

Towards an Inclusive Mindanao Energy Transition: *RETS Project*

Asia Clean Energy Forum 2022

Track 3: Cross-Sectoral Applications for an Inclusive Energy Transition

Session 3.3: Cross-sectoral Applications of Renewable Energy Systems

Thursday, 16 June 2022, 2:00 – 3:30 p.m (Manila Time)

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The Mindanao Context

Philippines' 2nd largest island and closest to ASEAN neighbors





Just over a decade ago, Mindanao used to be a showcase of Renewable Energy:



Agus Complex



Pulangi IV



Mt. Apo Geothermal



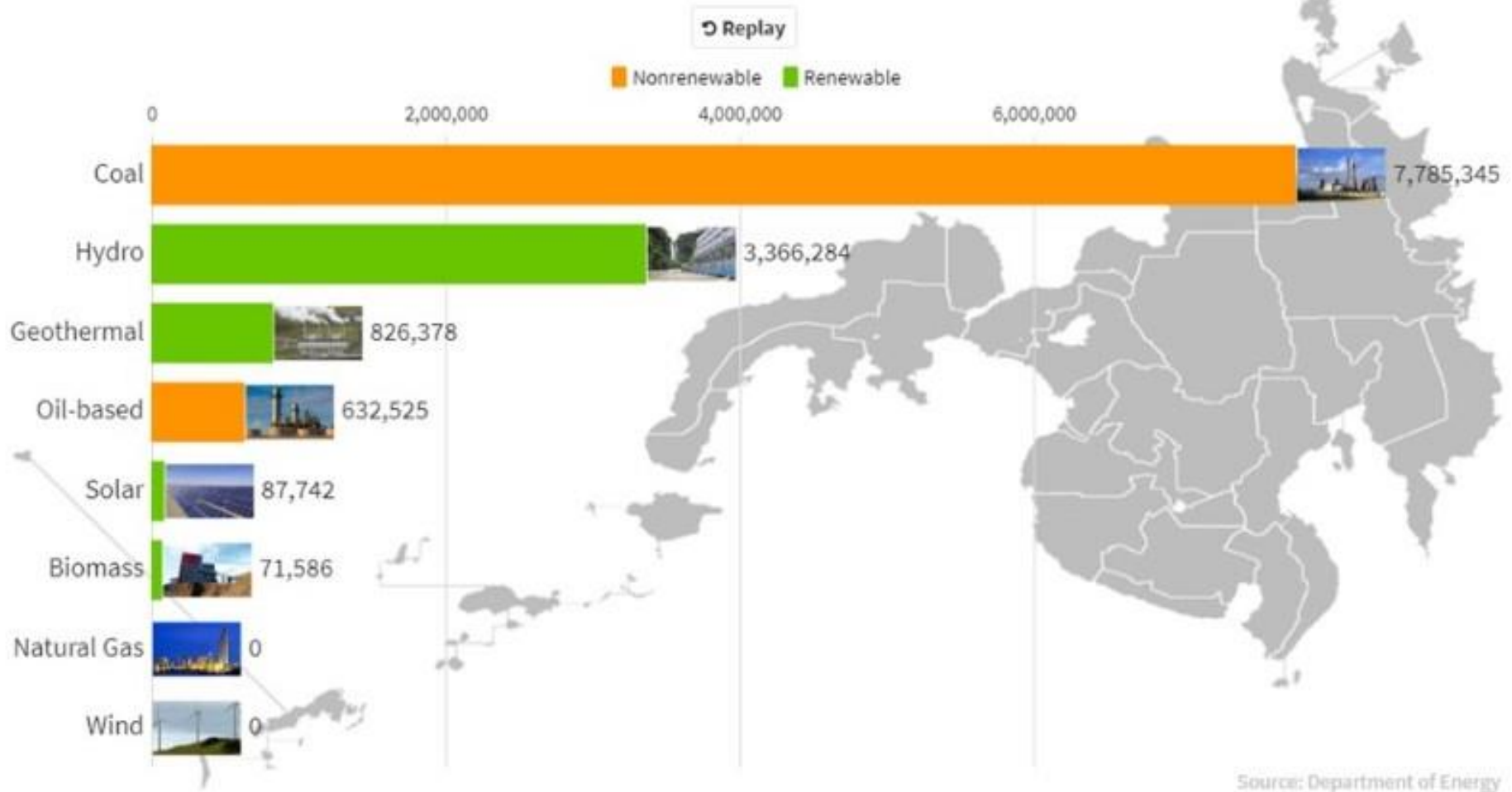
Cepalco Solar



70-30
energy mix
in favor of RE

But influx of mostly coal-powered plants had resulted to reversal of RE-fossil energy mix starting 2017

Mindanao Gross Power Generation by Plant Type (MWh)





**We need to understand
and push for Energy
Transition that is
inclusive...**



Mindanao 2030 and Mindanao Energy Plan



100% electrification, diversification of energy mix and achieving a regime of reliable, reasonably priced and sustainable power for Mindanao in 2030 and beyond...

