

The Development of Blue Economy Framework at Sub-National Level : The Case Study Of West Java Province

Presented at the Workshop "The Power of Coordination and Collaborative Partnerships for Achieving Blue Carbon Success"

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ABOUT WEST JAVA & ITS DEVELOPMENT CHALLENGES





ABOUT WEST JAVA PROVINCE



Coastal boundary (updated)
(Keputusan Ka.BIG No. 26.4 Tahun 2021)

In the 2022-2042 West Java Provincial Regional Spatial Plan (RTRW), the boundary of the marine management area is set at 2 nautical miles from the coastline.

This means that all activities and management of marine resources within that distance are under the jurisdiction of the Province of West Java

Population

50.025.605



Topography

Steep mountains
9,5% in the south
area
Hillside **36,48%** in
the middle area
Sloping plain **54,02%**
in the north area



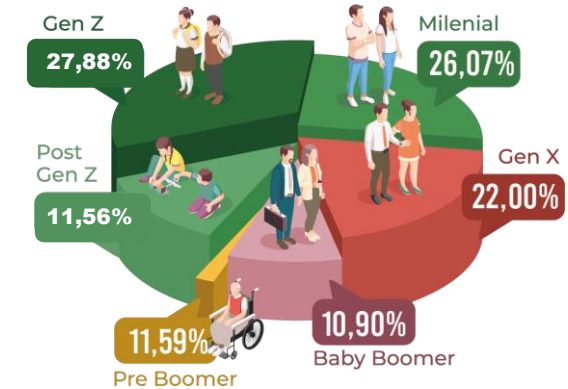
Temperature

16°C - 34°C



Rainfall

1000-4000 mm/year



Area

Land 3.694.485 Ha

Sea 1.655.121 Ha

Total 5.349.606 Ha



27 Districts/Cities

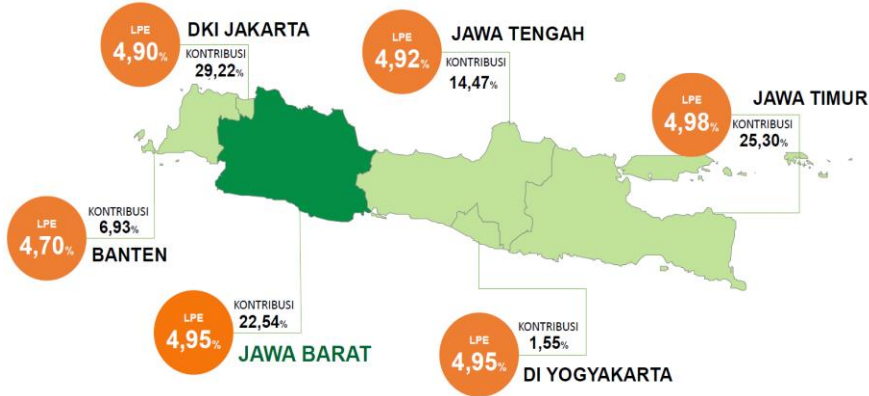
18 Districts
9 Cities

627 Sub-district
645 Urban-village
5.311 Village

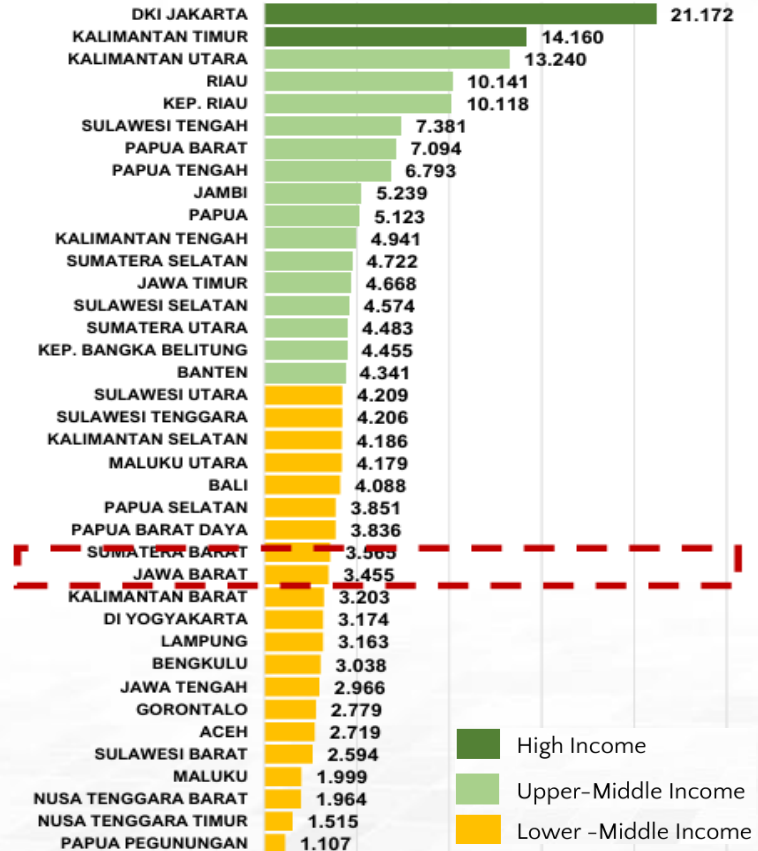
WEST JAVA ECONOMY : STRONG OR WEAK?



