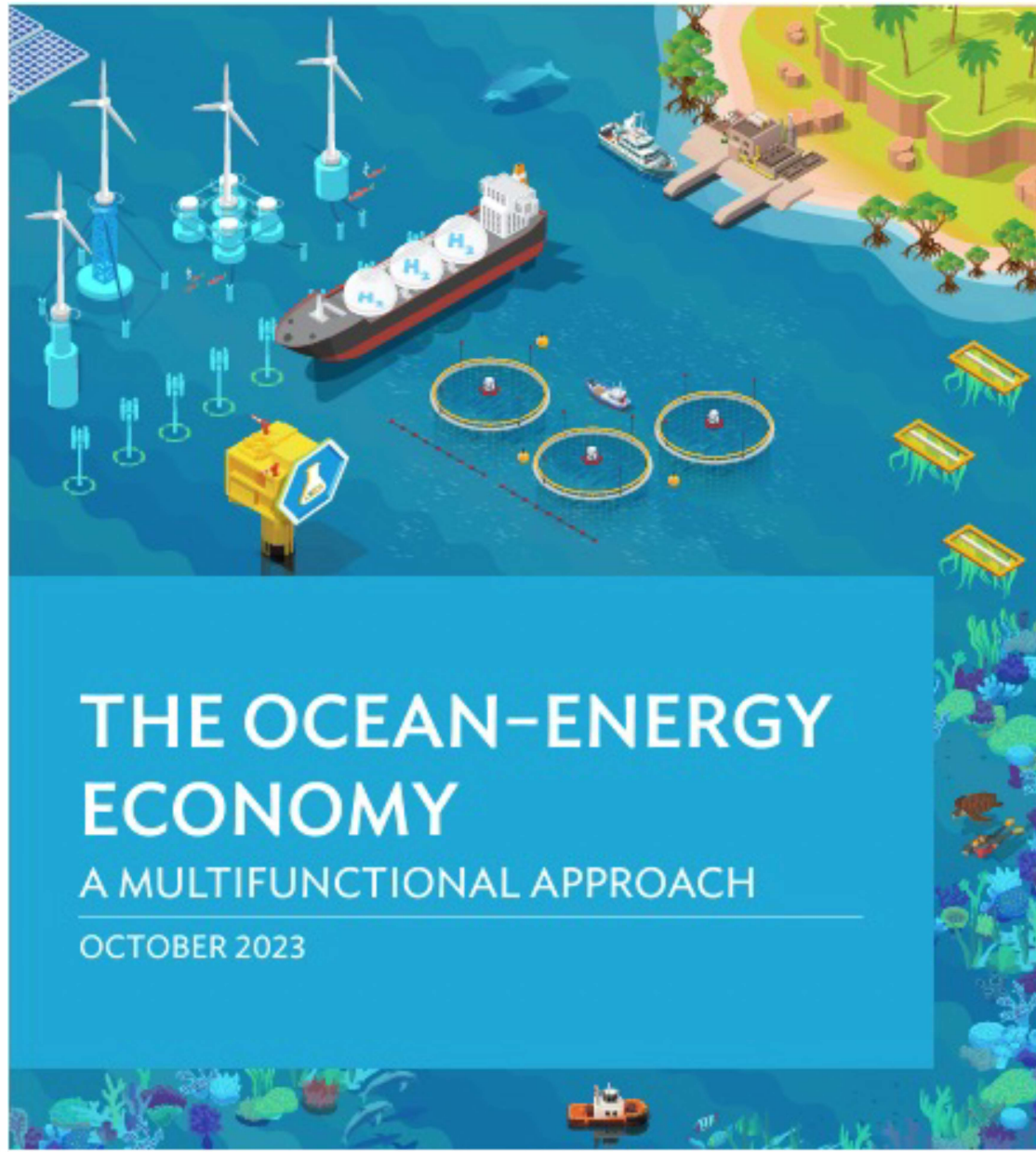




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# THE OCEAN-ENERGY ECONOMY

A MULTIFUNCTIONAL APPROACH

OCTOBER 2023

**Part 1: Full Analysis  
Dinagat Island and Surigao City**



**Part 2: Overview  
Balut and Sarangani Islands**







# 2030 Scenario

# Marine RE Scenarios Surigao City and Dinagat Islands, Philippines

## Low Ambition – meeting demand (106%)

- Marine Solar (100MW, 15%)
- Offshore Wind (0MW, 30%)
- Tidal Currents (5MW, 35%)
- Wave Energy (5MW, 30%)
- OTEC Pilot (10 MW, 90%)

## High Ambition – exceeding demand (175%)

- Marine Solar (200MW, 15%)
- Offshore Wind (10MW, 30%)
- Tidal Currents (10MW, 35%)
- Wave Energy (10MW, 30%)
- OTEC Pilot (100 MW, 90%)