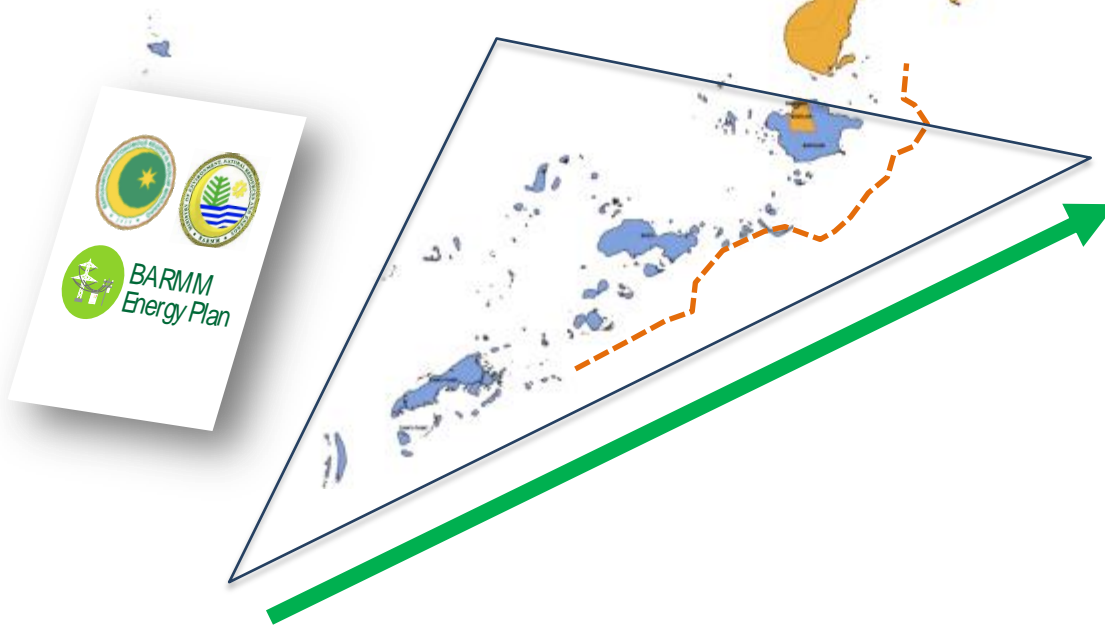
Download MEP at:

<https://www.doe.gov.ph/sites/default/files/pdf/pep/mindanao-energy-plan-2018-2040.pdf>

www.minda.gov.ph

Hybrid/Mini Grid for the Island Provinces/Municipalities

- ✓ Hybridization of Off-Grid Areas especially the Island Provinces of Basilan, Sulu and **Tawi-Tawi**



The Role of Energy in Mindanao's Agri-Fisheries Value Chain





Mindanao Context

The inextricable
linkage between
water, energy,
and food



USAID
FROM THE AMERICAN PEOPLE

Investing in Mindanao as the Country's Food Basket is Key to National Economic Recovery