ECONOMIC GROWTH 2ND QUARTER/2024 (y-o-y) (BPS, 2024)

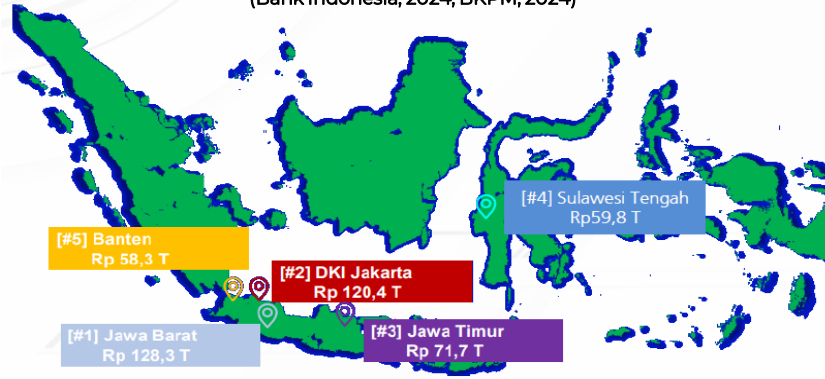


GRDP PER CAPITA (USD) JAWA BARAT IS RANKED 26th & CATEGORIZED AS **LOW MIDDLE INCOME**



Sebaran Realisasi Investasi Indonesia sd Tw II 2024

(Bank Indonesia, 2024, BKPM, 2024)



■ High Income
■ Upper-Middle Income
■ Lower -Middle Income

Open
Unemployment
Rate in West
Java **6,91%**,
(3rd worst in
Indonesia)

(BPS, Februari 2024)

only **6 of 100 Gen Z** interested in
farming & fisheries. Mostly
interested in tech, industry,
education, & health, which is
limited (CNBC Indonesia)

Stunting
Prevalence in
West Java

23,2%,
(above
national
average)

(Kemenkes, 2023)

One of contributing factors:
lack of access to protein source.

Fish consumption per capita is 32-
34 kg/person/year (**VERY LOW**)
(Source: KKP)

Poverty Rate
in West Java

7,46%,

Extreme
poverty

+460.000

(around 25-30%
living in coastal area)

(BPS, Maret 2024;
TKPKD Jabar, 2023)

A fisherman wearing a traditional conical hat is shown in silhouette, pulling a large fishing net from a boat on the water. The background is a soft, hazy sky over the sea, with another boat visible in the distance. The overall tone is somber and evocative.

Number of
extreme poor
fishermen in
Indonesia: **555,720**

Source: P3KE (2022)



WHY *BLUE ECONOMY?*





BLUE ECONOMY IN THE NEW ECONOMY PARADIGM

Economy growth shifted from extractive activity to inclusive and sustainable

Conventional Economy



Some of Gunter Pauli's main principles related to the concept of the blue economy, at least refer to resource efficiency, zero waste, social inclusion, social equity and employment opportunities for the poor, innovation and adaptation, and the multiplier economic effect.

New Economic Paradigm: Green economy and Blue Economy

Terrestrial Economy

Balancing growth with environmental benefits, considering carrying capacity and low carbon emissions

Implementation through:

- Circular economy
- Renewable energy
- Green Industry
- Green Investment
- Waste management
- etc

Blue Economy: Marine-Based Economy

Creating added value and increasing output-based economic productivity to achieve inclusive and sustainable economic growth

New sources of economic growth opportunities for Indonesia

Cross-sectors:

- Marine tourism
- Fisheries industry
- Ship industry
- Bioeconomy and biotechnologies
- Marine logistic
- Renewable energy
- R&D
- Marine waste management etc.

SDGs:





CHALLENGE:

The operational definition of blue economy **is still limited** to conventional sectors (capture fisheries, aquaculture, and fish processing).

Average contribution of Blue Economy sector to GRDP in the last 5 years **is still low, around 2%, mainly contributed by the fisheries sector**

Bappeda Jabar (2023)



BLUE ECONOMY IN WEST JAVA: “UNTAPPED POTENTIALS”

The 2nd most
aquaculture producer
nationally

The main exporter of
ornamental fish, 46% of
national production

Highest number of
cultivators (286,337)
13.5% of national cultivators

Future national *blue*
food producers/
potential

Three (3) main
conservation areas

Future Development of
REBANA & Southern West
Java Areas

5 colleges/universities
or related majors
specialized in
Blue Economy

The South Java Sea has
been identified as having
a wave energy potential
of 30kW/m

The third highest
destination for local
tourists after East Java and
Central Java

Source: Kementerian Kelautan dan Perikanan (2023); Bappenas (2023); Ranhir RPJPD Jawa Barat (2024)



