

**ASIA / PACIFIC**

# **HA LONG BAY – CAT BA ARCHIPELAGO**

**VIET NAM**



Cat Ba Archipelago © IUCN / Ulrika Aberg



## WORLD HERITAGE NOMINATION – IUCN TECHNICAL EVALUATION

### HA LONG BAY - CAT BA ARCHIPELAGO (VIET NAM) – ID N° 672Ter

**IUCN RECOMMENDATION TO WORLD HERITAGE COMMITTEE:** To defer the nomination under natural criteria (vii), (viii) and (x)

**Key paragraphs of Operational Guidelines:**

Paragraph 77: Nominated property partially does not meet World Heritage criteria.

Paragraph 78: Nominated property does not meet integrity requirements and protection and management requirements.

**Background note:** Ha Long Bay was first evaluated by IUCN in 1993 with a recommendation that “*the boundaries as presented in the nomination need some adjustment to better encompass the features of World Heritage quality*” and “*added to the site should be the islets adjacent to Cat Ba Island which form part of the National Park but are found in the adjacent province of Haiphong*”. Considering the need for boundary modifications, IUCN recommended that “*The Bureau should defer a decision but encourage Vietnamese authorities to consider the above prerequisites for an acceptable nomination*”. However, Ha Long Bay was inscribed in 1994 under criterion (vii) (criterion N(iii) at that time), without adjustment to add the islets of Cat Ba. In 2000, Ha Long Bay was re-nominated and inscribed also under criterion viii (then criterion N(i)). In 2013, Cat Ba Archipelago was nominated as a separate property under criteria (ix) and (x). The IUCN evaluation, concluding not to inscribe the nominated property, recommended “*to consider the possibility of proposing an extension of Ha Long Bay, under criteria (vii) and (viii) and possibly criterion (x), to include Cat Ba Archipelago*”. The State Party withdrew the nomination on 12 June 2014.

In 2018, an IUCN Advisory mission visited Ha Long Bay finding *inter alia* that the World Heritage values of Ha Long Bay are impacted by the visual and physical effects of waste related to current and projected growth in visitor numbers to the property, that could have significant additional impacts.

## 1. DOCUMENTATION

**a) Date nomination received by IUCN:** February 2021

**b) Additional information officially requested from and provided by the States Parties:** Following the session of the IUCN World Heritage Panel, a progress report was sent to the State Party on 17 December 2021. This letter advised on the status of the evaluation process and requested supplementary information across a wide range of issues including on boundaries and the rationale for these; legal protection status; planned developments in and around the nominated property; corrected and updated species data; further information on pollution and water quality; human population data and trends; and clarifications on people and community relocations. The supplementary information was provided by the State Party on 25 February 2022.

**c) Additional literature consulted:** IUCN’s previous evaluations consulted a wide array of relevant reference material for the biology, ecology, protection and management as well as the comparative values of the nominated property. Comprehensive reference lists were compiled within IUCN’s previous evaluations, which are available as referenced above. Further references included: Hendershott, R. et al. (2018). Home range size and habitat use by Cat Ba Langurs (*Trachypithecus poliocephalus*) in a disturbed and fragmented habitat. *International Journal of Primatology*, 39, 4, 547-566; Key Biodiversity Areas

Partnership. (2022). Key Biodiversity Areas factsheet: Cat Ba. Extracted from the World Database of Key Biodiversity Areas; Leonard, N. et al. (2016). Golden-headed or Cat Ba langurs *Trachypithecus poliocephalus poliocephalus* (Trouessart 1911) Vietnam. In: Schwitzer et al. (eds). *Primates in peril: The world’s 25 Most Endangered Primates 2016-2018*; Long, T.H. et al. (2020). Structural characteristics of natural limestone forests in cat ba biosphere reserves, Vietnam. *Annual Research & Review in Biology*, pp.161-172; Mai, T. and C. Smith (2018). Scenario-based planning for tourism development using system dynamic modelling: A case study of Cat Ba Island, Vietnam. *Tourism Management*, 68, 336-354; Milto, K.D. et al. (2013). Two new rhacophorid frogs from Cat Ba Island, Gulf of Tonkin, Vietnam. *Russian Journal of Herpetology*, 20, 4, 287-300; Ngai, N.D. et al. (2015). Biological community in submerged caves and marine lakes in Ha Long-Cat Ba area, Vietnam. *Journal of Life Sciences*, 9, 541-548; Ngo, H.N. et al. (2016). First population assessment of two cryptic Tiger geckos (*Goniurosaurus*) from northern Vietnam: Implications for conservation. – *Amphibian and Reptile Conservation* 10, 1: 34-45; Ngo, H.N. et al. (2019a). First record of the Cat Ba tiger gecko, *Goniurosaurus catbaensis*, from Ha Long Bay, Quang Ninh Province, Vietnam: Microhabitat selection, potential distribution, and evidence of threats. *Amphibian and Reptile Conservation*, 13, 2, 1-13; Ngo, H.N. et al. (2019b). A case study on trade in threatened Tiger Geckos (*Goniurosaurus*) in Vietnam including updated information on the abundance of the Endangered *G. catbaensis*. *Nature Conservation*, 33, 1-19; Nguyen,

