

# ENVIRONMENT AND SOCIAL DUE DILIGENCE REPORT



## Ariyamaan Beach, RAMANATHAPURAM. TAMIL NADU

*For*

**BLUE FLAG BEACH Programme**

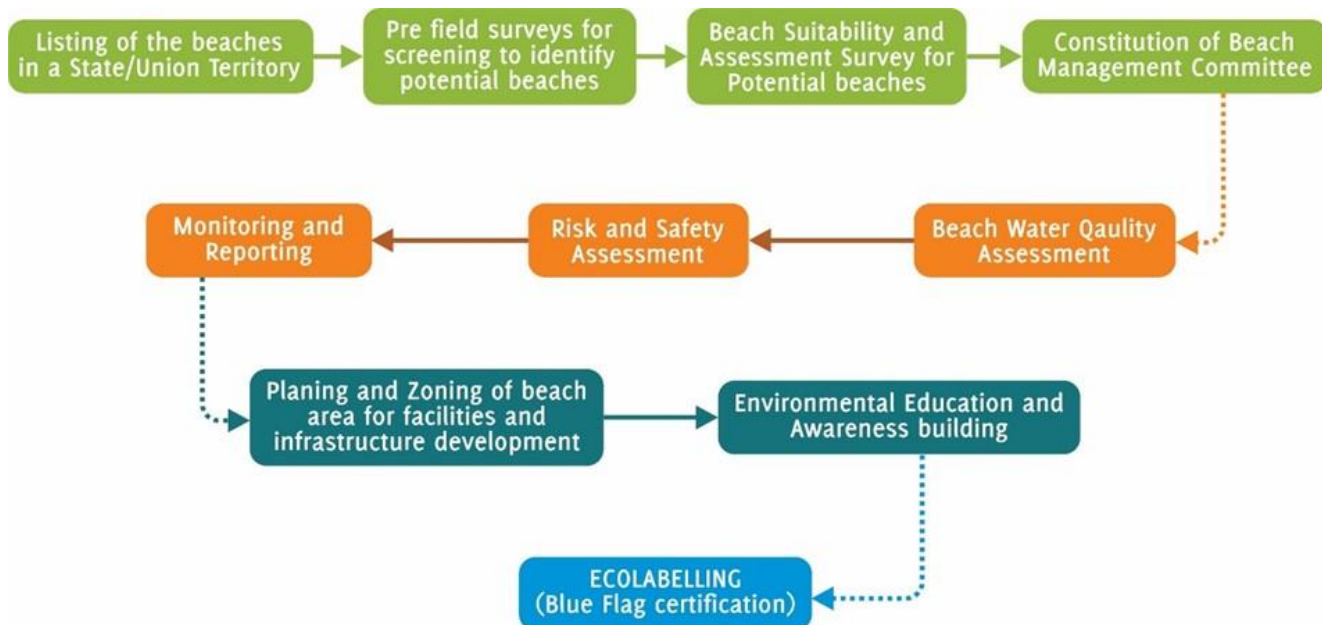
**July 2024**

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| Sl. No. | Position | During construction phase (12 months) in Rs. | Post construction phase (12 months) in Rs. |
|---------|----------|----------------------------------------------|--------------------------------------------|
|---------|----------|----------------------------------------------|--------------------------------------------|

|   |                          | Number | Salary (approx.)/<br>month | Number       | Salary (approx.)/<br>month |
|---|--------------------------|--------|----------------------------|--------------|----------------------------|
| 1 | Beach manager            | 1      | 90000                      | 1            | 90000                      |
| 2 | Beach engineer           | 0      | 0                          | 1            | 50000                      |
| 3 | Beach supervisor         | 1      | 45000                      | 2            | 45000                      |
| 4 | Clearing and maintenance | 10     | 27500                      | 15           | 27500                      |
| 5 | Security                 | 2      | 37000                      | 4 (M) +2 (F) | 37000                      |
| 6 | CCTV operator            | 0      | 0                          | 1            | 32000                      |
| 7 | First aid attendant      | 0      | 0                          | 1            | 40000                      |
| 8 | Life guard               | 0      | 0                          | 4            | 37000                      |