## MARINE RE Resource Estimates (Potential Installed Capacity)

- Marine Solar (160,000MW, 15%)
- Offshore Wind (4,000MW, 30%)
- Tidal Currents (200MW, 35%)
- Wave Energy (700MW, 30%)
- OTEC Pilot (1000 MW, 90%)





# 2030 Scenario

# Marine RE Scenarios Surigao City and Dinagat Islands, Philippines



## Low Ambition – meeting demand (181%)

- Marine Solar (200 MW, 15%)
- Offshore Wind (200 MW, 30%)
- Tidal Currents (50MW, 35%)
- Wave Energy (50MW, 30%)
- OTEC Pilot (100 MW, 90%)

## High Ambition – exceeding demand (1703%)

- Marine Solar (20,000 MW, 15%)
- Offshore Wind (2,000 MW, 30%)
- Tidal Currents (200 MW, 35%)
- Wave Energy (200 MW, 30%)
- OTEC Pilot (1,000 MW, 90%)



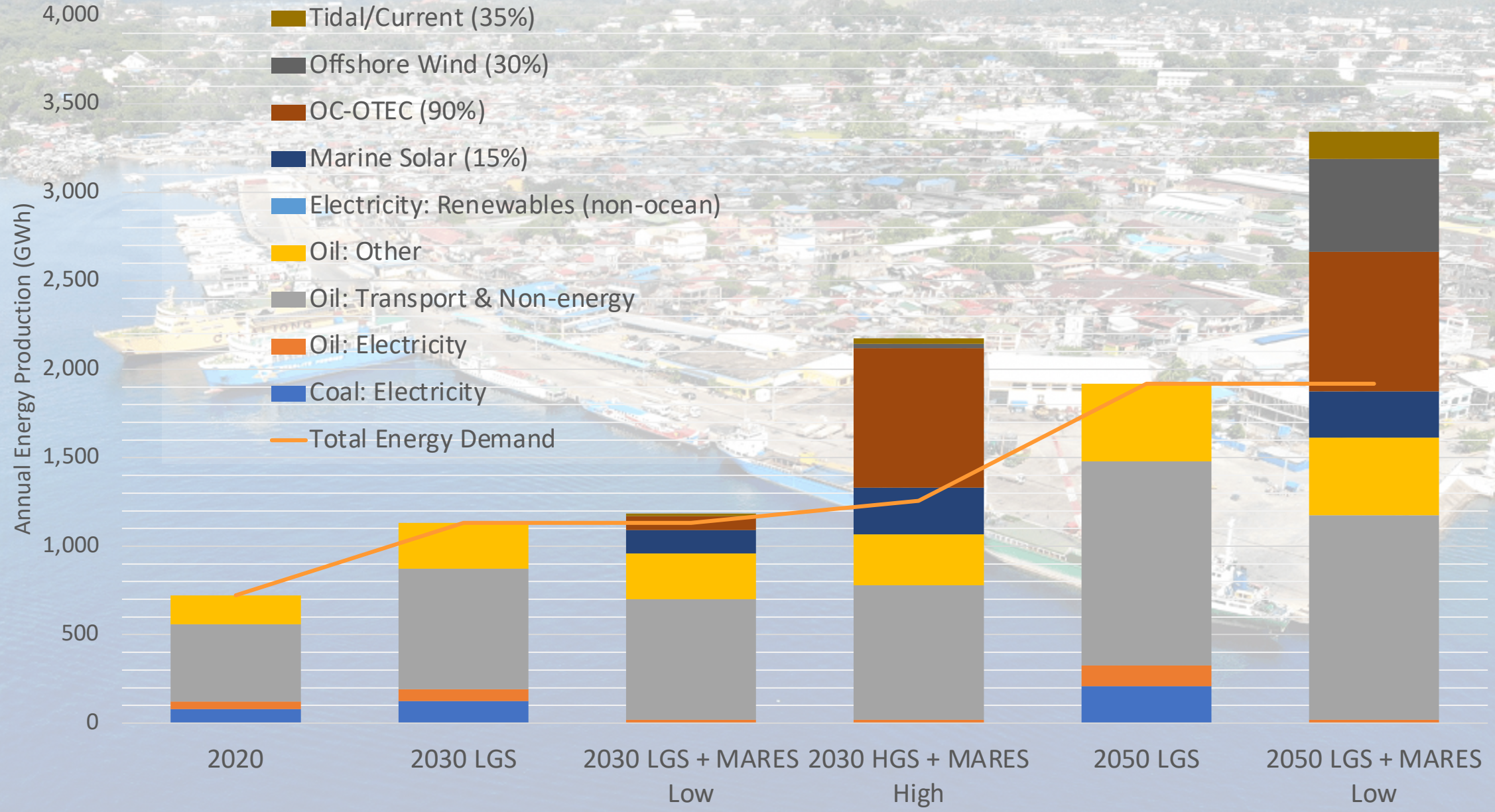
## MARINE RE Resource Estimates (Potential Installed Capacity)