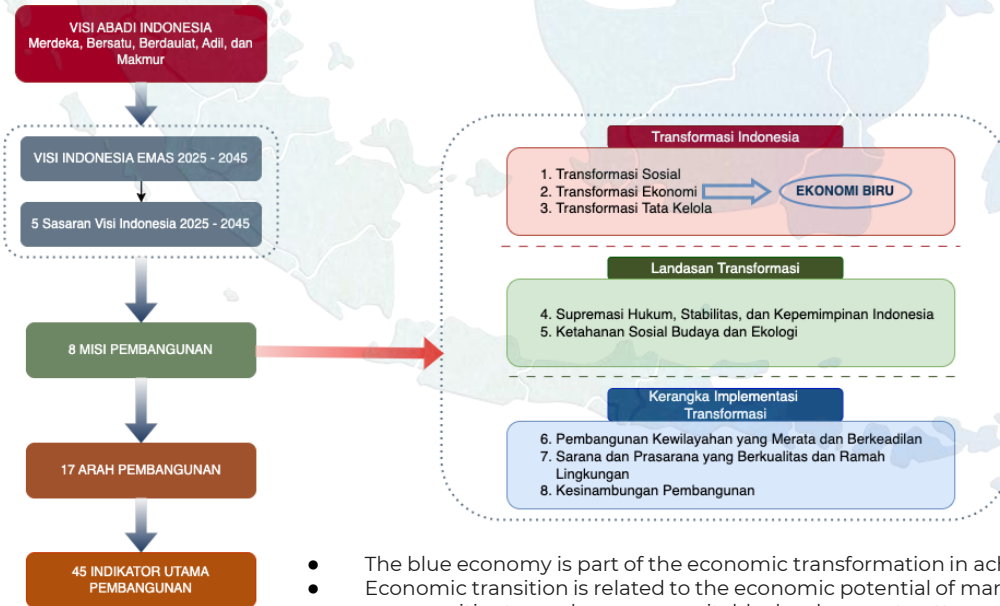
WEST JAVA BLUE ECONOMY FRAMEWORK





BLUE ECONOMY POLICY IN INDONESIA

NATIONAL LONG TERM DEVELOPMENT PLAN (RPJPN) 2025-2045



- The blue economy is part of the economic transformation in achieving a Golden Indonesia.
- Economic transition is related to the economic potential of markets, industry and communities towards a more equitable development pattern.

BLUE ECONOMY AS INDICATOR FOR TARGET VISION (*Sasaran Visi*)



INDONESIA EMAS 2045

01 Income per capita equivalent to developed countries

	2025 Baseline	2045 Target
GNI per Capita (USD)	5.500	30.300
Contribution of Marine GDP (%)	7,6	15,0
Contribution of Manufacture GDP (%)	20,8	28,0

Sources: World Bank (2022); BPS (2022) diolah oleh **Bappenas** (2023)

