Ha Long Bay, in the Gulf of Tonkin, includes some 1,600 islands and islets, forming a spectacular seascape of limestone pillars. Because of their precipitous nature, most of the islands are uninhabited and unaffected by a human presence. The site’s outstanding scenic beauty is complemented by its great biological interest. © UNESCO

SUMMARY

The World Heritage values relate to the property’s extraordinary karst features and exceptional scenic beauty (criterion (vii)) as well as its extensive representation of karst formation processes (criterion (viii)). These values remain largely intact due to their very nature and property’s natural defenses. High levels of tourism and continued growth in visitor numbers represent the most significant threat to Ha Long Bay unless it is carefully planned and managed for in a way that is integrated with Provincial and Local development. Water quality and waste management issues should receive an appropriate level of attention. Improvements to management and a willingness to address issues raised by the Committee in decisions and recommendations are noted. Management capacity has recently improved to keep better pace with the rapid growth in tourism numbers.
FULL ASSESSMENT

Description of values

Values

World Heritage values

► A spectacular seascape of limestone pillars

Outstanding features of the property include the magnificent towering limestone pillars and associated notches, arches and caves, which are exceptionally well-developed and among the best presented of their type in the world (IUCN, 1994; World Heritage Committee, 2012). These features and the limestone islands and islets rising from the sea in a variety of sizes and shapes form a majestic natural scenery and presenting picturesque, unspoiled nature.

► Exceptional scenic beauty

Repeated regression and transgression of the sea on the limestone karst over geological time has produced a mature landscape of clusters of conical peaks and isolated towers which were modified by sea invasion, adding an extra element to the process of lateral undercutting of the limestone towers and islands (IUCN, 1994; World Heritage Committee, 2012).

► The most extensive and best known example of marine-invaded tower karst in the world

One of the world’s most important areas of Fengcong (clusters of conical peaks) and Fenglin (isolated tower features) karst. Abundant lakes, occupying drowned dolines, are one of the distinctive features of the Fengcong karst, with some appearing to be tidal. Possessing a tremendous diversity of caves and other landforms derived from the unusual geomorphological process of marine invaded tower karst the caves are of three main types: remnants of phreatic caves; old karstic foot caves and marine notch caves (World Heritage Committee, 2012).

► Full range of karst formation processes

The property possesses the most complete and extensive example of its type in the world and provides a unique and extensive reservoir of data for the future understanding of geoclimatic history and the nature of karst processes in a complex environment (World Heritage Committee, 2012).

Other important biodiversity values

► Diverse flora

Ha Long Bay harbours a diverse flora, and primary tropical forests are found, although mostly on larger islands outside the boundaries of the property (IUCN, 1994).

► Fish

Approximately 1000 fish species are found in Ha Long Bay (IUCN, 1994).

Assessment information

Threats
The values of the property are in relatively good condition at present. The current threats, while considered significant, are also considered manageable with appropriate actions. The key impacts are on the overall management of the site and the aesthetic values of the property rather than the specific geological values for which it was inscribed. Tourism use and the subsequent need for infrastructure and developments in support of tourism has considerably increased and current planning and management responses need to be re-evaluated regularly to cope with this increase given the projections of continued increases in the number of tourists. Residential occupation of the property is relatively concentrated and has decreased through planned re-settlement. The relevant authorities are making a genuine effort through better planning, regulation, education, promotion and direct management intervention to improve the aquaculture and fishing activities and reduce their impact on marine species and biodiversity in the property. It is important to maintain a focus on water quality both within and outside the property. Waste management systems need to be put in place and their use monitored. Mining and natural resource extraction as well as development for tourism continue in areas adjacent to the property and are significantly impacting on a number of the values and require continuous monitoring.

### Housing/ Urban Areas

*Human population within the property*

Inside site, localised (<5%)

The impacts from the number of people living inside the boundaries of the World Heritage Property, primarily in boats, has been noted as a possible threat to the values of the property (World Heritage Committee, 2003, 2009). The 2013 IUCN reactive monitoring mission to Ha Long Bay found that the number of residents was decreasing as a result of planned re-settlement of houseboat owners to the mainland. These results were confirmed by the 2018 IUCN Advisory Mission (IUCN, 2018). Other improvements include limiting the number and improving the standard of houseboats, and improving waste management (IUCN, 2013).

