

DRAFT EXECUTIVE SUMMARY

Integrated Island Management Plan (IIMP) As per ICRZ Notification 2019

Netaji Subhash Chandra Bose (NSCB) Island, Union Territory of Andaman and Nicobar Island

The Ministry of Environment, Forest and Climate Change, Government of India, New Delhi issued the Notification No. S.O.1242(E) dated 8th March, 2019, referred to as the Island Coastal Regulation Zone (ICRZ) Notification, 2019 in supersession of IPZ Notification 2011, declaring the designated areas as Island Coastal Regulation Zone (ICRZ), with a view to conserve and protect the unique environment of coastal stretches and marine areas, besides livelihood security to the fisher communities and other local communities in the coastal areas and to promote sustainable development based on scientific principles taking into account the dangers of natural hazards, sea level rise due to global warming.

As per the provisions of the ICRZ Notification, 2019, the Department of Environment & Forest, Andaman & Nicobar Administration have entrusted the responsibility of preparation of the Integrated Island Management Plan (IIMP) of Netaji Subhash Chandra Bose (NSCB) Island to the National Centre for Sustainable Coastal Management (NCSCM), Chennai, which is an authorized agency approved by the Government of India, for the said purpose, vide Ministry of Environment & Forests Government of India order No. J-17011/8/92-IA-III dated 8th August, 2019. NCSCM, Chennai has completed the preparation of draft IIMP of Netaji Subhash Chandra Bose (NSCB) Island as per the guidelines of ICRZ Notification 2019.

With this background, NCSCM has prepared the draft IIMP on 1: 5,000 scale as per the guidelines in the ICRZ Notification, 2019.

2. IIMP under ICRZ Notification 2019:

Para 6 of ICRZ Notification 2019, the following provisions were given for the IIMP:

- (i) All the smaller Islands in Andaman and Nicobar and Lakshadweep, other than those listed under the ICRZ categories, shall also be covered under this Notification.
- (ii) These smaller islands shall be managed through the respective Integrated Island Management Plans (hereinafter referred to as the IIMP). Integrated Island Management Plans (IIMPs) shall be formulated by respective Union territory administration for all such Islands as per guidelines contained in Annexure-IV, and submitted to Ministry of Environment, Forest and Climate Change for approval at the earliest. Until and unless the IIMPs are framed, provisions of this Notification shall not come in force and the IIMPs as per provisions of IPZ Notification 2011 shall continue to be followed.

- (iii) In view of the unique coastal systems and space limitations in these islands, a No Development Zone (NDZ) of 20 meters from the HTL on the landward side shall uniformly apply to such islands and activities shall be regulated as under:
- (a) Existing dwelling units of local communities of these islands may be repaired or reconstructed within 20 meters from the HTL and however, no new construction shall be permitted.
 - (b) Foreshore facilities such as fishing jetty, fish drying yards, net mending yard, fishing processing by traditional methods, boat building yards, ice plant, boat repairs and the like, may be taken up in NDZ limits subject to due environmental safeguards.
 - (c) Activities in the Coastal Water areas, inter-tidal zone and ecologically sensitive areas shall be permitted or regulated as in the ICRZ-I and ICRZ-IV areas under Para 4 of this Notification.
 - (d) Development in these Islands beyond 20 meters of HTL shall be governed by the respective IIMPs and local regulations, as applicable.

3. Guidelines for preparation of Integrated Island Management Plan (IIMP).

Annexure-IVB of ICRZ notification 2019 provided the guidelines for preparation of Integrated Island Management Plan (IIMP) which are follows:

