SIRD #104
SOCIAL INVESTMENT ROUNDTABLE DISCUSSION

Social Investment Indonesia

Via zoom @SocialInvestment_Id

AI & DATA SCIENCE untuk Keberlanjutan



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Ketua - BRAIN IPB University



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Sustainable Finance Analyst
WWF Indonesia



Jalal
Chairperson of Advisory Board
Social Investment Indonesia



Resensi Buku:



Host:



Nur Astri Mufthia S.
Associate
Social Investment Indonesia

Jumat,
18 September 2026

15.00 - 17.00 WIB

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Professional Experience:

- *Saat ini menjabat sebagai Sustainable Finance Analyst di WWF Indonesia.*
- *PIC for WWF-ID's Landscape Finance Approach (LFA) In-Country Workshop, leading the design and delivery of in-house training modules and stakeholder engagement strategies to mobilize conservation finance solutions across prioritized landscapes that directly addresses structural barriers to sustainable investment at a landscape level.*
- *Advanced Green Financial Crime (GFC) policy work grounded in the Environmental Crimes Financial Toolkit (ECFT) by WWF-UK and Themis, engaging OJK, financial institutions, and FIUs to develop environmental crime typologies, deforestation-linked financial red flags, and AML-adjacent capacity-building programs contributing to the technical evidence base for Indonesia's POJK 51/2017 revision.*
- *Supported blue carbon financing pipeline development for Derawan MPA, contributing to due diligence, carbon finance, and application processes for Blue Action Fund (BAF) as well as a national-level Mangrove Breakthrough submission covering up to 10,000 Ha of mangrove restoration and conservation.*
- *Supported technical document development for Berau's blue carbon Pre-FS, supporting concept and structure the FPIC as well as project proponent chapters following re-analysis of prior assessment.*

Educational Experience

- *S1 – Sarjana Teknik Kimia Universitas Indonesia*



Nature-Based Solution for Marine Conservation Efforts in Alor Marine Protected Area

2026 – WWF Indonesia



Alor MPA (Marine Protected Area)

Exploring Innovative Finance Mechanism

OBJECTIVE

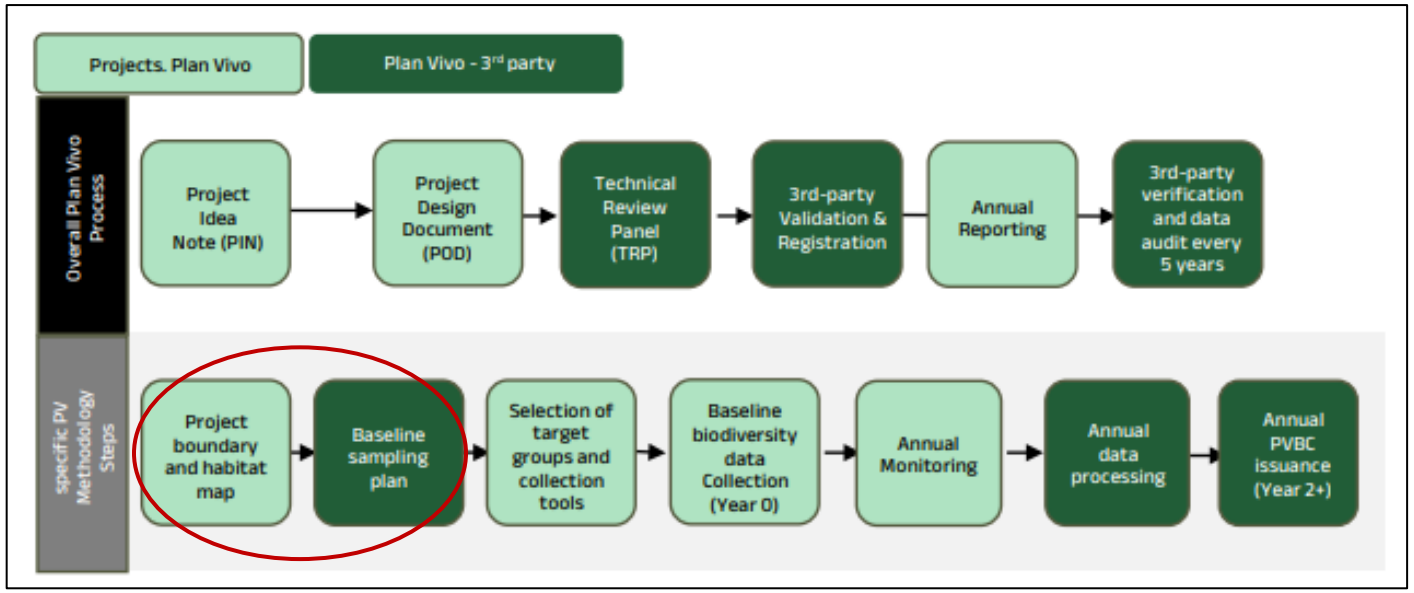
To restore and protect critical marine habitats in Alor through a nature asset benefit on verified biodiversity conservation translated to nature credit while establishing a high-integrity, community-led conservation model that secures ecosystem resilience and sustainable local financing.

