Clean Seas Solutions to Marine Pollutions from Land-Based Activities

PERTAMINA Collaborative Approach
STRATEGY FRAMEWORKS

MANAGEMENT COMMITMENT AND SUSTAINABILITY CONTEXT

INTEGRATED

COLLABORATIVE

SUB HOLDING UPSTREAM
FROM ONSHORE TO OFFSHORE
An Integrated Marine and Coastal Protection Program

Plastic waste elimination (internal programs)
- By replacing all bottle plastic 600 ml usage with reusable bottle for all employee. For offshore facilities, reverse osmosis (RO) used to replace gallon mineral water. This practice able to eliminate > 7 ton plastic waste yearly
- Share your Waste: Recycling all Plastic Packaging to Creative Economy

Eco Tourism & Biodiversity Conservation:
- Alternative Income Derived From The Use of River, Coastal and Mangrove Ecotourism Areas by Building Capacity Community and Local Women
- Marine and Coastal Biodiversity Conservation

The House of Inspiration
- Waste based community development program
- Turn the waste into socio-economic benefit

SUB HOLDING UPSTREAM
PLASTIC WASTE ELIMINATION

ELIMINATION PLASTIC WASTE FOR EAST KALIMANTAN BLOCK

Plastic waste elimination program able to avoid around 7.55 ton plastic waste in total by:
1. Focusing on replacing mineral water bottle (600 ml, 1500 ml) with reusable tumbler for all employee & contractor
2. Using reverse osmosis to replace mineral gallon water
3. Recycle remaining plastic waste using internal ‘waste bank’ to become facility mockup models

SUB HOLDING UPSTREAM
PLASTIC WASTE ELIMINATION
ELIMINATION PLASTIC WASTE FOR NORTH WEST JAVA BLOCK

GREEN LIFESTYLE “SHARE YOUR WASTE”

- Help People and Environment by share your waste
- Plastic and aluminum packaging waste from operational and household employee were collected and recycle to creative economy
- Bring Your waste and store to collecting point in Office

Sorting and Store from operations facility and from Home

Collecting point in office
EMPOWERMENT LOCAL WOMEN

PROTECTING MANGROVE IN EAST KALIMANTAN BLOCK

Excessive mangrove degradation by fire forest, excessive tree cuttings, changing of land use from mangrove area, could potentially caused abrasion, erosion, and flooding in coastal area. Also amount of carbon emitted to environment when land use happen (fire, cuttings, etc)

With understanding that mangrove presence is essential for their economy, Community will protect mangrove proactively and willingly, without enforcement from local authority needed.

Pertamina proactively protecting mangrove by forming solid cooperation with local women (23 women) to boost their economy through maximizing mangrove product (fruit, etc) as food product.

SUB HOLDING UPSTREAM
BIODIVERSITY SURVEY AND REFORESTATION

PROTECTING MANGROVE IN EAST KALIMANTAN BLOCK

Biodiversity survey which includes mangrove and coastal area (coral, fish, etc) carried out in yearly basis to understand the current condition of protected area by numerical metric (species richness index, etc).

Reforestation carried out regularly with regards to recommendations from biodiversity survey. They key objective is ensure critical or near-critical mangrove or coral zone can be prevented.
### COASTAL ECOTOURISM:

**CONSERVATIONS, EDUCATION AND ECONOMIC EMPOWERMENT IN WEST MADURA BLOCK**

1. Coral Reef rehabilitation and Conservation with total area ±105 m² & ±171 m²
2. Bird Watching Educations
3. 13,500 mangroves planting
4. Daily and Biweekly Coastal Clean Up Program Cooperation with Marine and Fisheries Department
5. Student and College involvement
6. Reducing waste until 543,236 m³/year
7. Visitor Increasing up to 300%

#### Coral Reef Transplantation

<table>
<thead>
<tr>
<th>Year</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>30</td>
<td>30</td>
<td>50</td>
<td>50</td>
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</tbody>
</table>