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- Water Quality
- Fisheries
- Conservation Areas
- Protected Areas
- Ecology
- Physical Environment
- Cultural Environment
- Tribal Presence
- Private Land/Assets/Encroachers/Squatters
- Labour
- Migrant Labour
- Gender-Based Violence (GBV) risks

#### Form SF-1: Screening of Project components

| Sl. No.  | Project Component                                       | Applicable (A), Not Applicable (NA) | Environment and Social Risk Associated within the restoration area (RA) and Outside Restoration Area (ORA) | Likely Nature of Risk/Impact Water Quality (WQ), Solid waste generation (SWG) Fisheries (F), Protected Area (PA), Biodiversity (B), Physical Environment (PE), Cultural (C), Tribal Presence (T), Impact on private land / assets / encroachers/squatters (LA), Labour (L) Gender Based Violence (G), Occupational Health and Safety (OHS), Human health and Safety (HS) |
|----------|---------------------------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>A</b> | <b>Project Development Stage</b>                        |                                     |                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                          |
| <b>1</b> | <b>Pollution Abatement Services</b>                     |                                     |                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                          |
| a.       | Mechanized cleaning of Beaches with walk behind machine | Applicable                          | Within                                                                                                     | L, OHS                                                                                                                                                                                                                                                                                                                                                                   |
| b.       | Bio-Digester/ Bio-Tank Unit                             | Applicable                          | Within                                                                                                     | L, OHS,WQ                                                                                                                                                                                                                                                                                                                                                                |
| c.       | Solid Waste Management Plant                            | Applicable                          | Within                                                                                                     | L, OHS,SWG                                                                                                                                                                                                                                                                                                                                                               |

| <b>2</b> | <b>Infrastructure Facilities Development</b>                                                                            |                |        |           |
|----------|-------------------------------------------------------------------------------------------------------------------------|----------------|--------|-----------|
| a.       | Toilet Blocks Facilities                                                                                                | Applicable     | Within | L, OHS,HS |
| b.       | Changing room with shower panels facility                                                                               | Applicable     | Within | G         |
| c.       | Solar power plant facility (40 KW)                                                                                      | Applicable     | Within | L, OHS    |
| d.       | Purified drinking water facility                                                                                        | Not Applicable | Within | -         |
| e.       | Beach access pathways                                                                                                   | Applicable     | Within | L,G       |
| f.       | Office block with: Control Room, Site office, Water rescue, First aid &safety Equipment, Environment education displays | Applicable     | Within | G         |
| <b>B</b> | <b>Project Operational Stage</b>                                                                                        |                |        |           |
| a.       | Human (visitors) contact with seawater                                                                                  | Applicable     | Within | HS        |
| b.       | Physical forces- waves & currents on visitors                                                                           | Applicable     | Within | HS        |
| d.       | Beach access pathways                                                                                                   | Applicable     | Within | G         |
| e        | Toilet facility                                                                                                         | Applicable     | Within | HS        |
| f        | Dress change room and showers                                                                                           | Applicable     | Within | G         |
| f.       | Office block with: Control Room, Site office, Water rescue, First aid &safety Equipment, Environment education displays | Applicable     | Within | G         |