WEST JAVA 2045

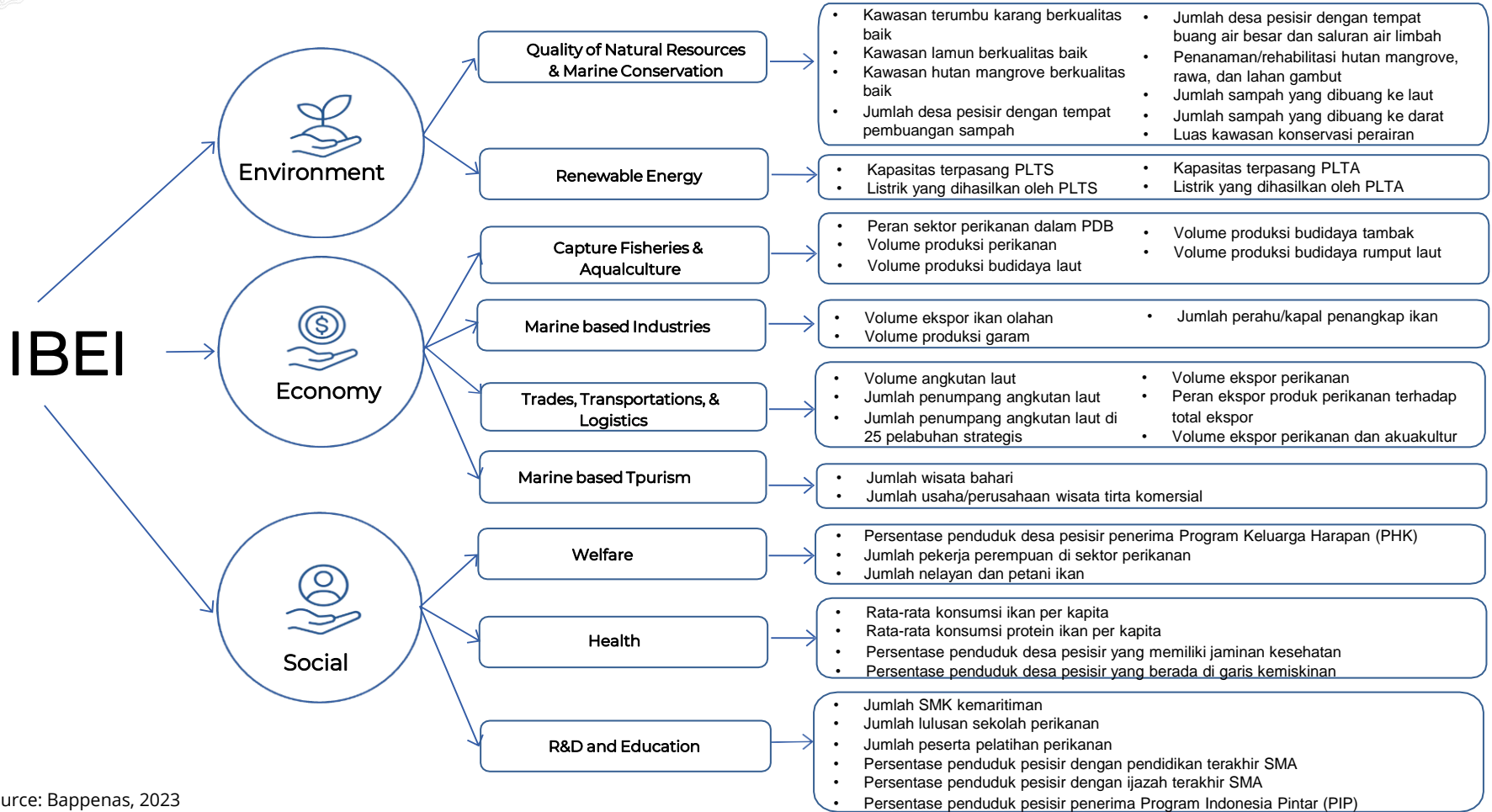
01 Increasing income per capita

	2025 Baseline	2045 Target
GRDP per capita (Rp.Juta)	57,14 - 57,42	237,17 - 325,25
Indonesia Blue Economy Index (IBEI)	42,56	186,06*
Contribution of Processing Industry GDRP (%)	41,15 - 41,38	46,43-47,60

Sources: RPJPN 2025-2045; **Bappeda** (2024)

*still under discussion

THE FRAMEWORK OF INDONESIA BLUE ECONOMY INDEX (IBEI)



DETAILS OF INDONESIAN BLUE ECONOMY INDEX – WEST JAVA PROVINCE



Variable Description	Jawa Barat
Blue Economy Index	54,56
Economic Pillar	38,41
Environment Pillar	39,24
Social Pillar	47,89
Subindex Capture Fisheries and Aquaculture	6,90
Kontribusi sektor Perikanan terhadap PDB (%)	1,06
Produksi akuakultur (ton)	0,54
Produksi budidaya tambak (ton)	3,27
Ekspor produk perikanan (ton)	3,61
Produksi budidaya rumput laut (ton)	0,94
Ekspor ikan olahan (ton)	7,43
Produksi garam (ton)	8,32
Subindex Marine-based Manufacturing	26,74
Jumlah perahu/kapal penangkap ikan	25,34
Volume angkutan laut (ton)	0,46
Jumlah penumpang angkutan laut (orang)	0
Jumlah penumpang angkutan laut di 25 pelabuhan strategis (orang)	0
Subindex Trade, Transportation, and Logistics	5,76
Ekspor perikanan (ton)	7,86
Peran ekspor produk perikanan terhadap total ekspor (%)	0,8
Volume ekspor perikanan dan akuakultur (ton)	0,13
Subindex Marine-based Tourism	69,08
Jumlah wisata bahari (titik)	8
Jumlah usaha/perusahaan wisata tirta komersial (usaha)	10,1
Subindex Enabler: Technology	13,77
Jumlah kapal perikanan tangkap laut – kapal motor>30 GT (unit)	4,07
Subindex Enabler: Governance	55,70
Jumlah pelabuhan perikanan dengan Tempat Pelelangan Ikan (TPI) (pelabuhan)	44

Note: The score have not been standardized, only as an illustration of the potential that can be developed based on the score of each indicator

Subindex Marine Resources and Conservation Quality	13,32
Kawasan terumbu karang berkualitas baik (%)	0
Kawasan lamun berkualitas baik (%)	0
Kawasan hutan mangrove berkualitas baik (%)	0
Jumlah desa pesisir dan tempat pembuangan sampah (desa)	7
Jumlah desa pesisir dengan tempat buang air besar dan saluran air limbah (desa)	21,8
Penanaman/rehabilitasi hutan mangrove, rawa, dan lahan gambut (Ha)	5
Luas kawasan konservasi perairan (Ha)	1,03
Reserved dari jumlah sampah yang dibuang ke laut	2,66
Reserved dari jumlah sampah yang dibuang ke darat	0,00002
Subindex Ocean Renewable Energy	37,38
Kapasitas terpasang Pembangkit Listrik Tenaga Surya (PLTS) (MW)	3,2
Listrik yang dihasilkan oleh Pembangkit Listrik Tenaga Surya (PLTS)(GWh)	0
Kapasitas terpasang Pembangkit Listrik Tenaga Air (PLTA) (MW)	15,5
Listrik yang dihasilkan oleh Pembangkit Listrik Tenaga Air (PLTA) (GWh)	24,2
Subindex Welfare	63,50
Jumlah nelayan dan petani ikan (orang)	37,4
Jumlah perempuan di sektor perikanan (orang)	37,4
Reserve dari jumlah peserta PKH	0,01
Subindex Health	40,37
Rata-rata konsumsi kalori harian per kapita ikan (kkal)	4,15
Rata-rata konsumsi protein harian per kapital ikan (kkal)	7,72
Memiliki jaminan kesehatan	0,01
Reserve dari jumlah penduduk miskin	0,46
Subindex Education	47,25
Jumlah lulusan sekolah perikanan (orang)	14,6
Jumlah peserta pelatihan perikanan (orang)	9,41
Jumlah SMK Kemaritiman – 2023	11,3
Proporsi jenjang pendidikan terakhir SMA	0,01
Proporsi ijazah terakhir SMA	0,01
Reserve dari jumlah peserta PIP	0

MANGROVE CONDITION IN WEST JAVA



The distribution of West Java mangrove forests is in Bekasi Regency, Subang Regency, Indramayu Regency, Cirebon Regency, and Garut Regency. The condition of mangrove forests (2018 data) is **critical with very rare density.**