### Water Pollution

*Water pollution from industry, shipping and ports*

Inside site, widespread (15-50%)

Potential sources of water pollution previously noted by Committee decisions include industrial developments outside the property e.g. the Coc Sau coal mine, the Cam Pha cement factor and the Cai Lan port. The 2013 mission considered that all three developments appeared to be running according to high environmental standards and monitored levels of water pollution are well below the limits required by national environmental standards but that on-going monitoring is required to ensure water quality within the property is not affected by these developments. However, the 2018 mission expressed considerable concerns for the release of wastewater from mines directly into the river (IUCN, 2018). If the latter mission findings are true, the State Party's reported plans to not close coal mines until 2030 raises great concerns (State Party of Viet Nam, 2019).

Pollution from other sources have also been identified, including boats discharging oil and black and grey water. Land based sources and boats have also been identified as sources of solid waste, plastics, and other forms of pollution. While they may not have a physical impact on the limestone karst, these pollutants contribute to a reduction in environmental values of the site and visitor experience and is contrary to “exceptional scenic beauty” values (IUCN, 2015).

### Fishing / Harvesting Aquatic Resources

*Unsustainable fishing methods and aquaculture development*

Inside site, scattered (5-15%)

Aquaculture developments surrounding the property, and inside certain areas of the property, affect the water quality. The provincial master plan for aquaculture provides for delimitation of legal and non-legal fishing zones, seasonal bans on fishing, and improvements in fishing methods such as reduction in the unsustainable use of cages and gill nets (IUCN, 2013). Dynamite fishing and other destructive fishing methods are banned and can be prosecuted under the 2010 Aquaculture Master Plan. Purse seining is restricted within the property to an area of 10 ha only. Since 2011 the property has been subdivided
into three zones to regulate different levels of fishing activity (IUCN, 2013). Aquaculture is no longer allowed within the property, apart from Cua Van and Vung Vieng, which have been retained for tourism and education purposes (IUCN, 2018). However, with increasing human population pressures, aquaculture in areas adjacent to the property is also likely to become a more significant threat and enforcement of the master plan is important to limit any impacts.

**Commercial/ Industrial Areas**

(Commercial development and landfill activities)

Commercial development projects and landfill activities in the areas surrounding the property have previously raised serious concern in regards to threats to the values of the property (World Heritage Committee, 2009). The development outside the site visually encroaches on the spectacular seascape of exceptional scenic beauty. Significant development continues to occur within the buffer zone and while it is understood these developments are subject to Environmental Impact Assessments the scale of development was viewed as inappropriate by the 2018 IUCN Advisory Mission, which notes that it severely impacts the landscape, visual amenity and access. Continued development in the area requires monitoring of impacts on the property, regulation of use and regulation of threats.

**Tourism/ visitors/ recreation**

(Tourism infrastructure development)

Tourism numbers are consistently high at the site with total annual visitor numbers reaching almost 4 million up in 2017 with an increase mainly from the international market and the majority being day visitors (IUCN, 2018). Development of tourism facilities within the boundaries of the property has previously been noted to be causing pressure on the property and increasing tension between communities and park management (Ishwaran, 2003; World Heritage Committee, 2007-2013). Tourism is regulated under strong national legislation and a host of national and provincial regulations, and guided by a tourism management plan for the property. The 2013 IUCN Reactive Monitoring mission and the 2018 IUCN Advisory Mission found that the development and implementation of the tourism management plan has led to improvements in enforcement of regulations, visitor services, tour boat operations, safety and security and waste management but there are still major concerns about impacts from the level of tourism and resulting infrastructure. Enforcement of regulations is essential to avoid renewed/increasing impacts (see also "potential threats" below). The National Tourism Strategy is focussed on growth and increasing tourism and has been supported by recent announcements of significant government financial investments in infrastructure to support such increases (Das, 2019).

Separate to the level of tourism related developments outside the property and infrastructure to support tourism there are also specific threats to the site from the increasing levels of tourism within the property. Diversification of activities and opening of new areas for tourists are beginning to reduce the pressure from overcrowding of the most popular sites. In 2017 almost 4 million international and domestic tourists visited the site with 77% of these being day visitors (IUCN, 2018). This number increased to over 4.1 million in 2018 (Mackay, 2020). The increases, in the order of 20% per annum, creates incremental pressure on available tourist facilities as well as on the environment (Mackay, 2020). The National Tourism Strategy is focussed on growth and increasing tourism and is based on predictions of 10-10.5 million international arrivals and 47-48 million domestic tourists (Government of the Socialist Republic of Vietnam, 2011). The tourism industry in Viet Nam continues to rank amongst the fastest-growing in the world (Das, 2019). The growing number of visitors and the impacts from boats, waste and activities on the values of the property are of concern. The State Party reports that it has recently increased efforts to address issues related to solid waste including efforts to reduce single use plastic and other sources of solid waste (State Party of Viet Nam, 2019).
Potential Threats