T.Q. et al. (2018). The reptile fauna of the Cat Ba Archipelago: An unique biological resource with a high level of local endemism and important conservation significance. In: Proceeding of a scientific workshop on “Values and Solutions to conserve biodiversity in Ha Long Bay and Cat Ba Archipelago”, IUCN Vietnam, Gland, Switzerland: IUCN: 124 pp; Pham, V.V. et al. (2020). The Presence of IUCN Red List Tree Species in Dependence of Site Characteristics in the Vietnamese Cat Ba National Park. *Diversity*, 12, 3, 104; Pham, V.V. et al. (2022). Tree regeneration characteristics in limestone forests of the Cat Ba National Park, Vietnam. *BMC Ecology and Evolution*, 22, 1, pp.1-27; Phan, D.T. et al. (2014). Population status of the Southwest China serow *Capricornis milneedwardsii*: a case study in Cat Ba Archipelago, Vietnam. *Pacific Conservation Biology*, 20, 4, pp.385-391; Phan, T.D. et al. (2016). A systemic approach to understand the conservation status and viability of the critically endangered Cat Ba Langur. *Systems Research and Behavioral Science*, 33, 6, pp.742-752; Phuong, T.H. et al. (2013). Geoheritage values in the Cat Ba islands, Vietnam. *Environmental Earth Sciences*, 70, pp.543-548; Tatarski, M. (2019). On one island, a microcosm of Vietnam’s environmental challenges: Cat Ba Island, off Vietnam’s northeast coast, hosts a vast array of flora and fauna, including one of the rarest primate species in the world. *Mongabay Series: Global Forests*, Mongabay, 22 April, 2019; Tri, D.Q. et al. (2015). Application of environmental sensitivity index (ESI) maps of shorelines to coastal oil spills: a case study of Cat Ba Island, Vietnam. *Environmental Earth Sciences*, 74, 4, pp.3433-3451; Van, Q.N. et al. (2010). Landscapes and ecosystems of tropical limestone: Case study of the Cat Ba Islands, Vietnam. *Journal of Ecology and Environment*, 33, 1, pp.23-36; Vietnam Plus (2020). Rescuing Cat Ba Skybirds - Protecting the World Biosphere Reserve, Part 1, 30 Nov. 2020, Part 2, 1 Dec. 2020, Part 3, 2 Dec. 2020; Vietnam Plus. (2020). Request Hai Phong to check and handle the problem of "extermination" of Cat Ba sky birds, Part 4, 4 December 2020; Williams, P. (2008). *World Heritage Caves and Karst*. Gland, Switzerland: IUCN. 57pp.

**d) Consultations:** 11 desk reviews were received for the 2014 evaluation of “Cat Ba Archipelago” (Viet Nam) and 10 desk reviews for this proposed extension of Ha Long Bay. The mission was able to meet with representatives of the UNESCO Office in Hanoi and the Viet Nam National Commission for UNESCO; leaders of the Ministry of Culture, Sports and Tourism; representatives of the Department of Foreign Affairs; representatives of the Bureau of Cultural Heritage; leaders of the Hai Phong City People’s Committee; leaders of Quang Ninh Province; the Management Board of Cat Ba Archipelago; the Management Board of Ha Long Bay; the Management Board of Cat Ba Archipelago Biosphere Reserve; leaders of Cat Hai District People’s Committee; representatives of the Institute of Marine Environment and Resources; representatives of Cat Ba National Park; NGOs, Viet Hai Commune representatives and civil society associations.

**e) Field Visit:** Ulrika Åberg, 29 October to 5 November 2021

**f) Date of IUCN approval of this report:** April 2022

## 2. SUMMARY OF NATURAL VALUES

The present nomination constitutes both a re-nomination of the already inscribed Ha Long Bay (henceforth referred to as HLB) under all four natural criteria (vii-x), and an extension of the area of HLB to incorporate the adjacent Cat Ba Archipelago (henceforth referred to as CBA) in the property. HLB is currently inscribed under criteria (vii) and (viii) and the nomination dossier argues that the extension to include CBA would add similar and complementary values under criteria (vii) and (viii). The nomination proposes natural criteria (ix) and (x) to apply to both HLB and CBA. Therefore, IUCN evaluates in the present report whether CBA would add value under criteria (vii) and (viii) to the existing property of HLB, and whether HLB and CBA together would meet criteria (ix) and (x).

The proposed extension, comprising HLB and CBA, is located in the Gulf of Tonkin in the north-east of Viet Nam, 165 km east from Hanoi, and is part of the Indochinese rainforest biogeographical province. It covers a total of 65,650 ha of which 43,300 ha constitute the HLB World Heritage property in Quang Ninh Province, a marine area studded with 775 islands. The nominated property, being the CBA extension in Hai Phong City Province, covers 22,250 ha, encompassing a marine area with 358 islands as well as a larger contiguous landmass of approximately 13,000 ha on Cat Ba Island. The highest point within the nominated property is Cao Vong Peak (322 m a.s.l.), located in the north of Cat Ba Island. The lowest point is 39 m below sea level, located in the Lach Van channel east of Cat Ba Island.