## Form SF -2: Assessment of Risk/Impact Intensity for Sub-Activities

| Sl. No.  | Applicable Project Component/<br>Sub activity                                                                           | Nature of Risk /Impact | Cause and Effect on Environment/Social                                                                      | Risk/Impact intensity |
|----------|-------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------|-----------------------|
| <b>A</b> | <b>Project Development Stage</b>                                                                                        |                        |                                                                                                             |                       |
| <b>1</b> | <b>Pollution Abatement Services</b>                                                                                     |                        |                                                                                                             |                       |
| a.       | Mechanized cleaning of Beaches with walk behind machine                                                                 | L, OHS                 | Likely injury to labour                                                                                     | L                     |
| b.       | Bio-Digester/ Bio-Tank Unit                                                                                             | L, OHS,WQ              | Labour and occupational health risk, noise pollution, leakage                                               | L                     |
| c.       | Solid Waste Management Plant                                                                                            | L, OHS, SWG            | Labour and occupational health risk, noise pollution, spillage                                              | L                     |
| <b>2</b> | <b>Infrastructure Facilities Development</b>                                                                            |                        |                                                                                                             |                       |
| a        | Solar power plant facility (40 KW)                                                                                      | L, OHS                 | Negligence to safety instructions could cause health risk                                                   | M                     |
| b.       | Purified drinking water facility                                                                                        |                        | NA                                                                                                          |                       |
| c.       | Beach access pathways                                                                                                   | G                      | Possibility of Gender Based Violence                                                                        | L                     |
| <b>B</b> | <b>Project Operational Stage</b>                                                                                        |                        |                                                                                                             |                       |
| a.       | Toilet Blocks Facilities                                                                                                | HS                     | Improper maintenance leads to pathogenic environment                                                        | L                     |
| b.       | Changing room with shower panels facility                                                                               | G                      | Possibility of Gender based violence                                                                        | L                     |
| c        | Human (visitors) contact with seawater                                                                                  | HS                     | Seawater contaminated with bacteria                                                                         | L                     |
| d        | Physical forces- waves & currents on visitors                                                                           | HS                     | Freak waves occurring sometimes and rip currents pose a risk to human life when people move to deeper areas | L                     |
| e        | Beach access pathways                                                                                                   | G                      | Possibility of gender based violence especially during dark hours                                           | L                     |
| f        | Office block with: Control Room, Site office, Water rescue, First aid &safety Equipment, Environment education displays | G                      | Possibility of Gender Based Violence                                                                        | L                     |

|                                                                                                                          |  |  |  |  |  |
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|                                                                                                                          |  |  |  |  |  |
| Mechanized cleaning of Beaches with walk behind machine                                                                  |  |  |  |  |  |
| Bio-Digester/ Bio-Tank Unit                                                                                              |  |  |  |  |  |
| Solid Waste Management Plant                                                                                             |  |  |  |  |  |
|                                                                                                                          |  |  |  |  |  |
| Solar power plant facility (40 KW)                                                                                       |  |  |  |  |  |
| Purified drinking water facility                                                                                         |  |  |  |  |  |
| Beach access pathways                                                                                                    |  |  |  |  |  |
|                                                                                                                          |  |  |  |  |  |
| Human (visitors) contact with seawater                                                                                   |  |  |  |  |  |
| Physical forces- waves & currents                                                                                        |  |  |  |  |  |
| Toilet Blocks Facilities                                                                                                 |  |  |  |  |  |
| Changing room with shower panels facility                                                                                |  |  |  |  |  |
| Office block with: Control Room, Site office, Water rescue, First aid & safety Equipment, Environment education displays |  |  |  |  |  |