38.700 Hektare Hutan Mangrove di Jawa Barat Rusak



Source: Media Indonesia, 2022



West Java Province has established a **Regional Low Carbon Development Plan (RPRKD)** that covers various sectors, including mangrove rehabilitation. **The target is to rehabilitate 600 thousand hectares of mangroves by 2024**, which is the largest area in the world

GOOD PRACTICE: CIRATA FLOATING SOLAR PANEL



Source: PLN Documentation, 2023

Floating Solar Panel

- The Cirata Floating Solar Power Plant with a **capacity of 192 Mega Watt peak (MWp)** only utilizes 4% of the surface area of the Cirata Reservoir.
- The Cirata Floating Solar Power Plant, hailed as **the largest floating solar power plant in Southeast Asia** (ASEAN) and the third-largest in the world.
- The Cirata Floating Solar Power Plant is capable of **supplying electricity to as many as 50 thousand households**.
- The plant will contribute to the target of net zero emissions (NZE) by generating 245 Gigawatt hours (GWh) per year and **reducing carbon emissions by 214,000 tons of CO2** per year.
- This is a **successful example of international cooperation**, as it was formed through collaboration between Indonesia State Enterprise and a company from the United Arab Emirates (UAE).

Hydroelectric Power Plant

- Utilizing Citarum River flow
- The Cirata Reservoir was built for water power plant, due to the stable and strong water discharge
- The Cirata Hydroelectric Power Plant is the largest hydroelectric power plant in Southeast Asia.
- This hydroelectric power plant has an underground power house construction with a capacity of 8x126 Megawatts (MW)
- The total installed capacity is 1,008 Megawatts (MW) with an average electrical energy production of 1,428 Gigawatt Hour (GWh) per year.

INDONESIAN BLUE ECONOMY INDEX - WEST JAVA POTENTIAL



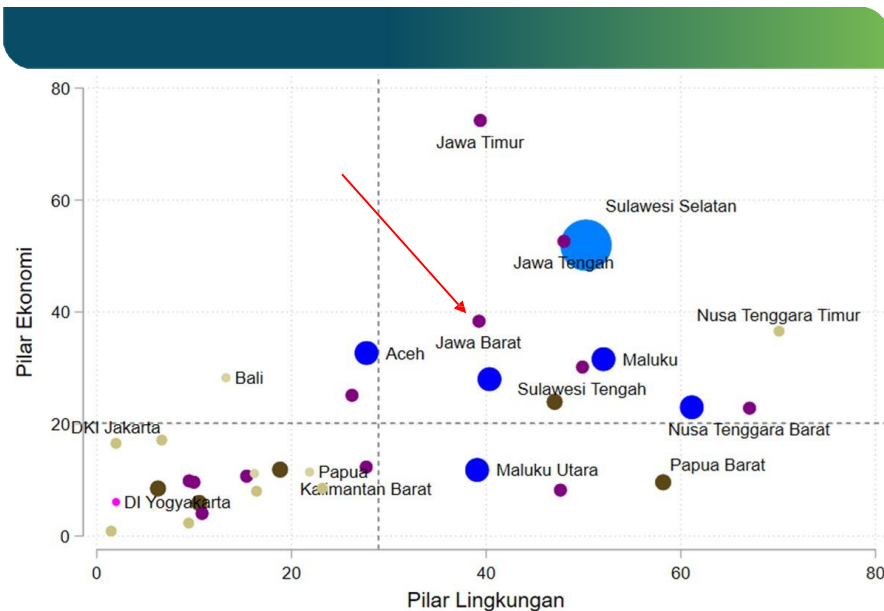
5 Regional with highest IBEI 2023*:

1. Sulawesi Selatan: 80,86
2. Jawa Timur: 71,63
3. Nusa Tenggara Timur: 68,50
4. Sulawesi Utara: 67,98
5. Maluku: 67,22

Note:

14. West Java: 54,65

*before normalization



West Java's Quadrant Analysis:

- Economic pillar above the national average (38,41 ; national 20,15)
- Environment pillar above the national average (39,24 ; national 28,94)
- Social pillar **under the national average** (47,84 ; national 53,21)

THE WEST JAVA BLUE ECONOMY FRAMEWORK



(Adopted from Bappenas, 2023)

VISION

Sumber daya perairan, pesisir dan laut Jawa Barat yang beragam dikelola secara berkelanjutan melalui Ekonomi Biru berbasis pengetahuan dan penelitian untuk menciptakan kemakmuran social-ekonomi, memastikan lingkungan perairan dan laut yang sehat, dan memperkuat ketahanan demi kepentingan generasi saat ini dan mendatang

TARGET

Percentage of marine environments designated as marine conservation areas

Contribution to maritime GRDP

Labor force in maritime sector

MISSION

Securing healthy, resilient and productive waters and oceans

Encourage environmentally friendly economic growth

Improve health, welfare and collective prosperity

Create a supportive environment

STRATEGY

Improving the quality of aquatic ecosystems and productivity of maritime resources, including mitigation and adaptation

Encourage sustainable economic growth from both conventional sectors and sectors that are currently developing in the global economy

Increasing equality and welfare of blue economy stakeholders for a equitable transition

Strengthen supporting ecosystems including governance, financing and infrastructure