The proposed extension is comprised of a multitude of vegetated limestone islands and towering limestone pillars rising from the sea, with associated eroded notches, arches and caves, which present a very picturesque and beautiful landscape (criterion vii). HLB is inscribed as one of the most extensive and best-known examples of marine-invaded tower karst in the world. The proposed extension of HLB to include CBA would comprise examples of all the stages of the process of sea-inundation of tropical karst, from hanging karst depressions with tropical forests, to areas of Fengcong (clusters of conical peaks) and Fenglin (isolated tower features) karst with marine lakes gradually merging into the open sea (criterion viii). Marine lakes are, geologically speaking, short lived special phenomena where depressions become permanently inundated by the sea before either drying up or erosion re-connects them with the sea. Some 138 marine lakes have been mapped in HLB-CBA, which is about one-third of all marine lakes in the world. Many good examples of both enclosed and semi-enclosed marine lakes are located within the nominated CBA extension. While HLB shows the later stages of the sea-inundation process, CBA provides

examples of the earliest stages of the process and of what the karst looked like before inundation started. The presence of a wide (and still not fully understood) diversity of freshwater swamps in valleys on Cat Ba Island further adds to the karst inundation story. The proposed extension includes three main types of caves, ancient marine notch caves, old karstic foot caves and notch caves.

The nomination dossier outlines seven key ecosystem types (criterion ix): tropical rainforest; mangrove forest; caves; marine lakes; tidal flats; soft bottom ecosystems; and coral reefs. It highlights a gradient and transgression of habitats from forest covered limestone hills and karst valleys, down to the submerged karst plains. The CBA extension also encompasses some of the few remaining freshwater swamps within this ecosystem.

The proposed extension, and particularly the CBA, is home to a wide range of marine and terrestrial species, including a large number of plants (criterion x). Among these are some threatened endemic species such as the Cat Ba Langur (*Trachypithecus poliocephalus*, CR) and the Cat Ba Tiger Gecko (*Goniurosaurus Catbaensis*, EN). Other threatened species include the Keeled Box Turtle (*Cuora mouhotii*, EN), the Asian Small-clawed Otter (*Aonyx cinerea*, VU), the Mainland Serow (*Capricornis milneedwardsii*, VU) and the King Cobra (*Ophiophagus hannah*, VU). There are also at least 29 species of land snails, 3 spiders, 1 cave crab and 1 amphibian.

### 3. COMPARISONS WITH OTHER AREAS

The comparative analysis provided in the nomination dossier compares the nominated property with two natural World Heritage properties against criteria (vii) and (viii) and to seven natural properties against criteria (ix) and (x). The basis for selecting comparable sites is very broad, including marine and terrestrial World Heritage properties inscribed under natural criteria, and natural properties that have at least one criterion (vii, viii, ix, or x) in common. Comparison has only been made to inscribed World Heritage properties. IUCN notes that the comparative analysis is largely a repetition of the analysis provided in the 2013 nomination dossier presenting CBA as a standalone site. In its evaluation at that time, IUCN noted inadequacies in this comparative analysis relating to inaccurate species data and the choice of sites compared. IUCN notes that these earlier concerns have again not been addressed in the present nomination dossier. The choice of several properties for comparison does not appear to be convincing as they bear little resemblance to HLB-CBA, or are not compared based on their criteria.

Regarding criteria (vii) and (viii), IUCN also notes that the two World Heritage properties selected for comparison under these criteria were also included in the 2013 analysis, however, at that time they were compared against criteria (ix) and (x). The comparison with the World Heritage property of Phong Nha - Ke Bang (Viet Nam), inscribed under criteria (viii), (ix) and

(x), focuses on species, habitat diversity and threatened species, with no comparison made regarding the geological or geomorphological values. Similarly, the comparison with the World Heritage property of Rock Islands Southern Lagoon (Palau), inscribed under criteria (iii), (v), (vii), (ix) and (x), focuses on species and habitats, but does not touch upon natural beauty. Several desk reviewers also noted that values under criteria (vii) and (viii) are not sufficiently dealt with in the comparative analysis. Nevertheless, based on the description in the nomination dossier, literature, desk reviews and the field evaluation mission, the proposed extension would appear to add value to HLB through the addition of vegetated limestone islands and towering limestone pillars completing the similarly picturesque and spectacular seascape of HLB under criterion (vii). Under criterion (viii), CBA would appear to complete the stages of the process of sea-inundation of tropical karst through examples of the terrestrial and intertidal stages. However, IUCN notes concerns regarding the protection and management of the nominated property and threats to its values under criteria (vii) and (viii) in section 4.

Regarding criteria (ix) and (x), the nominated property is compared to seven World Heritage properties, however, many of these do not seem relevant to the values of the nominated property. The comparison with the Shiretoko World Heritage property (Japan), inscribed under criteria (ix) and (x) is not convincing as biological richness in this property is largely influenced by sea-ice and therefore bears no resemblance to the tropical/sub-tropical environment of HLB-CBA. The World Heritage property of Thungyai-Huai Kha Khaeng Wildlife Sanctuaries (Thailand), inscribed under criteria (vii), (ix) and (x), is also included in the comparative analysis but this property is principally an inland forest ecosystem with a very different ecological context. The Ogasawara Islands World Heritage property (Japan), inscribed under criterion (ix), consists of an isolated volcanic North-Western Pacific island group with little ecological or habitat similarity to HLB-CBA.