- Marine Solar (160,000MW, 15%)
- Offshore Wind (4,000MW, 30%)
- Tidal Currents (200MW, 35%)
- Wave Energy (700MW, 30%)
- OTEC Pilot (1000 MW, 90%)



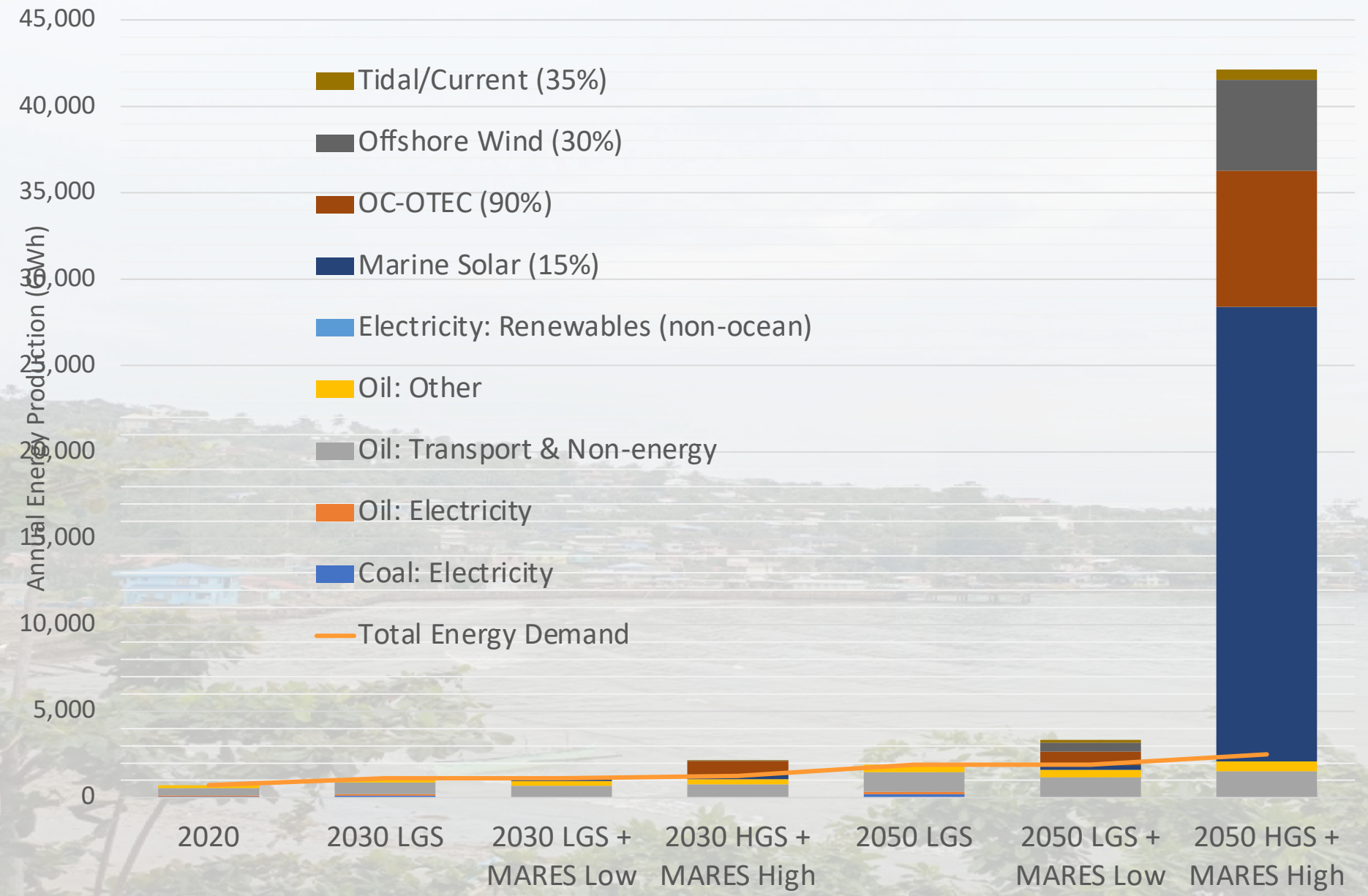


# Dinagat and Surigao



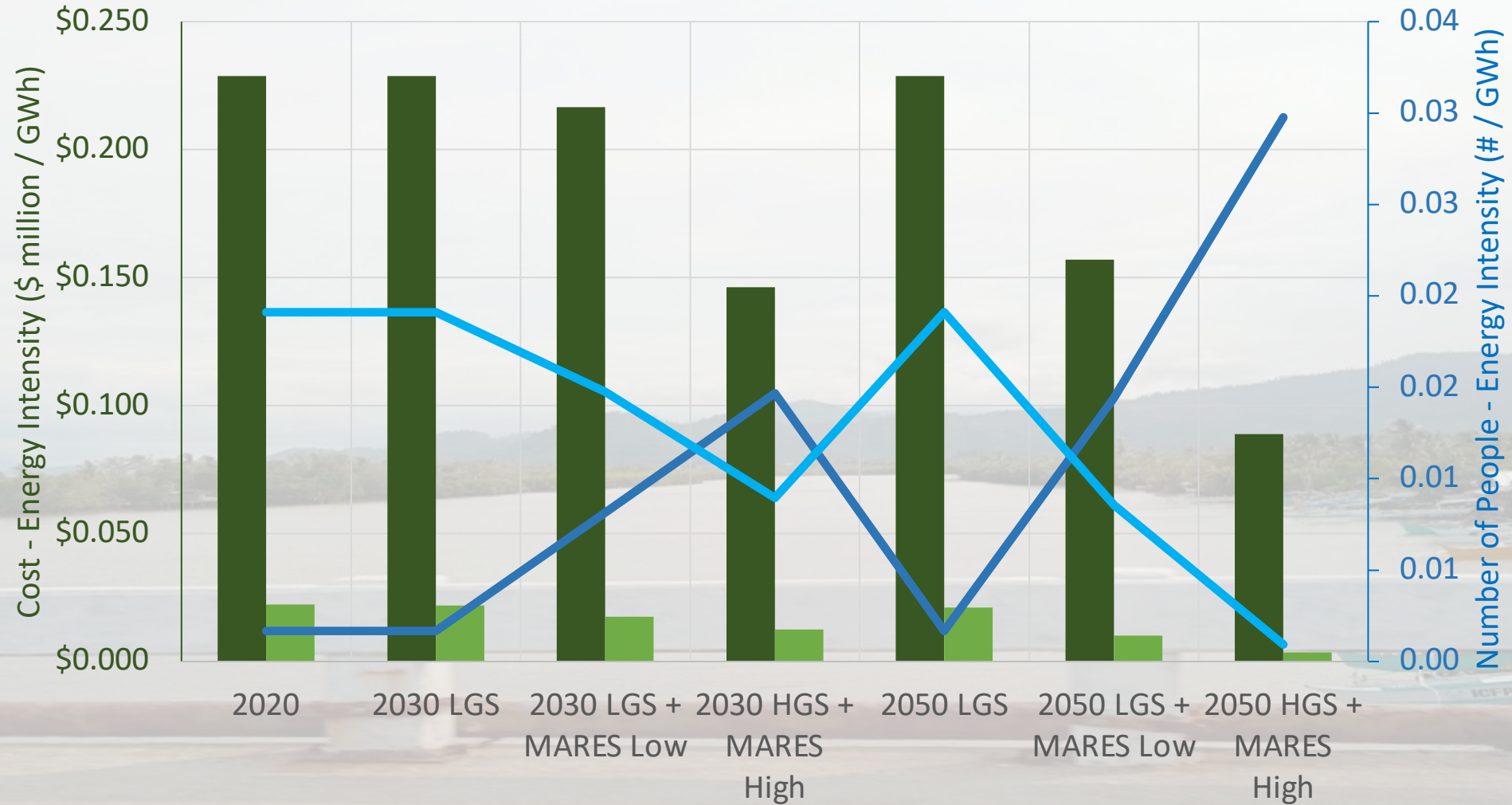


# Dinagat and Surigao





# Dinagat and Surigao



- LCOE - Energy Intensity (\$ million / GWh)
- Carbon Emission - Sequestration - Energy Intensity (\$ million / GWh)
- Jobs - Energy Intensity (# 1000 / GWh)
- Deaths - Energy Intensity (# / GWh)