OUTCOMES

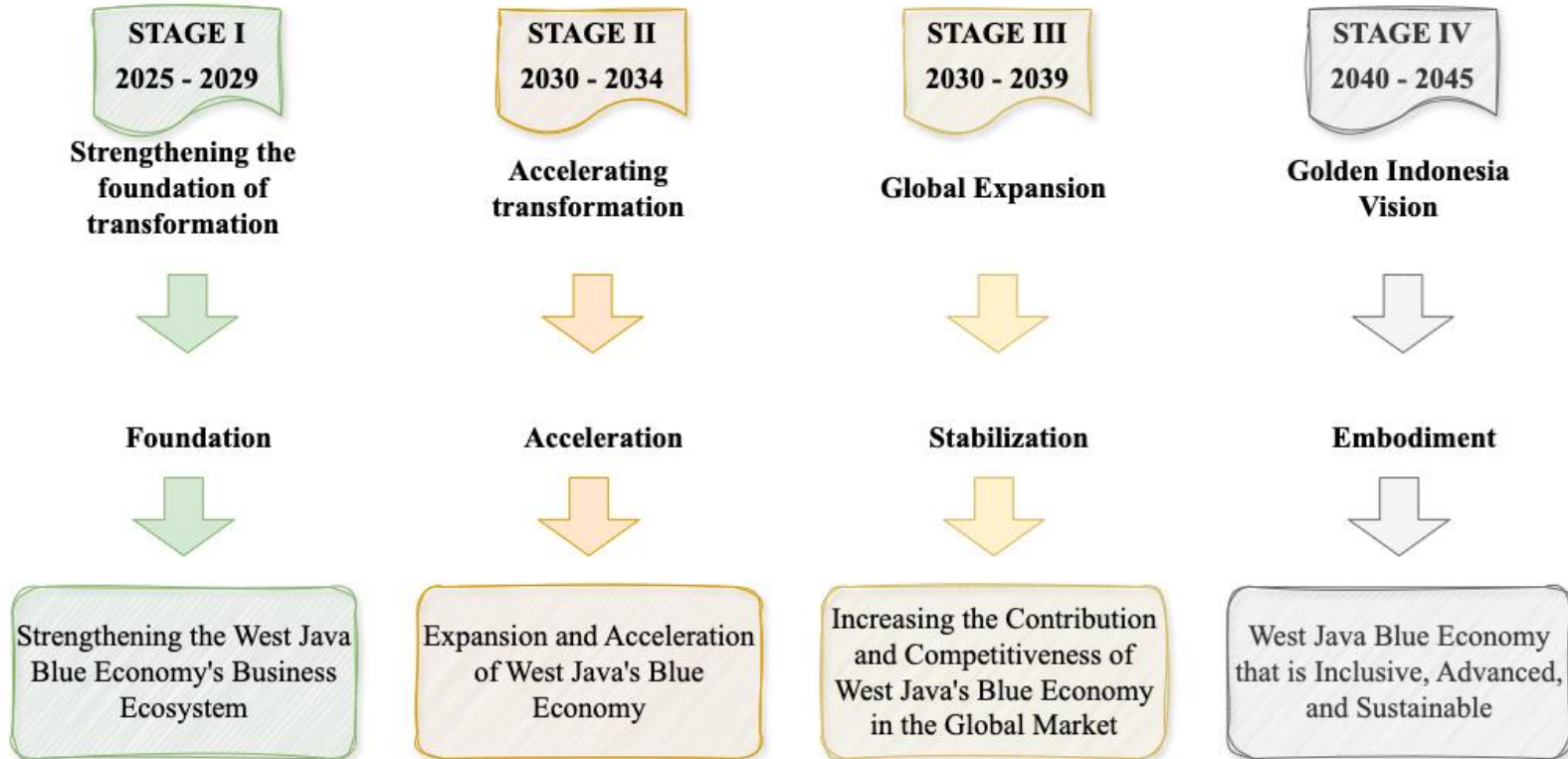
Blue economy in West Java contributes to ecosystem quality, resilience and climate control

Blue economy contributes to the maritime economy through the downstream maritime industry as well as superior commodities and products from fisheries resources in a sustainable and resilient manner for the social economy in the future

Blue economy contributes to expanding employment opportunities in the water and maritime sector for the livelihood and welfare of the community

Creation of an ecosystem that supports the management and utilization of aquatic resources based on science and sustainable principles and supports the assessment of IBEI

BLUE ECONOMY: PHASING & POLICY DIRECTIONS





MAIN FOCUS OF WEST JAVA BLUE ECONOMY DEVELOPMENT (FIRST PHASE* – *ON GOING*)

Comprehensive Downstreaming: Downstream of fisheries industry including fisheries processing, could increase added value and create more jobs in marine industry. Fisheries industry has uniqueness because their derivative products need sustainable certificate

Quality of Superior Product

Exported fish should have high and consistent quality. Focus on good fish farming, hygienic processing and strict food safety standards.

Diversification of Superior Product

Offer a wide variety of fish and fish products, including processed products and ready-to-eat foods. This makes it possible to meet the demands of different markets around the world.

Certification and sustainability

Obtain international certification for sustainability and quality, such as ASC (Aquaculture Stewardship Council) or MSC (Marine Stewardship Council). Geotagging for fishery products. This will increase consumer confidence in the product.

Innovation in processing industry

Apply the latest technology in processing fish, seeds and pallets, to maintain freshness and nutritional value.