Furthermore, IUCN notes that the information on the size and importance of mangrove forest within the nominated property is inaccurately portrayed. Supplementary information provided by the State Party has confirmed that only 10.34 ha of mangrove forest exists within the nominated property, and not up to 650 ha as indicated in the nomination dossier. IUCN notes that several other key habitats presented to illustrate a continuous ecological transgression are degraded by human activities or only exist in small areas (see section 4.5). Moreover, in its 2014 evaluation of the standalone CBA nomination, IUCN argued that claims on the transgression of ecosystems from terrestrial to marine, are not a valid argument and merely demonstrate that there is habitat diversity within the nominated property. All the endemic plant species listed in the 2014 nomination dossier of CBA, except for one, are put forward again in the current nomination; however, the 2014 IUCN evaluation found that only a few species were truly endemic to the Cat Ba – Ha Long landscape. IUCN recalls that the CBA nomination in 2013 did not make a convincing case

under criterion (ix) as much of the species data was inaccurate with no case for CBA being made as a centre of endemism or evolutionary processes in insular systems. IUCN notes that the species data in the current nomination dossier remain inaccurate and do not provide evidence for outstanding endemism or evolutionary processes. The nominated extension of HLB to include CBA has not strengthened above arguments. In summary, there does not appear to be a case for criterion (ix).

IUCN concluded in its 2014 evaluation that HLB and CBA together might have potential to meet criterion (x), but requiring further study. Comparative analysis undertaken in 2014 by UNEP's World Conservation Monitoring Centre (UNEP-WCMC) in conjunction with IUCN noted that CBA appears to have a higher overall biodiversity compared to the adjacent HLB, especially in regards to terrestrial species. However, monitoring data, including abundance and distribution, was not provided in the 2013 nomination dossier for most species. The populations of Cat Ba Tiger Gecko and Mainland Serow are considered to be probably too small to be viable and the current Cat Ba Langur population is small, estimated to count about 65-70 individuals. Several marine species were also indicated as being on the brink of local extinction, including bivalves and crustaceans. Based on desk reviews of the current nomination and peer-reviewed journal articles, IUCN finds that up to 25% of the mammals listed in the nomination dossier (excluding bats) are not considered to exist within the nominated property, including Chinese Pangolin (*Manis pentadactyla*), Asian Golden Cat (*Catopuma temminckii*), Masked Palm Civet (*Paguma larvata*), Large Indian Civet (*Viverra zibetha*) and Eurasian Otter (*Lutra lutra*). Among marine species, it is highly unlikely that Leatherback Turtles (*Dermochelys coriacea*) are present.

In conclusion, IUCN considers that CBA would have potential as an extension of HLB under criteria (vii) and (viii). IUCN further considers that the nominated property appears to also have potential under criterion (x); however, the case for criterion (x) would need to be demonstrated based on accurate species data for both CBA and HLB.

## 4. INTEGRITY, PROTECTION AND MANAGEMENT

### 4.1. Protection

The entire area of the nominated property is state-owned. Some agricultural areas exist within the nominated area on Cat Ba Island, for example in Viet Hai commune, but the state, via Hai Phong province, exercises control over these areas. The CBA extension encompasses most of Cat Ba National Park (IUCN Category II), which is a legally protected area. However, the field evaluation mission and supplementary information, including maps provided by the State Party, confirm that the nominated area also includes areas outside the National Park boundaries, on Cat Ba Island as well as the Long Chao island group.

Both HLB and CBA are designated as "National Special Scenic Sites" and the terrestrial areas of the two sites are classified as "Special-use forest". The HLB Management Board is currently in the process of developing a Marine Protected Area (MPA) for the site. HLB-CBA is also protected by a number of laws and decrees including the Cultural Heritage Law, Law on Forestry, Law on Biodiversity, Fisheries Law, Law on Environmental Protection and Tourism Law. Activities that could have significant impact on the Sites must have official approval from the Ministry of Culture, Sports and Tourism, along with other relevant ministries. In supplementary information, the State Party noted that the buffer zone is subject to the Law on Cultural Heritage and that development projects must be approved by the Ministry of Culture, Sports and Tourism. IUCN notes however that large scale tourism resorts and other development projects have been constructed in the buffer zone of HLB and new tourism developments are planned in or directly adjacent to the buffer zones of both HLB and CBA.

The fisheries law in HLB was strengthened in 2018, limiting boat sizes and banning damaging fishing methods as well as aquaculture in marine lakes. Despite some issues, overall there seems to be sufficient national legal protection in place, at least for parts of the proposed extension, such as the area protected by the Cat Ba National Park and the islands in HLB. However, the field evaluation mission, supported by research and publications referenced in section 1 c) above, found law enforcement, especially for poaching and illegal resource extraction, to be ineffective.