# Dinagat and Surigao

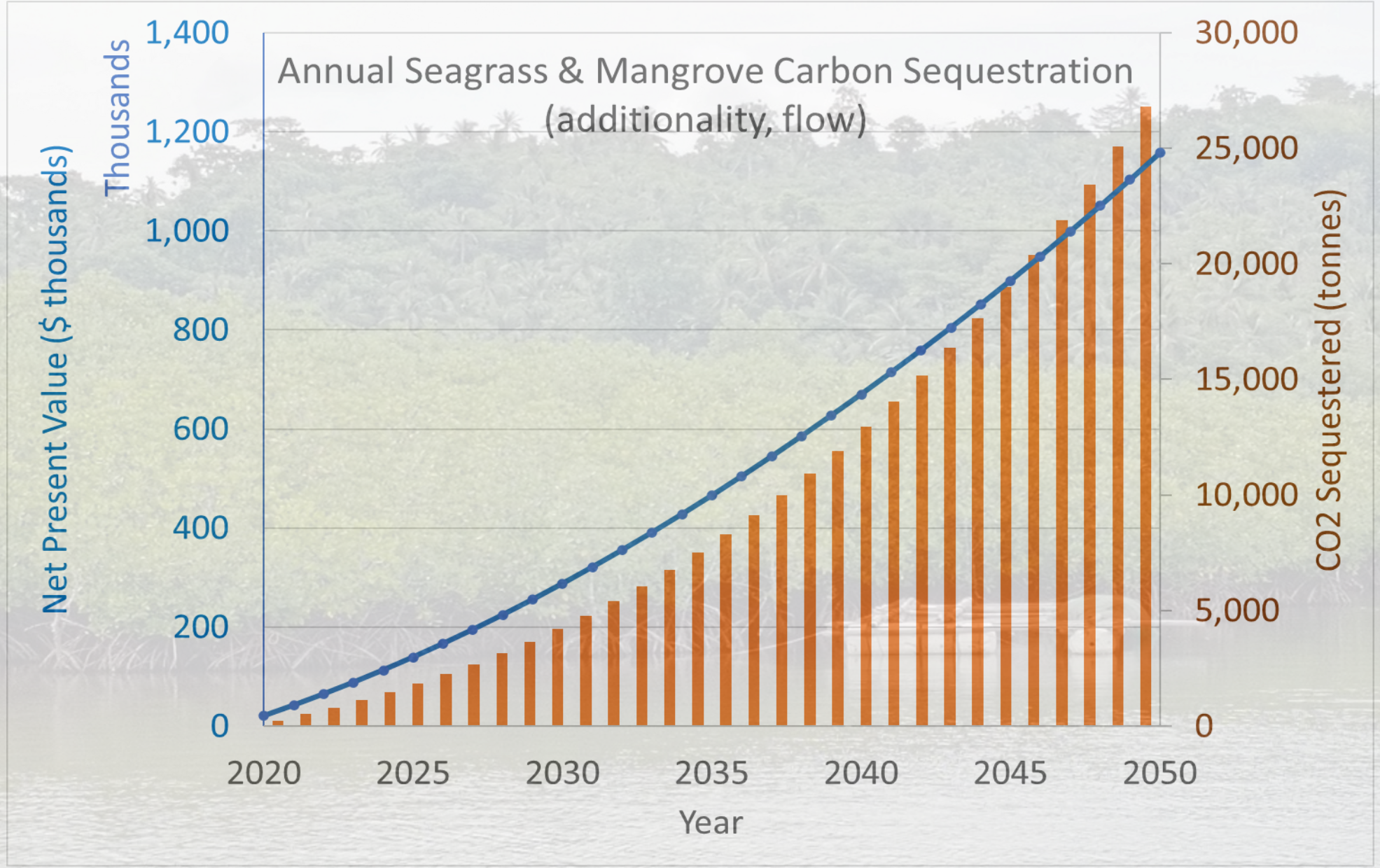


## Created Near-Term Gross Direct and Indirect Jobs (#)



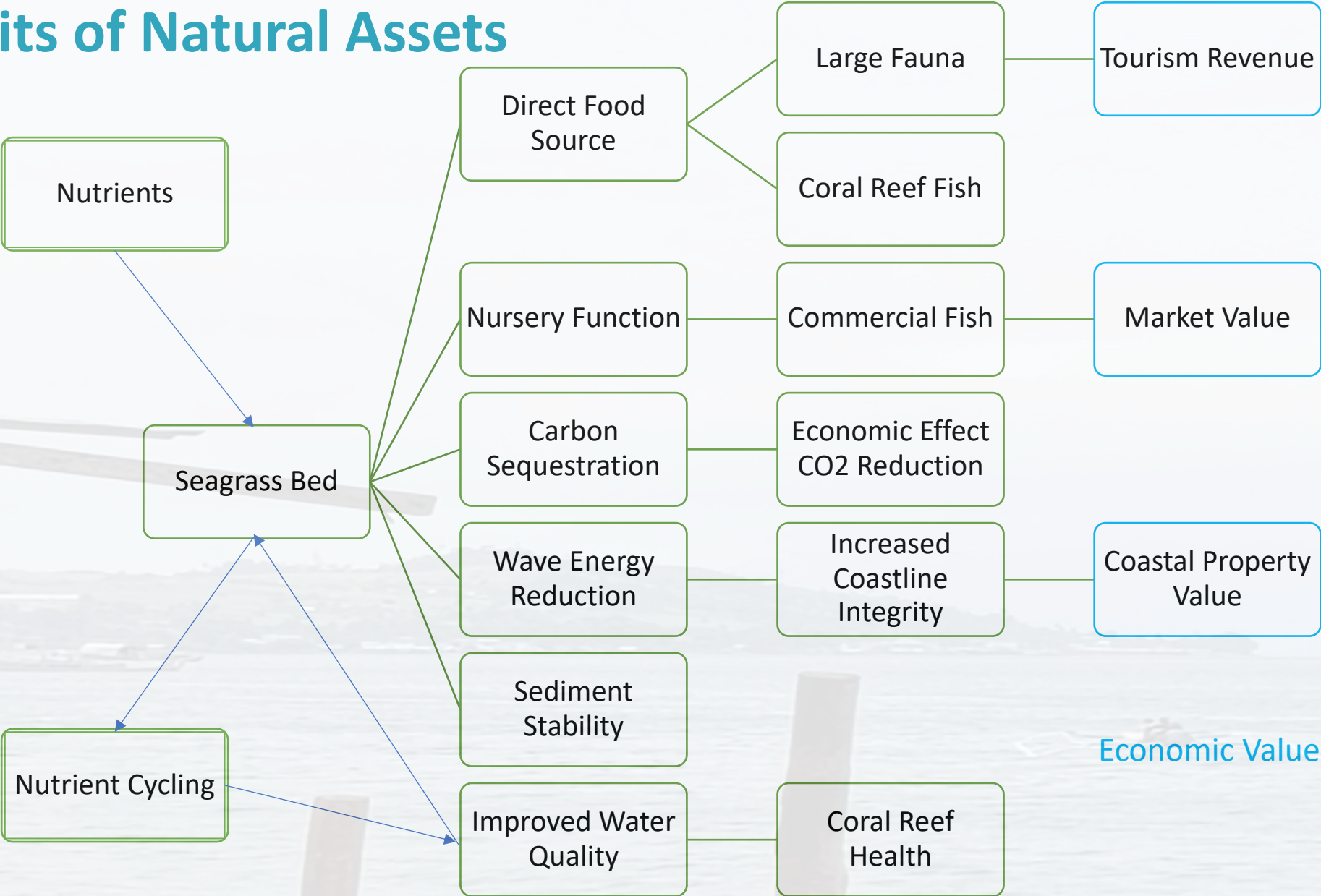


# Dinagat and Surigao





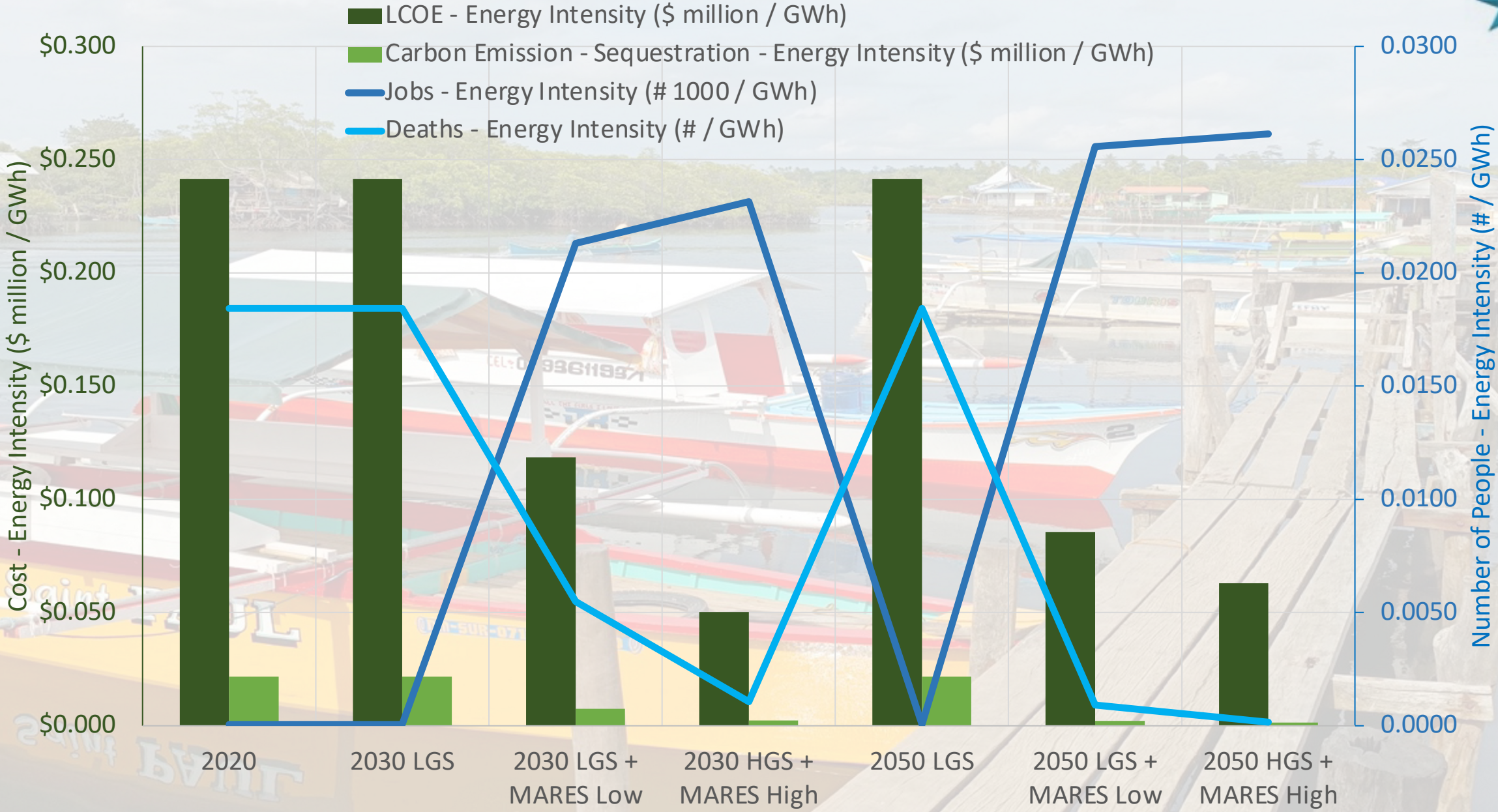
# Benefits of Natural Assets



Economic Value