- (1) The Integrated Island Management Plan shall be prepared based on scientific methodology and appropriate coastal protection structures constructed/proposed to be constructed shall be indicated in addition to activities planned in the area and got approved by the concerned authority in the UT administration. Thereafter it shall be forwarded to the NCZMA for final approval.
- (2) The entire island including the aquatic area shall be considered for framing of the Integrated Island Management Plan (IIMP).
- (3) Integrated Island Management Plans shall be prepared indicating therein all present and future developments, conservation and preservation schemes with frame of ten years.
- (4) The Integrated Island Management Plan shall address vulnerability to human life and property based on elevation, geomorphology, sea level trends and horizontal line displacement and indicate suitable areas that are safe for locating dwelling units, infrastructure, and the like, and appropriate safeguards measures to protect the life and property of the local communities, infrastructure from natural hazards shall be indicated in the Integrated Islands Management Plan.
- (5) All the existing roads including the internal roads shall be strengthened, as these roads shall serve for the purpose of livelihood, communication, rescue, relief and evacuation measures during natural hazards.
- (6) Adequate cyclone shelters shall be earmarked and constructed on elevated areas or on stilts adjacent to populated areas.

- (7) The existing and as well new schools, market areas and other public facilities (excluding public toilets) where large number of public congregate, shall normally be located on safe areas preferably in elevated areas or protected areas shall be suggested.
- (8) Along the seaward side sufficient bio-shield with local vegetation, trees including mangroves shall be planted and other soft protection measures.
- (9) Sand dunes, being natural barrier in the event of flooding, shall be conserved and maintained or regenerated by planting shrubs or through appropriate measures.
- (10) There shall be no restriction with regard to traditional fishing by local communities including installation of fish aggregating device as recommended by the Islands Administrations.
- (11) The mining of construction material, especially sand from deep sea bed (beyond fifteen meters depth), after undertaking proper scientific studies may be permitted in the Plan;
 - (i) The alternative construction material, such as, bamboo, local forest products may be identified and used;
 - (ii) the other materials, like, metal, hollow brick blocks, and the like, shall be imported from the mainland.
- (12) Emphasis shall be given for use of non-conventional energy resources especially, wind, solar and tidal energy, desalination, water recycling, and use of local products.
- (13) Early warning system shall be provided for cyclone, tsunami, and the like, and an evacuation and relief measure plan in case of disasters shall be built preferably into the Integrated Islands Management Plan.
- (14) Necessary provision shall be made in the Integrated Islands Management Plan for relocation and rehabilitation of people displaced due to natural disasters.
- (15) Integrated Islands Management Plan shall also include the areas under habitation and make plan for future development.
- (16) No developmental activities shall be permitted in the area under reserve forests, protected forests, national parks and sanctuaries notified under the Forests (Conservation) Act, 1980 (69 of 1980) or the Wildlife (Protection) Act, 1972 (53 of 1972) and the areas protected under the Environment (Protection) Act, 1986 (29 of 1986).
- (17) The dwelling units or infrastructure of local communities as are existing at the time of preparation of Plan shall not be displaced.
- (18) Repair of existing buildings or infrastructure including reconstruction activities shall be allowed.
- (19) IIMP shall be prepared in 1:25,000 scale map for macro level planning and 1:10000 scale or cadastral scale for micro level planning.
- (20) The High Tide Line demarcated by NCSCM, Chennai shall be used for all purpose while preparation of the Plan.

4. Preparation of Integrated Island Management Plan

The draft IIMPs maps on 1:5000 scale has been prepared in accordance with the guidelines given in Annexure-IVB of the ICRZ notification, 2019. These are submitted to Department of Environment and Forest, Government of Andaman and Nicobar for website publication and public hearing. The draft IIMP maps to be modified based on the suggestion and comments as per the provision of ICRZ notification 2019. The modified maps are to be submitted to MoEF&CC, Government of India for approval.

5. Methodology for Preparation of Integrated Island Management Plan

5.1. Base data: HTL, LTL, ESA, ICZMP and IIMP:

High Tide Line (HTL), Low Tide Line (LTL), and Ecologically Sensitive Areas (ESAs), demarcated by NCSCM, Chennai, as per the standard procedure as required under the provisions of the ICRZ Notification, 2019. Apart from the above database, hydrographic charts of the Naval Hydrographic Office, Toposheets of the Survey of India, and Satellite image were used.