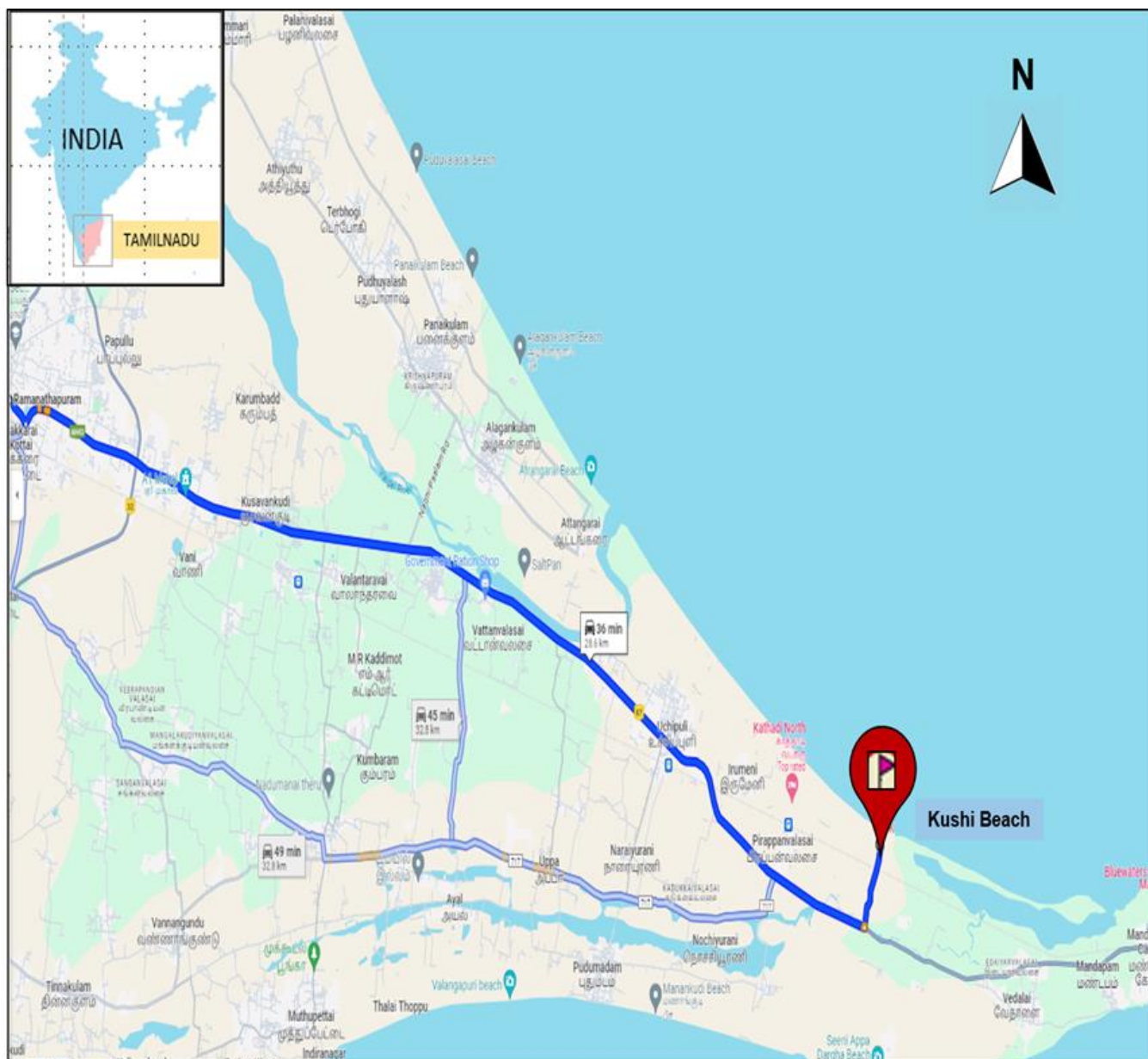
| <b><i>Stakeholder group</i></b> | <b><i>Key concerns and feedback points</i></b>                                                                                          | <b><i>Response and Action</i></b>                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Government officials</b>     | The project must promote tourism and also boost the economy of the local people.                                                        | Blue Flag contributes to fight poverty by supporting local economies through increasing tourism and promoting free access to beaches, business activities and services. Tourism development could generate revenue through taxes and create employment opportunities. Improved infrastructure could benefit the entire region.                                                                  |
|                                 | The developments must not degrade the environment.                                                                                      | The infrastructure development would promote a healthy coastal environment in beaches to attract local and international tourists.                                                                                                                                                                                                                                                              |
| <b>Environmental Specialist</b> | The sand dunes if found in the beach must be conserved.                                                                                 | No hind dunes have been observed at Kushi Beach. Tourism development could provide funds for conservation efforts to protect the beach ecosystem and endangered species.                                                                                                                                                                                                                        |
|                                 | The water quality status                                                                                                                | A thorough Bathing Water Quality test and Risk assessment survey has been carried out.                                                                                                                                                                                                                                                                                                          |
| <b>Local community</b>          | The beach is located in the low to medium population density area and hence would serve as a very good tourist destination if developed | The sub-project aims for the development of the Kushi beach to enhance sustainable tourism activities as well as maintain the environment. Active involvement of the local residents in the planning and decision-making processes will ensure their concerns are addressed, and they benefit from tourism. Out of 17 stakeholders participated in the meeting, 13 were male and 4 were female. |