#### Identified Bird

<table>
<thead>
<tr>
<th>Year</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>H’</td>
<td>36</td>
<td>31</td>
<td>33</td>
</tr>
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</table>

**Index**

H’ = 3,008

#### Mangrove Density

<table>
<thead>
<tr>
<th>Year</th>
<th>S1 2018</th>
<th>S2 2018</th>
<th>S1 2019</th>
<th>S2 2019</th>
<th>S1 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>1,966</td>
<td>2,033</td>
<td>3,200</td>
<td>3,700</td>
<td>3,666</td>
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</tbody>
</table>

#### Ton CO₂eq, Carbon Sequestration

<table>
<thead>
<tr>
<th>Year</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>1,966</td>
<td>3,200</td>
<td>3,666</td>
</tr>
<tr>
<td>S2</td>
<td>2,033</td>
<td>3,700</td>
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</tr>
</tbody>
</table>
LABUHAN BEACH (2011-2019)

Before Program

After Program

75.600 mangroves and cypress planting since 2011
**Objective**

- To build community awareness to protect the environment
- To build active participation from the society in managing waste
- To increase the knowledge and the capacity of the people
- To improve the awareness among youths to preserve local culture

**Background**

- Lack of access to health services for the elderly
- Unmanaged waste in Kelurahan Dangdeur: 4,447 tons/year
- Sisingaan as cultural potential

**PEP - SUBANG, WEST JAVA**
House of Inspiration Subang Achievement

- There is a decreasing waste volume in pandemic time
- The BROERI has adapted with this current condition:
  - Cash purchasing
  - New business: Waste Plastic Chopping Services

Collected Waste

- 2020: 40 ton

Member/customer of BROERI

- 2020: 3,065 person

Savings

- 2020: Rp 52,274,420

<table>
<thead>
<tr>
<th>Year / Number</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste</td>
<td>3.07 ton</td>
<td>18.1 ton</td>
<td>28 ton</td>
<td>38 ton</td>
<td>40 ton</td>
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<tr>
<td>Customer</td>
<td>559 orang</td>
<td>2899 person</td>
<td>3007 person</td>
<td>3056 person</td>
<td>3065 person</td>
</tr>
<tr>
<td>Savings</td>
<td>Rp 3,752,143</td>
<td>Rp 23,027,927</td>
<td>Rp 39,539,926</td>
<td>Rp 48,274,420</td>
<td>Rp 52,274,420</td>
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</table>

Member of Posbindu

- 2020: 70 orang
- And 1 assessed group

- Have a legal body and acknowledged by Subang cooperative institution.
- Having license (PIRT) for home-made product
- 70 seniors regularly attend the elderly center
- The senior center becomes part of routine program of Sukarahan Community health center
1. **Sorting Partnership**
Creating partnership with used plastic glass collectors in sorting service and purchasing of the Sorting result in order to improve the added value

2. **Cash Waste**
Waste purchase in huge amount to be choped to improve the sales value
SUSTAINABILITY COMPAS **House of Inspiration**

**NATURE**
- 40 ton Collected Waste

**ECONOMY**
- Establishment 1 Cooperative of House of Inspiration Subang
- Administrators of cooperative receive monthly income ranging from 150-500 thousand IDR per month
- 13 person (3 drop outs from school and 10 woman) has join and gain benefit from this program – Empowered

**SOCIAL**
- 3.065 person as Customer of BROERI
- 12 BROERI Customer group
- Create 2 woman group (Dahlia and Sukaseuri Group)
- Lahir dua kelomp

**WELLBEING**
- 70 Senior Citizens/Elderly having health Access through Senior Centre/posbindu lansia
WASTE MANAGEMENT PROGRAM & COVID 19 RESPONDS

DONAT MANIS: Waste Donation for Humanity

Partnership with restaurants and other public services to help and support medical worker and covid 19 affected person.

WARBYASA: Pay with Waste

Pay/Exchange with waste for people daily needs at House of Inspiration Partner (shop, restaurants)
THANK YOU