5.2. Field mapping and map preparation

The use of satellite imagery in combination with field mapping provides better results in the preparation of maps for IIM Plans. At the same time, various locational and spatial errors that could get magnified in large scale maps such as cadastral maps were minimised through appropriate approaches. Field work were carried during June 2023 and February 2024.

6. Integrated Island Management Plan for NSCB Island of the South Andaman District as per ICRZ notification, 2019

6.1. Location

Ross Island, officially known as Netaji Subhash Chandra Bose Island (NSCB Island). NSCB Island is situated on the eastern side of the South Andaman Island and falls under the Port Blair Tehsil of the District of South Andaman (Figure 1). The geographical location of the islands is between Latitude 11° 40'51.306"N to Longitude 92° 45'56.262"E, and Latitude 11° 40'11.847"N to 92° 45'41.106"E Longitude. The total area of NSCB Island is 0.315 sq.km and the total coastal length is 3.28 km. The island is situated 3 km (2 mi) east from central Port Blair. The historic ruins are a tourist attraction.

6.2. IIM Plan for NSCB Island:

- a) As per the ICRZ notification 2019, the NSCB Island fall under the Integrated island management due to its small area (0.315 sq km).
- b) Total length of HTL of NSCB Island is 3.28 km.
- c) The IIMP of Ross (NSCB) consists of the following three maps:
 - (i) Integrated Island Management plan (IIMP),
 - (ii) Land use map and
 - (iii) Geomorphology map.