|  |                                                                                                                                                                                                                                                                                                                                      |                                   |
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|  |                                                                                                                                                                                                                                                                                                                                      |                                   |
|  | <p>Precautionary steps to avoid environmental damages while carrying out all the activities and briefing the people involved on non-engagement of Gender-based violence or Harassment</p> <p>Safety from waves: Warning boards for occasional freak waves. Watch towers and lifeguards stationed across the designated area. The</p> | Applicable (Included in the ESMP) |

|  |                                                                                                                                                                                                                                                                                                                                   |                                    |
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|  |                                                                                                                                                                                                                                                                                                                                   |                                    |
|  | safe bathing zone is demarcated well with the aid of visible lines and buoys.                                                                                                                                                                                                                                                     |                                    |
|  | Adopting labour management rules and instructions to prevent Occupational Health issues and adopting safety norms especially to avoid injuries while using manual or electric tools                                                                                                                                               | Applicable (Included in the ESMP)  |
|  | Adopting prescribed solid waste management practices including disposing of solid wastes at designated places<br>Polluted seawater: Regular water quality monitoring and display of results in the beach information board.                                                                                                       | Applicable (Included in the ESMP)  |
|  | Cultural and social environment is included in the baseline details, for proper monitoring and assessment in the DPR document (Environmental and Social Safeguards Monitoring Plan)                                                                                                                                               | Applicable (Include in the ESMP)   |
|  | The project is in area that is under the control of the Government and land acquisition is not involved. There is no resettlement required for execution of the project.<br>To regulate a few tourist activities within the Eco-labelled beach protective barrier such as a fence or vegetation (Engineering control) may be used | Not Applicable                     |
|  | The project area does not fall within any Environmentally Sensitive Area.<br>To avoid cutting trees or removing vegetation, the layout plans and designs for                                                                                                                                                                      | Applicable (Included in each ESMP) |

|  |                                                                                                                                                                                                                                                                 |                                       |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
|  |                                                                                                                                                                                                                                                                 |                                       |
|  | all the activities should avoid areas with vegetation.<br>In case felling of any tree is absolutely unavoidable due to site-specific conditions, permission of the Forest Dept. will be secured and compensatory plantation undertaken as per the instructions. |                                       |
|  | No indigenous people or tribal live in the area                                                                                                                                                                                                                 | Not Applicable                        |
|  | Cultural sites are located far away from the mangrove areas                                                                                                                                                                                                     | Not Applicable                        |
|  | No financial compensation etc., involved                                                                                                                                                                                                                        | Not Applicable                        |
|  | A stakeholder consultation was carried out during site screening. A feedback mechanism is in place to address any grievances of the stakeholders (including beach goers).                                                                                       | Applicable<br>(Included in the ESDDR) |