Biodiversity credits target metrics by PV Nature Methodology seagrass conservation measuring species richness/abundance.

Raising enough revenue for MPA Management and EVIKA score and reducing threats to marine ecosystem.

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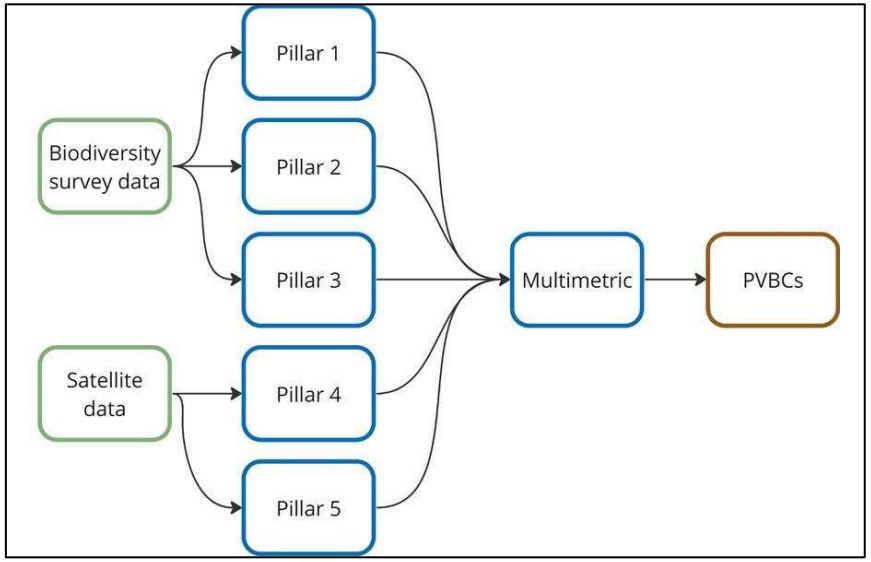
PV Nature Work Scheme



Indicator Requirements Under PV Nature:

- Annual MRV (Measurement, Reporting, and Verification) for:
  - Year 0 = Start
  - Year 1 = Additionality Review
  - Year 2 = Additionality Review (+ Credit Issuance)

- Must track **3 species metrics (richness, diversity, taxonomic dissimilarity)** and **2 habitat metrics (habitat health, habitat connectivity).**

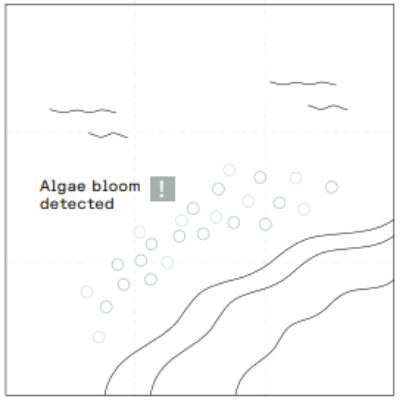


PVBC = Plan Vivo Biodiversity Credit Certificate

Kuva Space

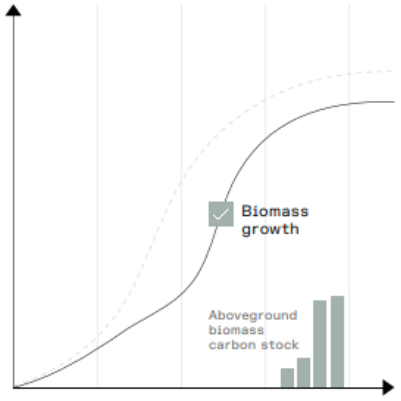
Advancing marine ecosystem intelligence from space

Kuva Space is a Finland-based provider of hyperspectral satellite data and AI-powered intelligence. Our technology captures detailed spectral signatures across hundreds of wavelengths, enabling precise detection and monitoring of environmental variables from orbit. With global subdaily coverage and AI-powered analytics, Kuva Space empowers organizations to make informed, insights-driven decisions for marine sustainability.