Marketing and Branding

Implement effective marketing strategies to promote your brand as a provider of superior quality fish. Take advantage of social media, trade shows and collaborations with famous chefs or restaurants.

Research on global market

Understand global market demand well. Identify trends, consumer preferences and specific needs in different countries or regions.

Strategic partnership

Form strategic partnerships with local fish producers, governments and international organizations to expand reach and build capacity.

Increasing quality of aquatic ecosystem

Carry out water conservation, especially mangrove areas to support the achievement of Net Zero Emission (NZE)

COORDINATION & COLLABORATIVE PARTNERSHIP





COORDINATION AND COLLABORATIVE PARTNERSHIP FOR WEST JAVA BLUE ECONOMY



Sept 2023

Sept- Dec 2023

Jan - June 2024

July 2024

Current

Coordination and Discussion

- Bappenas (Indonesian Ministry of National Development Planning)
- Ministry of Marine and Fisheries

Collaboration and Discussion

Academics

- Prof. Zuzy Anna (Director of SDGs Unpad)
- Prof. Yudi Nurul Ihsan (Dean of Faculty of Fisheries and Marine Sciences Unpad)
- Dr. rer. nat. Tri Dewi Kusumaningrum Pribadi, M.Si (Marine Ecology Unpad)

Focus Group Discussion

- Local Government Agencies
- Municipalities
- Bappenas (Indonesian Ministry of National Development Planning)

Workshop & Dissemination

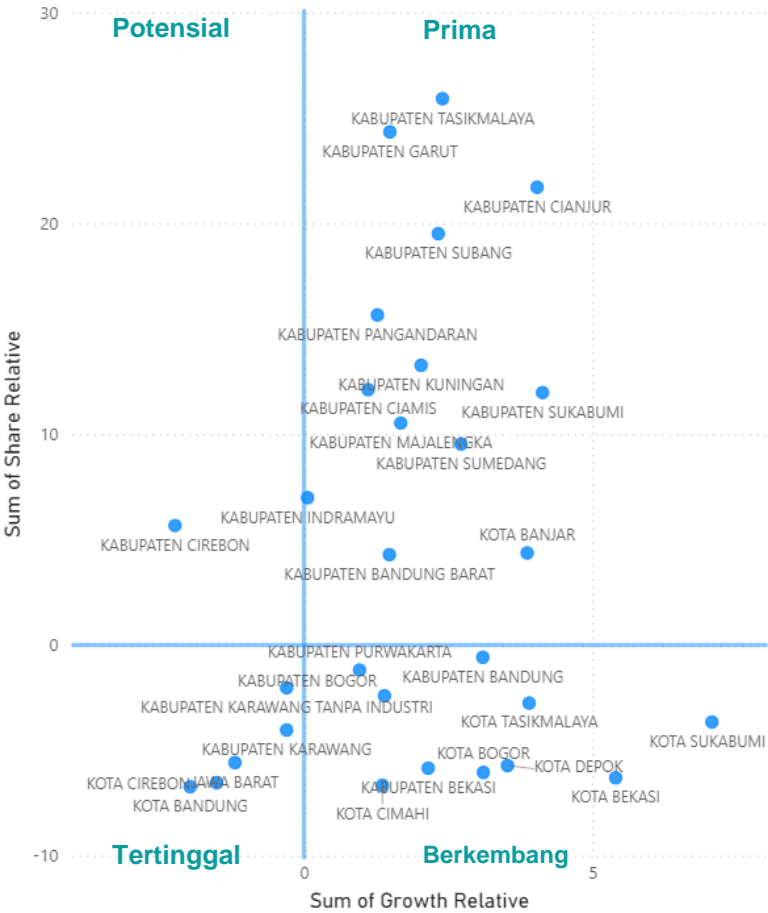
- Harmonization data with Local Government Agencies
- Calculation Indonesia Blue Economy Index (Bappenas)
- Dissemination Masterplan & roadmap Blue Economy with South Sulawesi

Blue Economy Roadmap in West Java is in finalization stage & being reviewed by academics