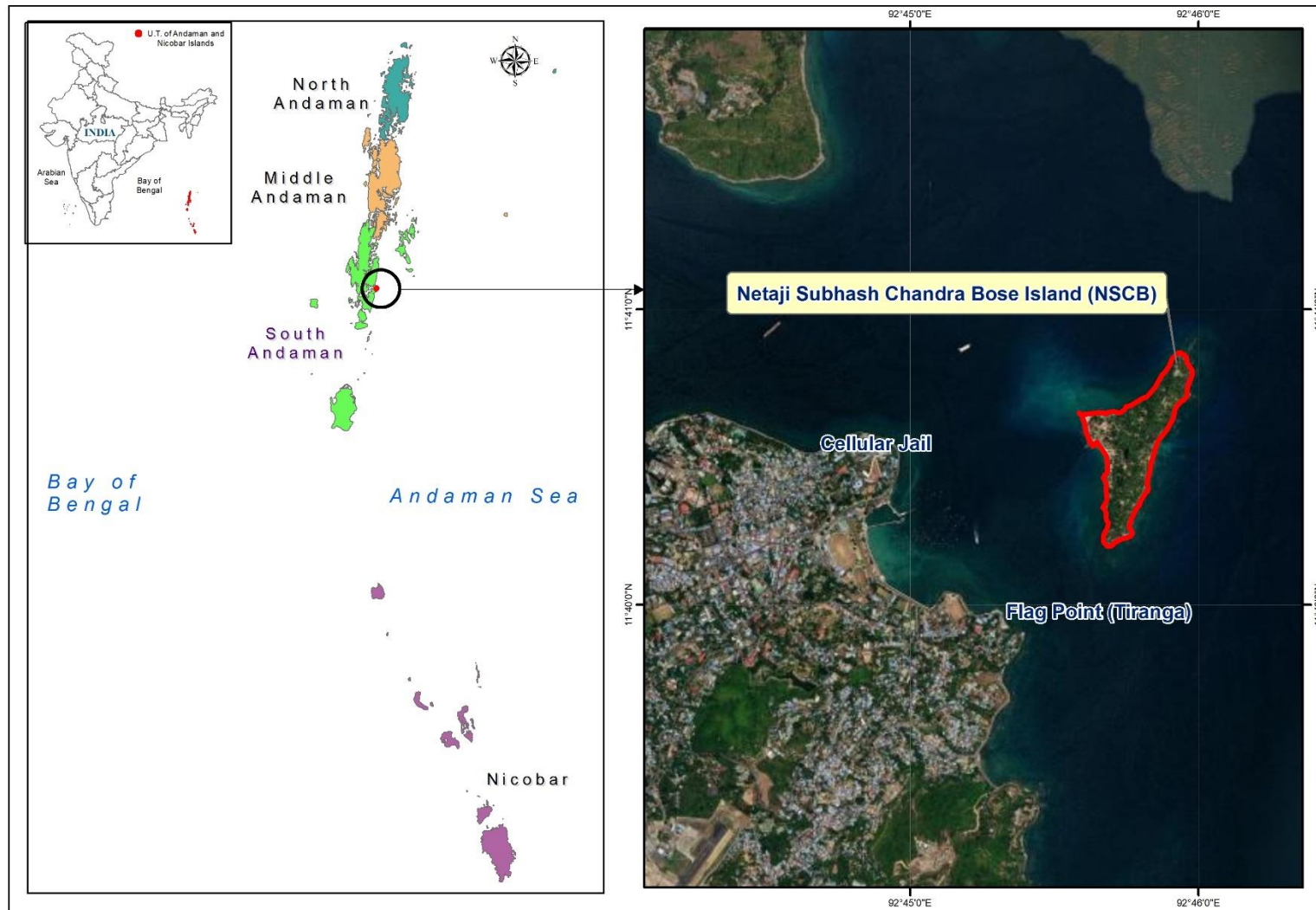


Figure 1. Location map of NSCB Island

- d) The IIMP for NSCB Island has been classified into:
- (i) **Preservation Zone:** The preservation zone includes Corals and Coral Reefs. Total area under the preservation zone is 551566.88 sq. m (0.55 sq km)
 - (ii) **Conservation Zone:** The Conservation zone includes Inter Tidal Zone, No Development Zone (NDZ) (i.e. 20m from HTL), Sandy Beach, Edged Rock and Sheet Rocks. The total area of the conservation zone is 274460.84 sq. m (0.27 sq km)
 - (iii) **Regulated Development Zone:** Includes Buildings/Infrastructures, Church, Coconut tree with vegetation, Helipad, NSCB Island Guest House, Naval Coastal Battery, Netaji Subash Chandra Bose Memorial, Old Baptist Church, Old Structures and Pond. The total area of regulated development zone is 289380.8 sq. m (0.29 sq km)

Table 1. Area statistics of different features of NSCB Island

IIMP Classes	Features	Area in sq.m	Total Area (sq. m)
Preservation Zone	Corals and Coral Reefs	551566.88	551566.88
Conservation Zone	Inter Tidal Zone	830.11	274460.84
	No Development Zone	62466.32	
	Sandy Beach	7640.04	
	Edged Rock	24078.25	
	Sheet Rocks	179446.12	
Regulated Development Zone	Buildings/Infrastructures	5005.37	289380.8
	Church	147.11	
	Coconut tree with vegetation	277856.92	
	Helipad	564.97	
	NSCB Island Guest House	466.99	
	Naval Coastal Battery	650.94	
	Netaji Subash Chandra Bose Memorial	185.82	
	Old Baptist Church	860.69	
	Old Structures	915.20	
	Pond	2726.80	

Different zones such as conservation zone, preservation zone, buffer zone, regulated development zone, etc., would have different regulations as provided in the ICRZ notification, 2019. The IIMP map also includes existing infrastructure and the proposed development plan.

- (1) The Geomorphology map depicts different geomorphological features and ecologically sensitive areas located in the seaward of High Tide Line such as sandy beach, edged rocks, sheet rocks, corals and coral reefs, intertidal zone.