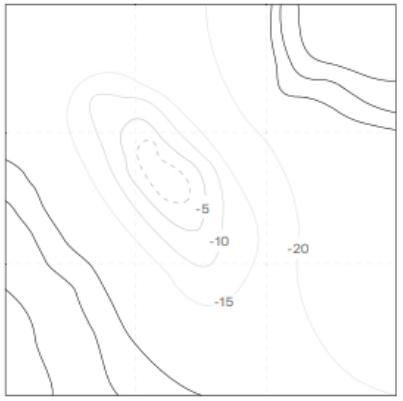
Water quality monitoring

- Detect and track CDOM, pH, harmful algal blooms (HABs), turbidity, and chlorophyll-a (Chl-a) levels to assess ecosystem health.



Biomass & habitat analysis

- Identify biomass species, monitor growth stages, and estimate biomass in ecosystems such as seaweed farms, mangroves and seagrass.
- Estimate blue carbon volume for climate impact assessment.
- Enable early detection of invasive species to support biodiversity conservation.



Seabed & coastal mapping

- Classify coastal land cover and track spatial changes over time.
- Track changes in seabed composition and sediment distribution (up to 30 m depth).
- Classify seabed types (sandy bottoms, rocky outcrops, seagrass beds, coral reefs).
- Support farm site identification for sustainable aquaculture planning.

Hyperspectral precision

Hundreds of spectral bands reveal details invisible to conventional satellites (Optical and SAR).

Subdaily global coverage

Monitor dynamic marine processes in near real-time.

AI-driven analytics

Automated, scalable insights for actionable decision-making.

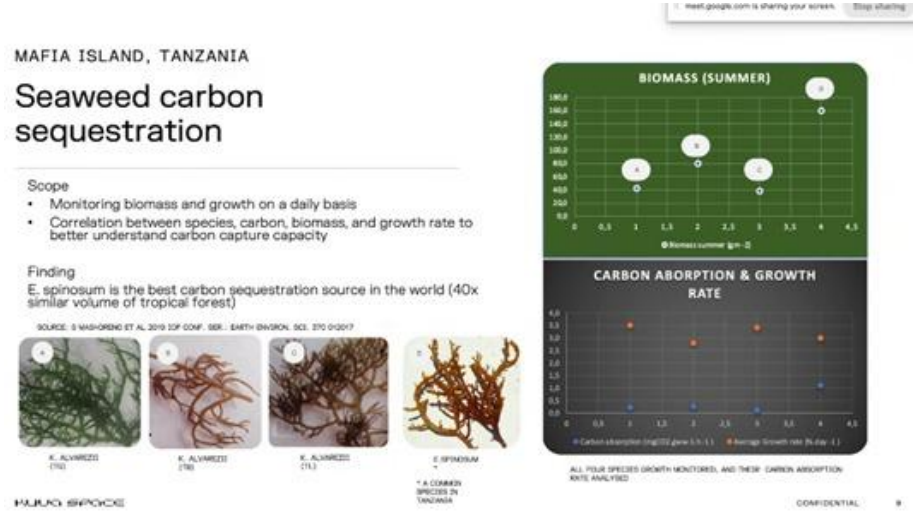
Sustainability impact

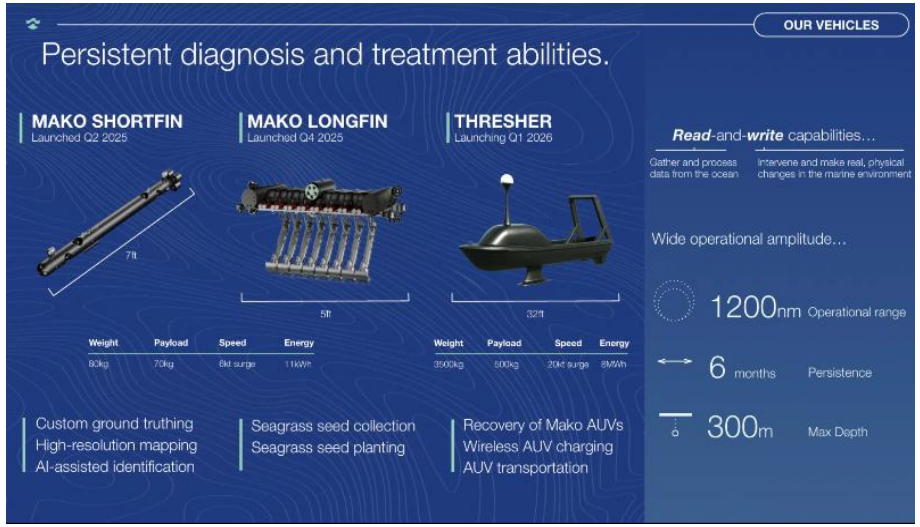
Empowering ocean conservation, coastal management, and blue economy growth.