36%

of the country's
farm area

43%

of the country's
total farm
produce

36%

GVA 2015-2017
Source: PSA





Mindanao *in the world!*

#World's Top 2 Banana Exporter

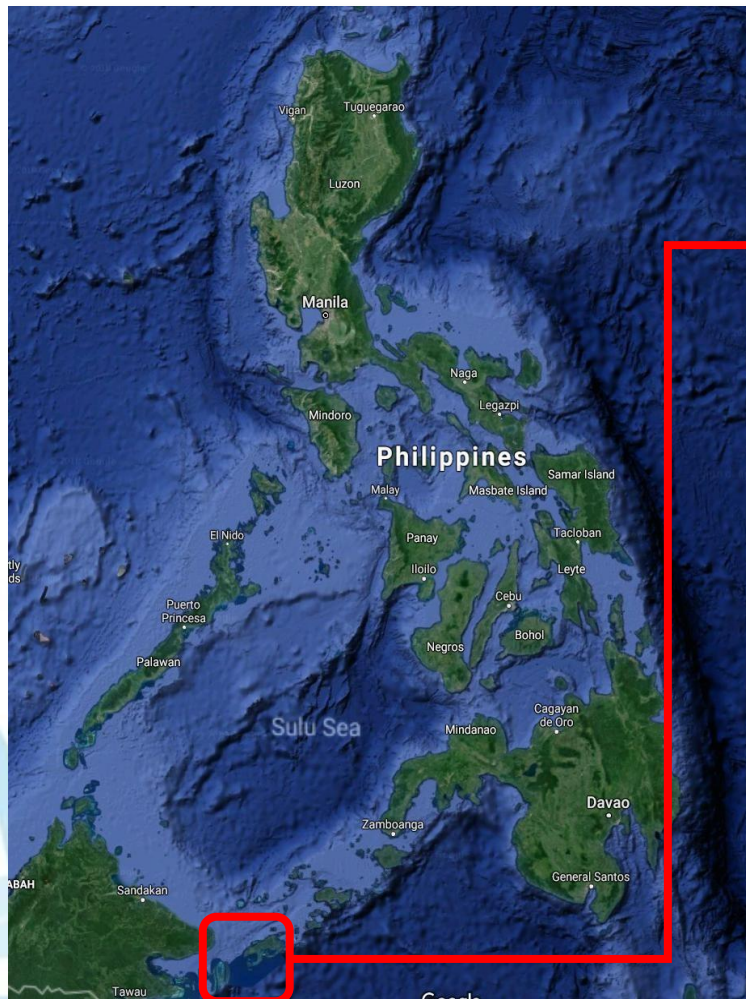
#World's Top 3 Seaweeds Producer

#World's Top 4 Pineapple Exporter

#World's Top 7 Rubber Producer

#World's Top 8 Tuna Producer

TAWI-TAWI: Philippines' Gateway to the Brunei-Indonesia-Malaysia-Philippines East Asian Growth Area (BIMP-EAGA)