- (2) Coastal land use depicts different land use features located in the landward of High Tide Line such as Church, Coconut tree with vegetation, Helipad, NSCB Island Guest House, Naval Coastal Battery, Netaji Subash Chandra Bose Memorial, Old Baptist Church, Old Structures, Pond
- (3) Regulation of activities in preservation, conservation and regulated developmental zones are given in Table 2.
- (4) The future development plan as received by NCSCM are follows:
 Proposed Way - POD Route, Visitor Path, Proposed Tunnel, Proposed Defence Area, Proposed Jetty and Proposed Concept Plan - Andaman Homes and Hospital, Boarding/De boarding Zone, Bose and INA, Navy on Ross and Tsunami 2004, Entry Zone, FEC and Stay on Island, Freedom Fighters/Presoners on Ross, Halt Point, Interpretation and Introduction Zone, Light and Sound Show, Paris of the East, Path of Freedom Struggle, Story of Water on Ross and Amenities, and Transition from British Ruled to Japanes and Earthquake 1942.

Table 2: Regulation of activities in preservation, conservation and regulated developmental zones

Preservation Zone:					
S.No	Activity	Prohibited	Permitted	Regulated	Remarks
1	Mining of corals (both alive and dead) in the sea	Y	-	-	-
2	Mining of sand on beaches	-		Y	Non-eco sensitive area and subject to environmental safeguard
3	Coral removal for Construction /Widening of Navigation channels	Y	-	-	-
4	Boating for transport	-	-	Y	A&N administration shall provide the stretches for transport and it will be indicated in the IIMP map
5	Boating for tourism and water sports and photography	-	-	Y	A&N administration shall provide the area for “boating for tourism and water sports” and it will be indicated in the IIMP map
6	Boating for fishing			Y	
7	Diving, snorkeling and coral viewing thro glass bottom boats			Y	Limited number of boats with tourists. No Out Board Motor (OBM) operation in tourist boats near coral reef areas

Preservation Zone:					
S.No	Activity	Prohibited	Permitted	Regulated	Remarks
8	Limited impact Scientific research	-	Y	-	Limited diving and collection of very few specimens for taxonomic purposes only
9	Collection of ornamental fishes for Government aquarium	-	-	Y	Only species that is abundant to be collected in small numbers. Rare and endangered species should not be collected
10	Collection of ornamental fishes for commercial purposes	Y	-	-	-
11	Any type of construction including observation towers etc for defence and security purposes	-	-	Y	-
12	Buoys to collect data on met and environmental parameters and marker buoys	-	-	Y	Limited in number and not to be anchored in hard coral areas.
13	Beaching or fishing craft or any other craft in turtle nesting areas	Y	-	-	-
14	Activities that facilitate preservation of corals	-	Y	-	-
15	Disposal of untreated sewage or effluents and Disposal of solid wastes including fly ash, industrial waste, medical waste, non-biodegradable waste, and the like	Y	-	-	-
16	Setting up of new industries and expansion of existing industries	Y	-	-	-
17	Boating with OBM in seagrass beds	Y	-	-	-
18	Cutting of mangrove vegetation	Y	-	-	-
19	Grazing in mangrove areas	Y	-	-	-
22	Fishing in mangrove water	-	-	Y	To regulate mesh size of nets to prevent fishing of juveniles
21	Collection & consumption of turtle eggs, capture of turtles	Y	-	-	-
22	Collection & destruction of seagrass	Y	-	-	-

Preservation Zone:					
S.No	Activity	Prohibited	Permitted	Regulated	Remarks
23	Eco-tourism activities such as mangrove walk, tree huts, nature trails, etc in identified area mention in the IIMP plan			Y	Subject to environment safeguard.
24	Construction of Road in identified area mention in the IIMP plan.			Y	Subject to public utility and strictly following environmental safeguard.

Conservation Zone:					
S.No	Activity	Prohibited	Permitted	Regulated	Remarks
1	Mining of corals (both alive and dead) in the sea	Y	-	-	-
2	Mining of sand on beaches			Y	Non-eco sensitive area and subject to environmental safeguard
3	Setting of industries	Y	-	-	-
4	Setting of food processing industries with waste treatment methods/plants	Y	-	-	To be established in areas identified in IIMPs
5	Boating for transport			Y	A&N administration shall provide the stretches for transport and it will be indicated in the IIMP map
6	Boating for tourism, watersport and photography			Y	A&N administration shall provide the stretches for “boating for tourism and water sports and photography” and it will be indicated in the IIMP map
7	Boating for fishing			Y	
8	Diving, snorkeling and coral viewing thro glass bottom boats	-	-	Y	Limited number of boats with tourists. No Out Board Motor (OBM) operation in tourist boats near coral reef areas