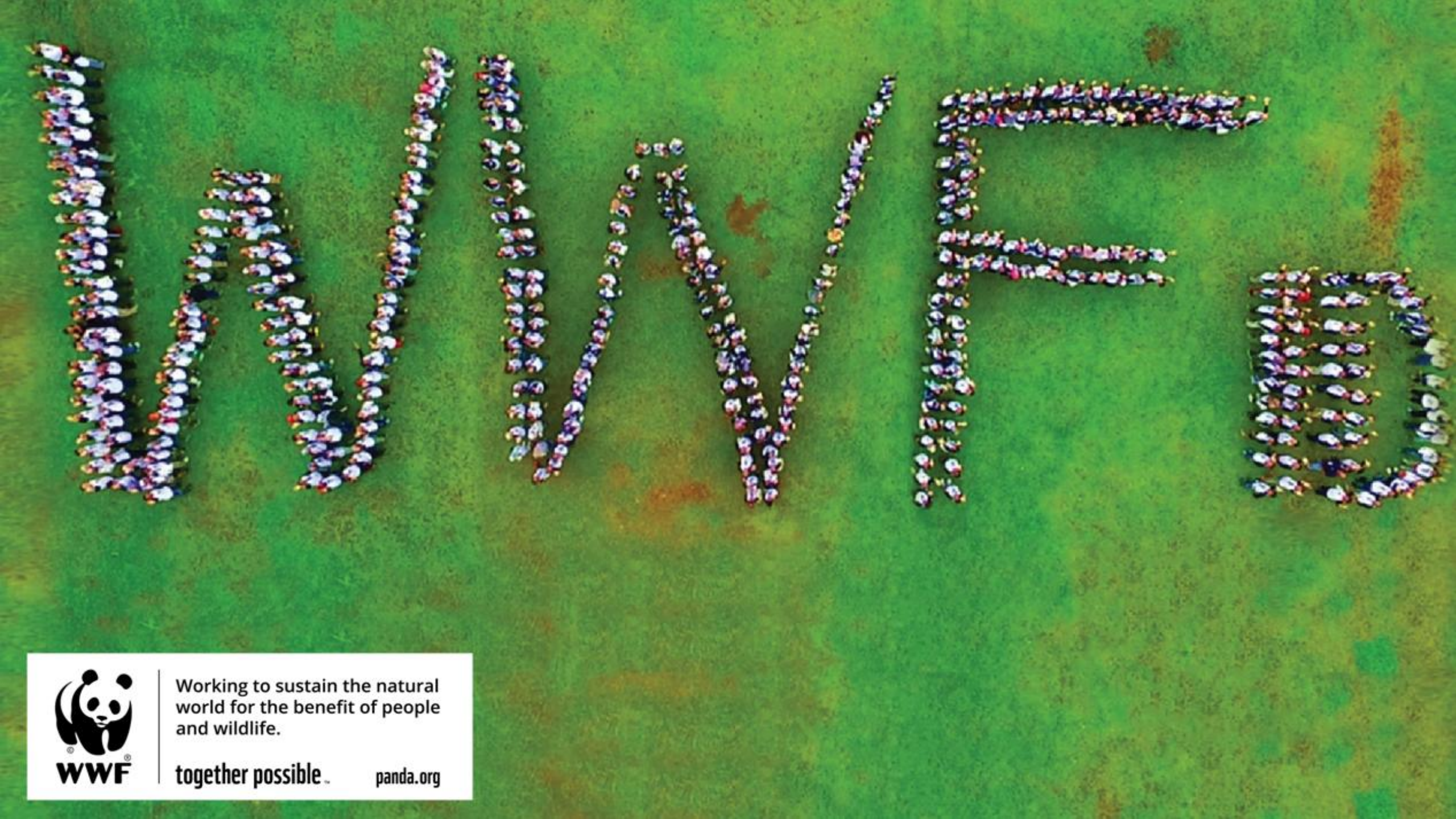
Kuva Space to Alor MPA

Kuva Space Expected Contribution to Alor MPA

1. Provides affordable and accurate **biomass monitoring** to identify and map **the spatial distribution** of seagrass and mangrove species using spaceborne hyperspectral data (accurate insights to marine ecosystem through physical and biochemical materials)
2. Study the impact of environmental and seasonal growth on coverage & biomass.
3. Support spatially explicit seagrass and mangrove biomass using **carbon sequestration models** to support verified blue carbon accounting.
4. Support **biodiversity and habitat-condition assessment** integrated with field ecological data, to inform conservation, restoration, and biodiversity finance mechanisms.
5. Map the **bathymetry (up to 30 m)** in the target maritime areas and assess the potential impacts of economic activities on the coastal environment, including shoreline erosion and water quality degradation.
6. Fulfilling MRV process for 2 habitat metrics (habitat health, habitat connectivity).






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