# Balut and Sarangani Islands







# Sustainable, Resilient, Economic Growth

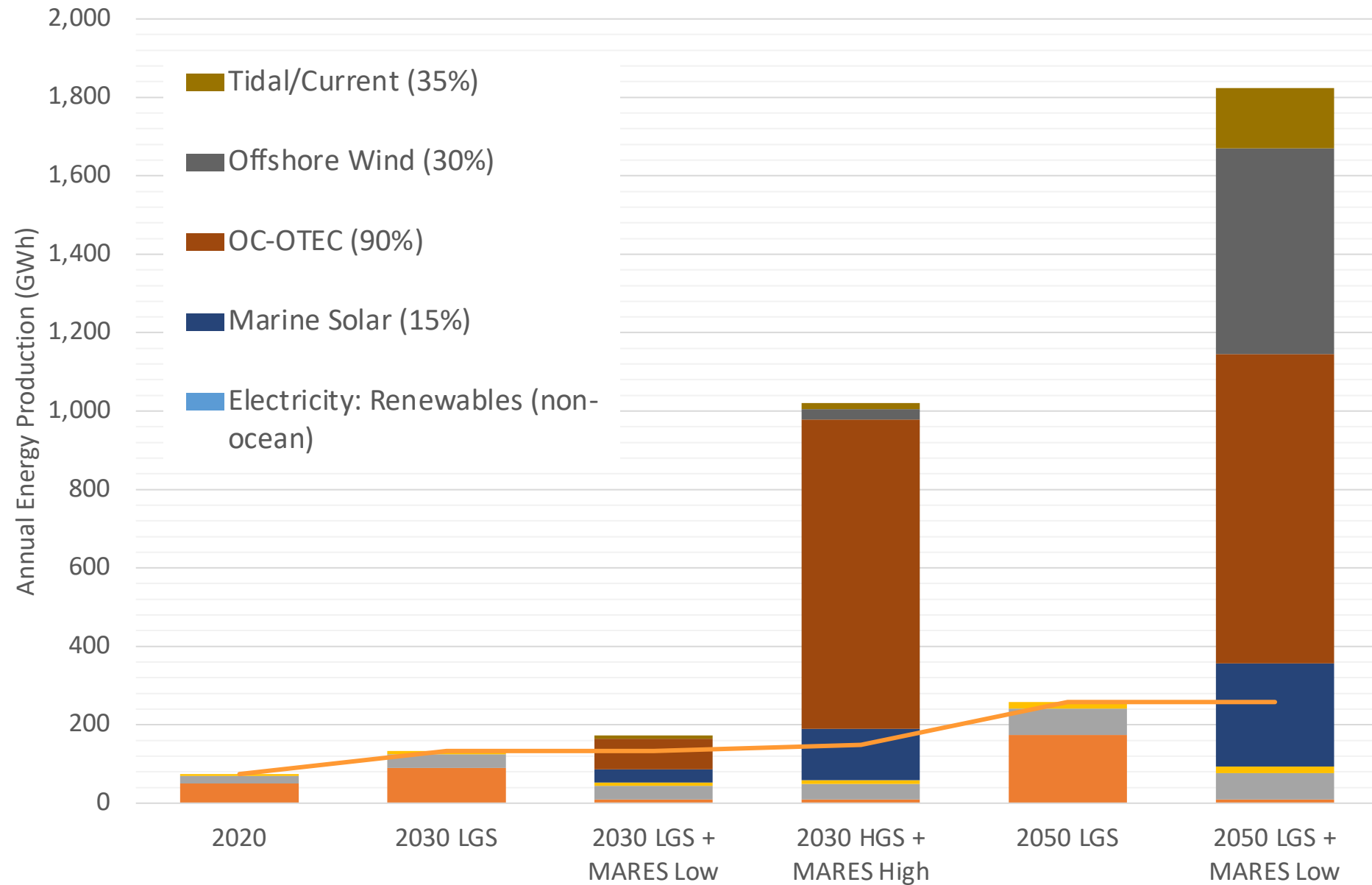
- Create new opportunities for foreign direct investment
- Increase sustainability aligned to SDGs while contributing to SDCs (reduced emissions and increased carbon sequestration)
- Create jobs across sectors
- Increase economic resilience via a diversified economy
- Reduce risks and exposure to climate change
- Positive impact on life expectancy
- Create energy security, avoid global energy access and price volatility (e.g. oil prices)