Conservation Zone:					
S.No	Activity	Prohibited	Permitted	Regulated	Remarks
9	Construction /Widening of Navigation channels	-	-	Y	Only in designated areas.
10	Construction of passenger jetties, breakwater for ports and slip ways for boat repair and other facilities that require front	-	-	Y	Subject to no damage to ambient environment and as supported by an EIA study.
11	Traditional use of marine resources including fishing and allied	-	Y	-	-
12	Collection of ornamental fishes for commercial purposes	Y	-	-	-
13	Collection of ornamental fishes for Public aquaria and Scientific research and also other organisms for scientific research	-	-	Y	Limited collection depending on population of target organisms
14	Collection of ornamental fishes for brood stock in commercial culture	-	-	Y	Limited collection permitted and requires permission from concerned department of Andaman Admin for every collection
15	Deployment of Fish aggregating devices in the sea.	-	-	Y	To avoid areas near corals (as it may attract Ornamental fishes also) in the sea.
16	Beach landing of fishing crafts and tourist boats	-	-	Y	To be away from turtle nesting grounds and prohibited during the turtle nesting season
17	Construction of resorts/restaurants/storage facilities and tourism related buildings, on stilts in the sea between coast and outer edge of coral reefs	Y	-	-	-
18	Reclamation of backwater/creeks and sea for any purpose except for laying of seawater pipelines and construction of cold water sumps for desalination and power plants	Y	-	-	Structures and pipelines for desalination plants are recommended only in non-coral reef and mangrove areas.

Conservation Zone:					
S.No	Activity	Prohibited	Permitted	Regulated	Remarks
19	Widening of roads	-	-	Y	-
20	Weather radars	-	-	Y	-
21	Storage of non-hazardous cargo such as edible oil, fertilizers, food near the port	-	-	Y	-
22	Activities that facilitate conservation of natural habitats including vegetation	-	Y	-	-
23	Disposal of treated sewage in coastal water except in coral reef areas	-	-	Y	Treatment of sewage from domestic sources to tertiary level before disposal
24	Eco-tourism activities on beaches including beach shacks.			Y	Subject to beach shack policy.
25	Construction of Road			Y	Subject to public utility and strictly following environmental safeguard.

Regulated Development Zone:					
S.No	Activity	Prohibited	Permitted	Regulated	Remarks
1	Setting of small-scale industries including food processing industries with waste treatment methods/plants, power plants including solar power plants and windmills	-	-	Y	To be established in areas identified in IIMPs. If not specified in IIMPs, in locations as decided by Admin
2	Establishment of hotels, tourist accommodation, resorts and other buildings relating to tourism	-	-	Y	To be established in areas identified in IIMPs and after undertaking carrying capacity studies
3	Construction of dwelling units, Govt buildings (office guest houses etc), public utilities, educational institutions, dispensaries, auditorium), places of religious worships and commercial buildings	-	-	Y	As per building norms prescribed in IIMPs and at locations as identified in the IIMPs. If not specified in IIMPs, in locations as decided by Admin.
4	Agriculture and horticulture	-	Y	-	-

Regulated Development Zone:					
S.No	Activity	Prohibited	Permitted	Regulated	Remarks
5	Construction of passenger jetties, breakwater for ports and slip ways for boat repair and other facilities that require front	-	-	Y	Subject to no damage to ambient environment and as supported by an EIA study.
6	Construction/expansion of air strips and helipads	-	-	Y	Subject to no damage to ambient environment as supported by an EIA study.

Note: Any activities not mention in the list, the same will be cleared based on the IIMP zones it falls as per the ICRZ notification, 2019, EIA notification, 2006 and relevant law need to be followed.

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