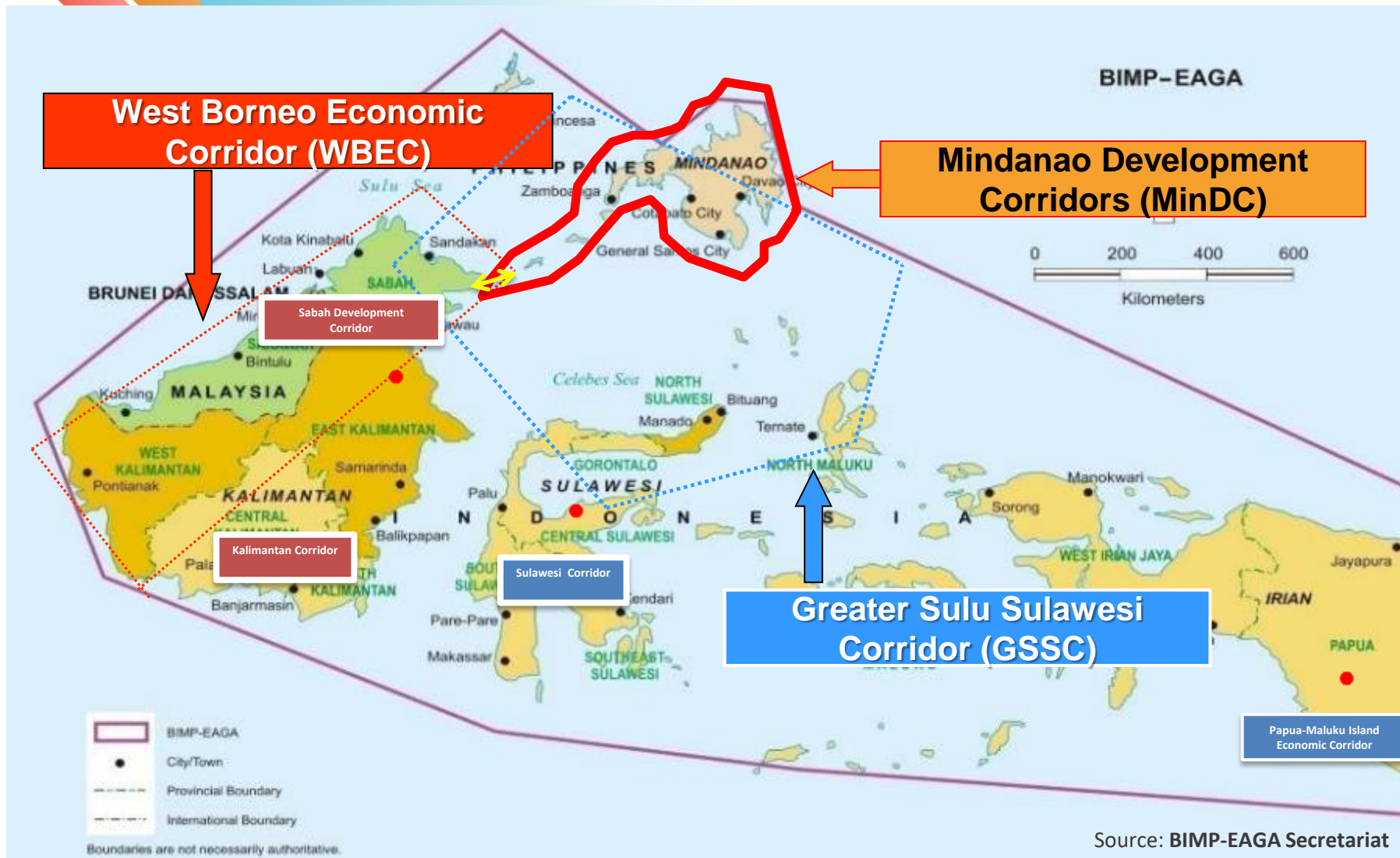


Top producer of seaweeds in BARMM and one of the country's top producers of seaweed.

- Ten of the eleven municipalities of Tawi-Tawi produce seaweeds that comprise 70% of the country's seaweeds production



Economic Corridors in BIMP-EAGA



Source: BIMP-EAGA Secretariat

Tawi-Tawi is the least electrified province in the country at 21% Electrification Level

	SITANGKAI	SIBUTU
Population (2015)	33,334	30,387
Number of households (2015)	6,045	4,993
Electrification (2019)	11%	30%
Water access*	<20%	
Water supply*	mostly level 1	

Issues and concerns

- Inadequate water reservoir
- Limited access to potable water supply
- Inadequate and unreliable power supply
- Unawareness on issue of climate change and/ or global warming

*Based on limited available information.



THE RETS PROJECT

Renewable Energy Technology to Increase
the Value-added of Seaweeds in Tawi-Tawi



Sitangkai



Sibutu

A Partnership for Inclusive and Sustainable Development



THE RETS PROJECT



€ 3 MILLION grant from the European Union

€ 4.3 MILLION total project cost



650kW Sibutu solar PV-diesel-battery hybrid system



1MW Sitangkai solar PV-diesel-battery hybrid system



Design of water supply system integrated to the RE-hybrid systems



Design of decentralized RE in the seaweeds value chain

2 NO HUNGER



6 CLEAN WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



THE RETS PROJECT

connects underserved and unserved communities to more reliable electricity using renewable energy



1,500

households will have access to sustainable electricity



2,000

additional potential connections



5 KM

reliable distribution line system of TAWELCO will be constructed



7 AFFORDABLE AND
CLEAN ENERGY



**Water supply
system**



**Solar PV-hybrid
systems**



**better sanitation,
hygiene and
access to clean
water**



Water is transported from neighbouring islands, while harvesting rain water provides a limited supply during monsoon season

The COVID-19 pandemic has demonstrated the critical importance of sanitation, hygiene and adequate access to clean water for preventing and containing diseases

(<https://www.un.org/sustainabledevelopment/water-and-sanitation/>)



6 CLEAN WATER
AND SANITATION



THE RETS PROJECT

contributes to increasing value-added of seaweeds and improving the livelihood of the communities



Improving quality of cultivars and introducing drying technology



Increasing livelihood opportunities; forging links with investors



HOME TO

3,500

SEAWEED FARMERS



2 NO HUNGER



Partnership between the electric cooperative, government, academe and the private sector would sustain the project in the next 25 years



Adding value through innovation and synergy will promote Tawi-Tawi seaweeds to the world.



The Green Force





***Full transition
to clean energy
is going to be a
difficult task,
but possible
when we work
TOGETHER as a
One.***

شكر

SHUKRAN

Daghang Salamat

MARAMING SALAMAT

A Partnership for Inclusive and Sustainable Development