RESULT OF THE ASSESSMENT OF REGIONAL ECONOMY POTENTIAL: AGRICULTURE, FORESTRY, FISHERY



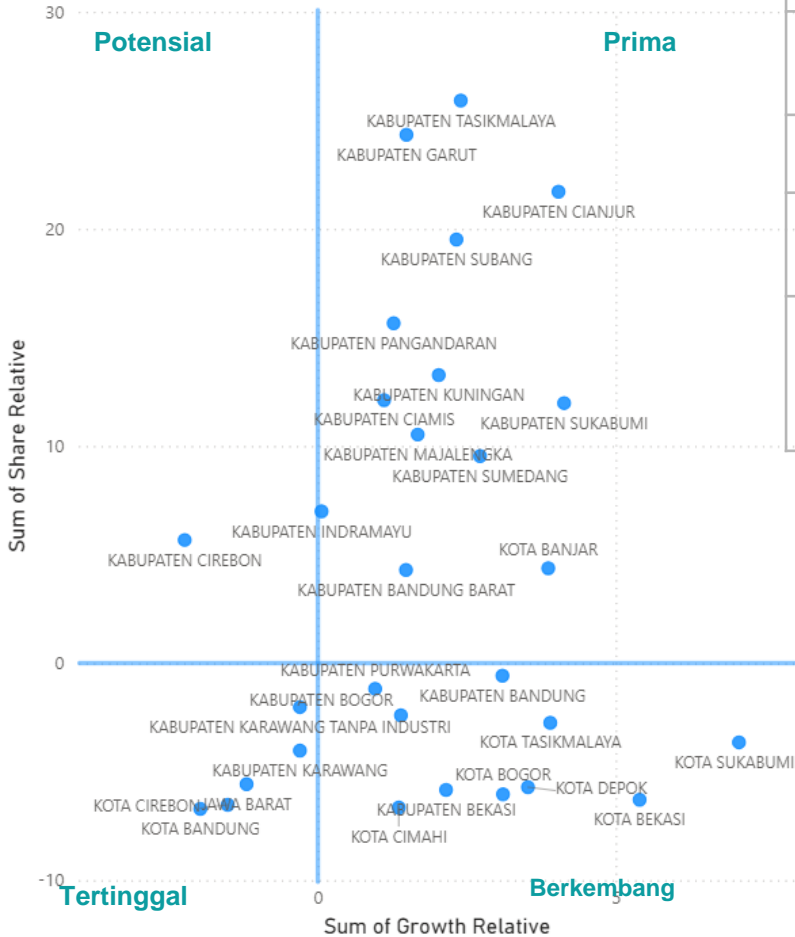
Sebaran LQ Lapangan Usaha di 27 Kab/Kot Jawa Barat



Nama Wilayah	Potensi Pengembangan	Arah Kebijakan
Kab. Tasikmalaya	Kelapa, kopi, aren, udang vaname, lobster budidaya, dan beras.	Pengembang agroindustri dengan produk berupa VCO, gula merah, dan tepung kelapa.
Kab. Garut	Kopi, akar wangi, tembakau, domba, perikanan tangkap & budidaya.	Pembentukan dan pengembangan klaster/ kawasan/ sentra produksi pertanian .
Kab. Pangandaran	Beras, kelapa, kapulaga, jahe, kencur, perikanan tangkap.	Peningkatan nilai tambah dan daya saing produk turunan biofarmaka dan perikanan tangkap.
Kab. Cianjur	Beras, biofarmaka, sapi potong dan perah, lobster, perikanan budidaya.	Peningkatan kapasitas ekspor komoditas biofarmaka dan lobster, pengembangan bibit unggul, dan teknologi pertanian.
Kab. Subang	Beras, biofarmaka, dan perikanan tangkap laut.	Konservasi wilayah laut dan peningkatan produktivitas pertanian tanaman pangan
Kab. Kuningan	Tanaman hortikultura, dan susu sapi.	Peningkatan produktivitas, penyediaan sarana prasarana, dan ketersediaan SDM unggul.
Kab. Ciamis	Tanaman hortikultura, sapi potong, dan perikanan budidaya.	Hilirisasi komoditas perikanan budidaya.
Kab. Sukabumi	Tanaman pangan dan hortikultura, sapi potong dan perah, sidat, lobster, dan rumput laut.	Peningkatan kapasitas ekspor komoditas sidat, lobster, dan rumput laut, serta agroindustri tanaman obat.
Kab. Majalengka	Tanaman pangan, hortikultura sayur	Perbaikan tata niaga pangan dan hortikultura.
Kab. Sumedang	Mangga, pisang, cabai	Pembentukan dan pengembangan klaster/ kawasan/ sentra produksi sektor pertanian, serta kualitas SDM pertanian.



Sebaran LQ Lapangan Usaha di 27 Kab/Kot Jawa Barat



Nama Wilayah	Potensi Pengembangan	Arah Kebijakan
Kota Banjar	Belimbing madu, durian, jambu kristal, pepaya california. Bawang merah, dan kelapa.	Pengembangan agropolitan.
Kab. Bandung Barat	Tanaman hortikultura terutama kopi, sapi potong dan perah.	Penyediaan sarana prasarana terutama irigasi, dan penyederhanaan sistem logistik.
Kab. Indramayu	perikanan laut, garam, mangga gedong gincu, dan beras.	Peningkatan nilai tambah produk pertanian dan perikanan, peningkatan kesejahteraan petani, dan pemanfaatan aksesibilitas perdagangan.
Kab. Cirebon	Padi, mangga, udang, garam, kerapu, kepiting, rajungan.	Kelestarian ekosistem pesisir, peningkatan kapasitas SDM perikanan, peningkatan nilai tambah produk UMKM, kemudahan akses modal dan pembiayaan, serta perluasan akses pasar melalui digitalisasi.

Source: Bappeda Jabar (2024)



The *blue economy* concept is the sustainable use of marine resources for the pace of economic growth, while maintaining the health of marine ecosystems.

Emphasis on the blue economy as a sustainable sector began its integration into Indonesia's national and sub-national policies with the RPJPN's 2025-2045

West Java places strategic importance on blue economy roadmap as it not only drives economic prosperity but also prioritise the well-being of marine ecosystems, ensuring that future generations can reap the benefits of a thriving ocean economy.

The West Java Blue Economy Policy is focused on utilizing existing sectors and starting to shift to a restorative economy through conservation, implementing a circular economy in the maritime industry and developing blue carbon towards net-zero emissions

REFLECTIONS





TERIMA KASIH

“Sukses Perencanaan Sukses Implementasi”

Jalan Ir. H. Juanda No.287, Dago, Coblong,
Kota Bandung, Jawa Barat | 40135

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