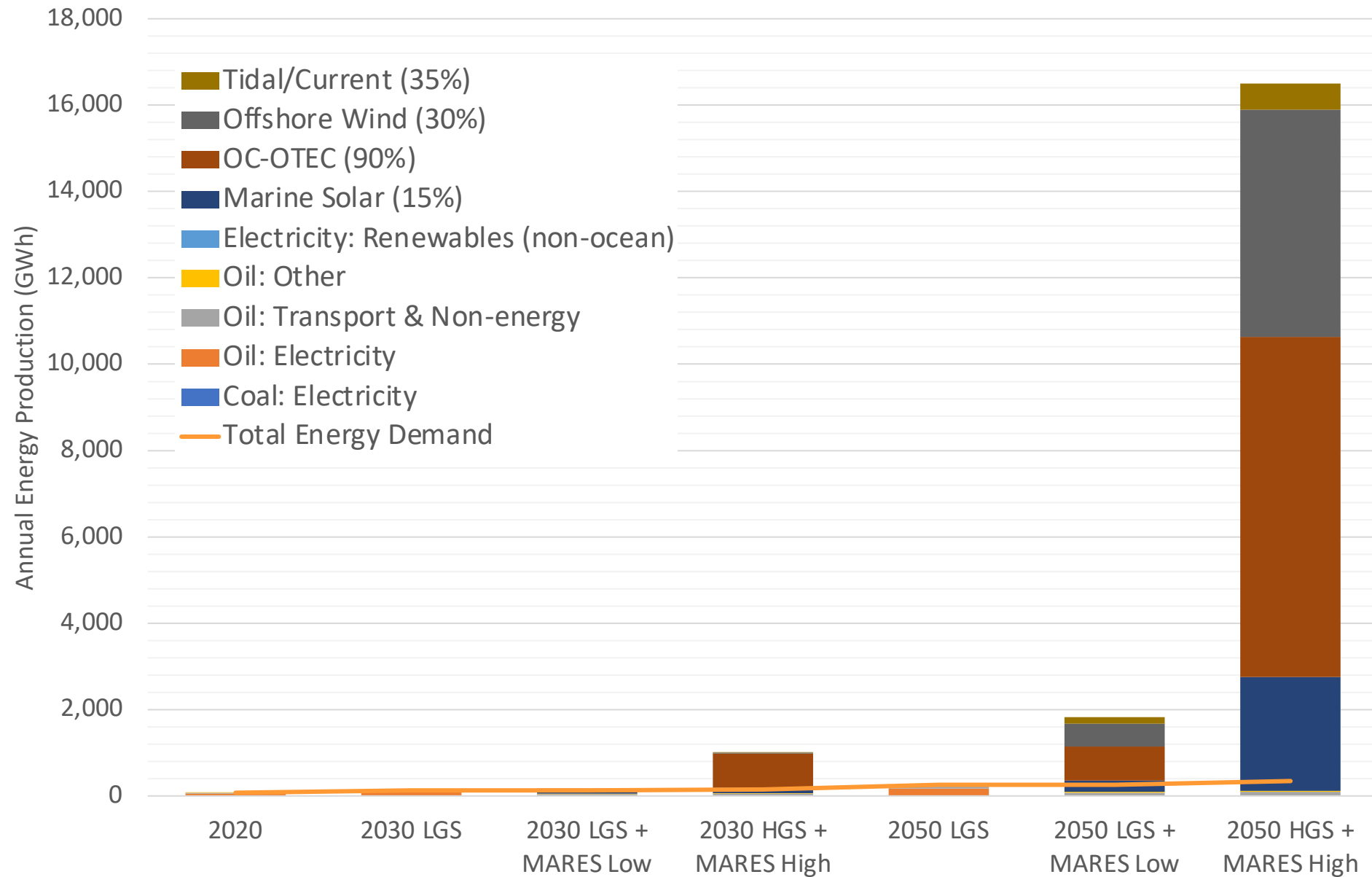
# Appendix



# Balut and Sarangani Islands



# Balut and Sarangani Islands







## Created Near-Term Gross Direct and Indirect Jobs (#)