Maps provided in supplementary information also indicate that there are gaps in the protection of CBA (see also section 4.2). The protection status of the Long Chao Island group is not clear apart from the fact that it is controlled by the military. Therefore, IUCN considers that it is not clearly demonstrated that the protection status of the nominated extension outside the Cat Ba National Park can assure the protection of the nominated property from social, economic and other pressures or changes that might negatively impact natural values. Specific regulations and enforcement need to be strengthened, especially for tourism, development, poaching, conservation of rare and threatened species, aquaculture, fisheries, forest protection (see section 4.5).

In order to ensure the future integrity of the nominated property, IUCN considers that Cat Ba National Park would need to be expanded to ensure important values in nominated areas outside the national park are adequately protected.

IUCN considers that the protection status of the nominated property does not meet the requirements of the Operational Guidelines.



## 4.2 Boundaries

For HLB, the boundaries would remain the same except along its western border where the core area is extended to the west covering Cat Ba Island and its archipelago and Lan Ha Bay, as well as Long Chau to the south. Some minor changes have also been introduced to its boundary south of Dau Be island group.

Concerning the CBA extension, the boundaries would encompass about half of Cat Ba Island and most of Cat Ba National Park. Cat Ba National Park includes three zones: a strictly protected zone, an administrative zone and a restoration zone. However, some areas of importance to protect rare, endemic and threatened species are not located within the strictly protected zone. HLB has recently dedicated five areas as strictly protected, where fishing and tourism activities are prohibited, but no other zonation scheme appears to be in place in HLB.

Furthermore, supplementary information confirms that the boundaries of the nominated property and the national park do not align (see section 4.1), nor do they align with the boundaries of the UNESCO Biosphere Reserve. The proposed boundary crossing Cat Ba Island does also not align with any existing protected area boundary and does not seem to follow any natural boundary. The boundary is in parts located within the National Park and in parts outside, the latter argued in the supplementary information to encompass values of on-going limestone processes and significant ecosystems, as well as the distribution areas of the Cat Ba Langur, located outside the National Park boundaries. As noted in section 4.1, this indicates in the view of IUCN the need to expand the area of the national park to include these important areas to ensure their strict protection.

The buffer zone, especially on Cat Ba Island, does not appear to serve as effective layer of protection for the nominated property from development or other use (see section 4.5). IUCN considers that some areas, including mangrove forests in Phu Long should be added to the buffer zone as an added layer of protection, especially to facilitate better protection for threatened bird species. The legal protection status of the buffer zone would also need to be strengthened in accordance with the *Operational Guidelines*.

In order to meet integrity requirements, the boundaries of the nominated property would need to align with an enlarged national park to ensure the boundaries comprise all attributes subjecting them to an effective protection of the nominated area from the direct effects of human encroachments and impacts of resource use outside of the nominated area (see section 4.5), as well as to support workable on-the-ground management through easy to identify boundaries.

IUCN considers that the boundaries of the nominated property and buffer zones do not meet the requirements of the *Operational Guidelines*.

## 4.3 Management

The Ministry of Culture, Sports and Tourism is directly responsible for conservation of the nominated property. However, since the National Park included within the nominated property (Cat Ba National Park) is located in only one province it is managed at that level of authority and not at national level. At the provincial level, HLB is under the administration of the Quang Ninh Province People's Committee and CBA under the Hai Phong City People's Committee. Locally, HLB is managed by the HLB Management Board and CBA by the CBA Natural Heritage Management Board. Within CBA, the Cat Ba National Park, Cat Ba Bay and the Cat Ba Biosphere Reserve are managed by the respective Management Boards. Evidence of some cooperation between the management of the two areas was established by the field evaluation mission.

A management plan for HLB-CBA covering the period 2021-2025 was included in the nomination dossier. It describes the characteristics and values of the nominated property and includes a list of legal documents, guidelines, decisions, decrees and resolutions at central and provincial level that apply to the nominated property. It also outlines the provisions of some major laws, such as the Cultural Heritage Law, Law on Forestry, Law on Biodiversity, Fisheries Law, Law on Environmental Protection and Tourism Law, as well as roles and responsibilities. Most pressures are well described with a good overview of the situation, however, measures to address these do not appear to be sufficient to address threats from poaching and tourism.

In contrast to the nomination dossier, which emphasises the terrestrial values of the nominated property, the management plan is very much focused on marine areas. The Management Plan does not demonstrate any clear institutional arrangements for biodiversity conservation or commitment to conserve or monitor terrestrial species other than the Cat Ba Langur. The action plan for 2021-2025 is based on tourism and the marine part of the nominated property (managing tour boats, fishery, aquaculture and marine habitats), with no actions specified for terrestrial protection or management. Tasks listed are dominated by the promotion of tourism for HLB and renovating and embellishing infrastructure in CBA. The nominated property does not have a separate tourism management plan.

Funding from the provincial governments and staffing seems to be sufficient for both HLB and CBA, but there is a need for more technical equipment that can be applied in the protection of the sites and training in how to use these, as well as capacity building and increased authorities to enforce the law. Main funding sources for the nominated property are central and local state budgets, revenues from ticket sales and service provision, as well as some sources from inhabitants. Monitoring, protection and conservation of the Cat Ba Langur is largely dependent on international funds.