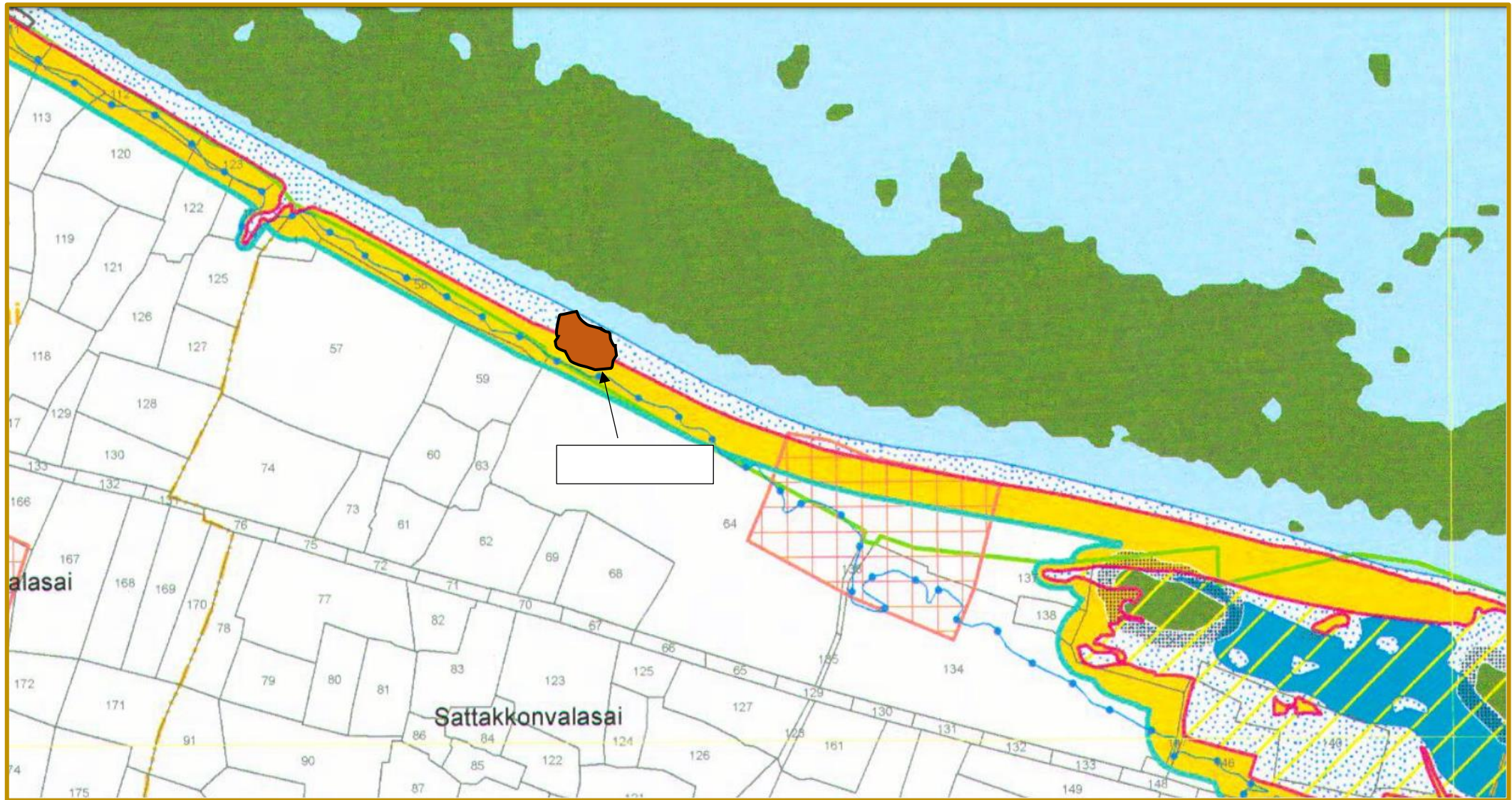
Develop and implement an Environmental and Social Management Plan (ESMP) to address the identified impacts, including water quality, coastal erosion, wildlife conservation, and community impacts. The ESMP should include specific measures for the operation of treatment plants, waste management, and solar energy facilities.



**Fig. 1: Location of Kushi Beach, Ramanathapuram, Tamil Nadu for Proposed Blue Flag Beach Development**



Fig.2 Proposed zonation for Blue Flag Certification area



**Fig.3: Proposed Blue Flag beach area in CZMP map of Tamil Nadu**