In conclusion, IUCN considers that the inter-provincial management of the nominated property could be strengthened by a joint Management Board for the whole HLB-CBA nominated property. More collaboration around strategic conservation and protection measures, species monitoring and actions to combat major threats are also needed to enhance management, in addition to a joint sustainable tourism management plan based on ecological carrying capacity analysis for the entire nominated property.

IUCN considers the management of the nominated property does not meet the requirements of the Operational Guidelines.

#### 4.4 Community

The IUCN field evaluation mission was informed that there is currently a large relocation scheme being implemented in CBA to move aquaculture and floating villages out of the core zone of Cat Ba National Park. In 2021, there were 1,298 people living in 516 floating houses, subsisting on aquaculture. In total, information provided by the State Party indicates 80% of the population will be relocated, leaving 260 family members to continue aquaculture in designated areas. In addition to the relocation of floating villages, the Management Plan provided as part of the nomination also mentions some people being relocated from the core area of the Cat Ba National Park. The field evaluation mission met with some selected people from Viet Hai commune but did not meet resident populations within the floating villages.

In HLB, all of the previously existing floating villages (about 2,000 people) within the property have already been removed and IUCN understands residents were resettled on the mainland. A small number (c.10%) have been employed within the tourism industry to row small tourist boats and showcase traditional culture. According to the nomination dossier, the reason for the resettlement was to minimise the impact on the environment.

The field evaluation mission, confirmed by peer-reviewed literature referenced above in section 1 b), understood that local people seemingly benefit very little from tourism including from large-scale tourism developments constructed or from the cruises in the bay. However, IUCN also notes some convincing examples of benefit sharing, such as the community-based farm stay in Viet Hai village in the nominated property.

The supplementary information provided by the State Party of Viet Nam notes that 422 out of 440 owners have signed a commitment to removing their premises. It outlines the financial compensation scheme and confirms that resettlement assistance has been granted to 127 people as of 31 December 2021. According to the supplementary information, the reasons for the relocation of people are to: 1) protect the environment from sediment- and organic pollution, 2) not hinder transportation in and out of harbours, and 3) reduce the “untidy and disordered scenery in the

eyes of visitors, for them to not have a bad impression on CBA”.

While IUCN has not received any direct representations or objections from local communities, IUCN notes with concern that the information obtained in the course of the evaluation process, including the information provided by the State Party, does not demonstrate that local communities have been appropriately consulted and given their free, prior and informed consent to the relocation and its conditions.

#### 4.5 Threats

Both HLB and CBA are subject to several current threats, which are likely to be exacerbated in future. The impact of mass tourism has been a recurring topic in the State of Conservation reports of HLB since 1995, which was reconfirmed by the 2018 Advisory mission. Similar concerns exist for the integrity of CBA which has already been affected by human activities significantly impacting forests, limestone cliffs, caves, marine lakes, tidal flats and corals, shrinking these ecosystem types to small areas. Past logging, landscape fragmentation and poaching on Cat Ba Island have impacted species abundance and distribution in the forest. Caves have been impacted by tourism activities with some caves receiving up to 10,000 visitors per day. Aquaculture and impoundment has affected marine lakes. Several unique and important karst habitats in the area have reportedly already been converted into tourist resorts. The majority of tidal flats within the nominated property are smaller than 0.5 ha in size. The field mission also noted concerns regarding the state of corals, views supported by peer-reviewed literature.

Overexploitation of marine resources, poaching for food, medicinal and commercial purposes impacts many species, such as macaques, porcupines, civets, squirrels, turtles, snakes, frogs and birds. Hunting has brought the Mainland Serow to the brink of local extinction, with only some 20-25 individuals remaining on Cat Ba Island and has caused a dramatic 97% population decline of the Cat Ba Langur since the 1960s, although conservation efforts have halted langur poaching in recent years. Other terrestrial resources exploited include timber, fuel wood, honey, bamboo shoots, edible roots, ornamental and medicinal plants, while some rare species of the limestone forest, such as the Cat Ba Gecko and Keeled Box Turtle, are subject to overexploitation to supply international pet trade.

Waste and pollution from tourism and industry is negatively impacting the nominated property. Some measures are being taken by the State Party through the introduction of new wastewater management systems, treatment of wastewater from tourist boats, solid waste collection and water quality monitoring. However, no improvements in water quality have so far been detected, possibly due to continued discharge from industry and fishing boats, tankers and cargo ships passing through the nominated property, as well as the discharge of several large rivers into the bay



area. Accumulation of pollutants in sediments and organisms is relatively high. In addition, marine values are also affected by turbidity and anchoring of boats, habitat destruction, and release of non-native and invasive species.

Therefore, IUCN considers that the integrity of HLB and CBA is currently under serious threat. In addition, IUCN notes with concern that the prospect of further large-scale tourism development will likely compromise the integrity of the proposed extension further. Before the COVID-19 pandemic, CBA has already received 2.5-2.7 million visitors per year. Hai Phong City People's Committee expects to increase the number of visitors to 3.7 million by 2025, with a long-term vision of 10.4 million visitors by 2050. HLB received 4.4 million tourists in 2019, and after the pandemic, this number is projected to grow as well. Over 1,000 tour boats are already operating within the nominated property. Especially tour boats organising parties, including by night, are evidently causing noise pollution and disturbance of night habitats for the Cat Ba Langur, which sleep on the cliffs by the sea. However, three new sightseeing routes are being planned in HLB, to areas within the Bay that are not yet highly exploited by tourism. Nevertheless, in its supplementary information, the State Party has confirmed that Haiphong City authorities shall coordinate with the counterpart of Quang Ninh province in undertaking a common carrying capacity study for both HLB and CBA.

The supplementary information provided by the State Party confirms that large-scale projects are in the planning stage, including a golf course and the Amatina project on Cat Ba Island as well as the Domino project in the buffer zone of HLB. While the Amatina project is awaiting approval of the Environmental Impact Assessment (EIA) from the Ministry of Natural Resources and Environment, the Domino project and the golf course are yet to submit EIAs. These types of developments are likely to cause further fragmentation and demands for natural resources ranging from freshwater to seafood and forest specialties, including wine preserved with reptiles, putting pressure on protection and conservation of wildlife and rare marine species, as noted in the nomination dossier.

Further large-scale projects that could impact the potential OUV of the nominated property include the new 18 km long International Seaport "Lach Huyen" that is being constructed by Hai Phong City to the west of Cat Ba Island.

IUCN concludes that the significant growth plans for large-scale tourism and industrial developments pose serious threats to the integrity of the terrestrial and marine parts of the nominated property, precluding the possibility of inscription. IUCN considers that the impacts of these threats would need to be reduced at very least to the maximum ecological carrying capacity of the nominated property. Regarding any relocations, local communities need to be appropriately informed and consulted, and given their free, prior and informed consent to the relocation and its conditions.

In summary, IUCN considers that the integrity requirements and protection and management requirements of the nominated property do not meet the *Operational Guidelines*.

## 5. ADDITIONAL COMMENTS

## 6. APPLICATION OF CRITERIA

The **Ha Long Bay - Cat Ba Archipelago (Viet Nam)** has been nominated as an extension to the existing World Heritage property of Ha Long Bay and as a renomination under all four natural criteria.

### **Criterion (vii): Superlative natural phenomena or natural beauty or aesthetic importance**

HLB fulfils criterion (vii) as confirmed through the inscription in 1994. The nominated extension to include CBA also contains areas of natural beauty including vegetated limestone islands and towering limestone pillars rising from the sea, with associated karst features such as arches and caves. Unspoiled and spectacular views of the vegetated islands, marine lakes and limestone towers, with sheer cliffs plunging into the sea, along the eastern and south-eastern coast of the Cat Ba Island would add value to the existing property (HLB) under this criterion.

However, IUCN notes that the values of HLB have been impacted by mass tourism, waste and marine transport, as well as large-scale developments in the buffer zone since its inscription. These threats from large-scale growth of tourism developments and infrastructure are similarly relevant for the extension to CBA and currently not addressed. Therefore, IUCN considers that the nominated extension would have the potential to meet this criterion if the threats to the nominated area of CBA are significantly reduced to ensure the long-term integrity of the aesthetic values of the nominated area.

IUCN considers that the nominated property has the potential to meet this criterion.

### **Criterion (viii): Earth's history and geological features**

HLB also fulfils criterion (viii) as confirmed through a re-nomination under this criterion, accepted by the Committee in 2000. HLB showcases one of the most extensive and best-known examples of marine-invaded tower karst in the world and one of the most important areas of Fengcong (clusters of conical peaks) and Fenglin (isolated tower features) karst. Through an extension to include CBA, HLB and CBA together would comprise all the stages of the process of sea-inundation of tropical karst as well as three main types of caves (ancient marine notch caves, old karstic foot caves and notch caves). While HLB shows the later stages of the sea-inundation process, CBA would add important geological values to the property

through examples of the terrestrial and intertidal stages, some of which are rare or even unique. With the extension of HLB to include CBA, the area would be increased by slightly more than 50%, and include about one-third of the world's marine lakes. Therefore, the extension to include CBA would strengthen the values and integrity under criterion (viii) and complete the story of drowned karst systems within one extended property.

However, IUCN notes the impacts from mass tourism on caves and the planned increase of tourism that will likely exacerbate pressures on the values of CBA. Therefore, IUCN considers that the threats to the nominated area of CBA need to be addressed in order for this criterion to be met.

IUCN considers that the nominated property has the potential to meet this criterion.

### **Criterion (ix): Ecosystems/communities and ecological/biological processes**

HLB and CBA are nominated under criterion (ix). The nomination dossier contends that the nominated property would meet this criterion due to the high representation of the world's total number of marine lakes within the nominated area, these habitats could be of value for on-going speciation. However, as no endemic species have so far been recorded in the marine lakes within the nominated property, there is currently no evidence demonstrating that such biological processes are taking place. Besides marine lakes, the nomination also proposes six further habitat or ecosystem types under criterion (ix) as prime examples of tropical and subtropical insular limestone ecosystems: primary forest; caves; mangrove forest; tidal flats; soft sea bottom and corals.

However, IUCN notes that many of these attributes critical to express OUV under criterion (ix), have been heavily impacted or modified by human activities and some are only present in very small areas. For instance, a number of marine lakes have been affected by past aquaculture and damming. Logging and land conversion has restrained primary forest to a small area of about 1,045 ha in the centre of CBA. Mangrove forest within the nominated property covers only some 10 ha, as indicated in supplementary information by the State Party. The largest areas of tidal flats are located outside the buffer zone on the west coast of Cat Ba Island, and are subject to modifications or planned to be converted for tourism, while corals have been impacted by pollution, siltation, boat traffic, anchoring, shellfish collection and fishing, including dynamite fishing in the past. Considering that the remaining areas of undisturbed or semi-natural habitats of most of the key ecosystems, and their size, within the nominated property are very small, IUCN considers that criterion (ix) is not met for the nominated property.

IUCN considers that the nominated property does not meet this criterion.

### **Criterion (x): Biodiversity and threatened species**

HLB and CBA are also nominated under criterion (x). The nomination contends that the nominated property would meet this criterion as the property is home to a large number of plant and animal species, and in 2012 the western side of Cat Ba Island together with Lan Ha Bay was identified as a Key Biodiversity Area. The nominated property also hosts endemic flora and fauna such as the *Livistona halongensis* palm and Cat Ba Tiger Gecko as well as threatened species such as the Keeled Box Turtle, the Asian Small-clawed Otter, the Mainland Serow and the King Cobra. Furthermore, the nominated property is suitable for the Rhesus Macaque, Leopard Cat, Oriental Pied Hornbill, Asian Water Monitor, Indian Cobra, *Livistona Saribus* palm, bats and some records of sea turtles. The Cat Ba Langur is a Critically Endangered endemic primate and the flagship species of the nominated property. Conservation efforts have largely dealt with the threat from langur poaching.

However, the small population of only 65-70 individuals of Cat Ba Langurs continues to be affected by disturbance from tourism, restrictions on gene flow due to few individuals and fragmentation of sub-populations in increasingly isolated and marginalised habitats, among other pressures. As noted in IUCN's 2014 evaluation of the standalone CBA nomination, IUCN does not consider that the presence of this species alone is sufficient to justify criterion (x). The state, abundance and distribution of the other species within the nominated property remain largely unclear. The species lists in the nomination dossier appear to be conflicting with more recent information. As the data does not appear to provide an accurate representation of species present, IUCN considers that the basis for criterion (x) is currently not demonstrated. Furthermore, a revised nomination should also consider any biodiversity values found within HLB as these have not been considered. Finally, poaching and other human activities, especially tourism and development, threaten many species of mammals, reptiles, amphibians and birds, as well as flora extracted for ornamental and medicinal plants. These threats need to be addressed before this criterion could be met.

IUCN considers that the nominated property has the potential to meet this criterion.

## **7. RECOMMENDATIONS**

IUCN recommends that the World Heritage Committee adopts the following draft decision:

The World Heritage Committee,

1. Having examined Documents WHC/22/45.COM/8B and WHC/22/45.COM/INF.8B2;

2. **Recalling** decisions **18 COM XI**, **24 COM XA.2**, and **44 COM 7B.98** taken at its 18th (Phuket, 1994), 24th

(Cairns, 2000) and 44th (Fuzhou, 2021) sessions respectively,

3. Defers the nomination of **Ha Long Bay – Cat Ba Archipelago (Viet Nam)**, in order to allow the State Party to prepare a new nomination focused on criteria (vii), (viii) and (x), and taking account of the need to:

- a) revise the boundaries of Cat Ba National Park to align with the proposed boundaries of the Cat Ba Archipelago extension to the Ha Long Bay World Heritage property, and include the Phu Long mangrove forest within the buffer zone of the nominated property,
- b) cancel large-scale development projects located in the buffer zone of the nominated property and adjacent to the buffer zone, such as a new golf course and the Cat Ba Amatina and Domino projects, and strengthen the legal protection status of the buffer zone,
- c) complete an ecological carrying capacity analysis for the entire nominated property as a basis for revised tourism planning through a comprehensive joint tourism management plan

for the nominated property, ensuring that tourism does not negatively impact the potential Outstanding Universal Value of the nominated property,

- d) address key threats to the nominated property and strengthen law enforcement accordingly, including threats from mass tourism, a major shipping lane, growth of settlements, poaching, exploitation of marine resources and forest products, overfishing, unsustainable aquaculture, pollution (oil, noise, sewage, litter, including from river catchment inputs), and significant developments in the buffer zone,
- e) ensure a new nomination dossier includes accurate, up-to-date and verifiable data on species and habitats both in Ha Long Bay and Cat Ba Archipelago, distinguishing between the biodiversity values found within the nominated property and within the buffer zone,
- f) demonstrate that local communities have been appropriately consulted and given their free, prior and informed consent to any relocations from the nominated property and its conditions.

Map 1: Location of the nominated property