The most significant potential future threat relates to the continued rapid increase in the number of tourists visiting the property. At present the related infrastructure is adequate, all be it overcrowded and with concentration of visitation, but there is a need to monitor these as the numbers of visitors continues to increase. Tourism is projected to grow significantly in coming years with a proposed airport, highway improvements, better access and wharf access for large foreign vessels and significant residential and holiday accommodation. Equally careful management of the surrounding areas is needed to maintain an appropriate setting for the core areas of the property. Climate change impacts on the ecological and geological values of the site are not fully understood and need further monitoring and research.

- **Habitat Shifting/ Alteration, Ocean acidification**
  
  (Climate Change - Chemical changes to oceanic waters and shifts in habitats)
  
  While current impacts from climate change on the site are unclear, in the long term climate change may cause the following impacts: (i) change in rainfall / weather patterns may impact on the vegetation on the karst islands; (ii) change in weather may alter the coastal wave action patterns leading to changes in erosion of the islands and islets, (iii) ocean acidification may change chemical processes around erosion and deposition, (iv) changes to habitats for the diverse flora and fauna found within the property. However, details of impacts on the OUV related to geology of the property cannot be assessed at the current time.

- **Housing/ Urban Areas, Commercial/ Industrial Areas**
  
  (Cumulative impacts of potential further urban and/or industrial development, including transportation corridors and continued development of housing and urban areas)
  
  Developments outside the property have and continue to be a cause for concerns in regard to potential impacts and threats on its values. While these threats appear to have been largely mitigated for the future similar developments may also have impacts, and any proposed developments will require a thorough assessment of potential cumulative impacts prior to any approval decision being taken.

- **Tourism/ visitors/ recreation**
  
  (Potential inappropriate tourism developments)
  
  With tourism numbers continuing and predicted to significantly increase (Hampton et al., 2018), the challenge remains to ensure tourism activities, levels and developments remain appropriate to maintaining the OUV of the property. Visitors to the site continue to comment on how crowded the property is and the degradation of water quality, which is lowering visitor experience. Degradation of OUV continued to be a threat to the site as new areas within the property are being opened for tourists and discussions of expansion of the property continues. Appropriate enforcement of regulations is essential to avoid inappropriate developments in unspoiled areas eg. the proposed Bai Dong Island resort (Quang Ninh Province, 2013).

  The national government needs to be refocused towards growing yield from visitors versus numbers of visitors. Accreditation of operators (of vessels) also need to be implemented and enforced, with opening up of new areas confined to accredited operators to ensure the existing situation is not perpetrated (IUCN Consultation, 2020).

- **Shipping Lanes**
  
  (Increase in shipping traffic)
  
  At the time of the inscription of the property, construction of the Cai Lan port was noted as posing a potential threat to the property (IUCN, 1994; World Heritage Committee, 1995) and subsequently in Committee decisions (World Heritage Committee, 1996, 1998). The port has now been completed and while measures are in place to minimize the environmental impact of its operation (IUCN, 2013) it remains unclear if the completion and operations of the port will lead to an increase in shipping related
Whilst there continues to be a rapid increase in the number of tourists visiting the site, the development and implementation of a visitor management plan and enforcement of existing regulations in regards to numbers of boats and tourists would assist in addressing the need to manage the environmental impact of additional visitors. However, water quality is clearly an issue with potential to impact on OUV. This issue need continued and ongoing efforts to be addressed. In addition, research and monitoring programmes to track visitor numbers and their impacts, and assess and adapt to the impacts of climate change should also be considered in the management plan. This would also help to assist in alleviating potential threats from increased tourism while also allowing for the detection of impacts from climatic changes.

**Protection and management**

**Assessing Protection and Management**

**Management system**

The current management system includes a wide range of management plans covering various issues, including a General Management Plan for Ha Long Bay 2017–2021. It is unclear if the various other plans including the Quang Ninh Province Aquaculture Master Plan 2015, the Ha Long Bay Tourist Management Plan 2013–2015, have been updated. The site is also covered by the Ha Long Bay Preservation and Promotion Plan 2020. However, concern remains over the absence of an integrated management approach. The State Party expressed recently undertook a Management Effectiveness Evaluation and further plans are underway for a visitor management plan and assessment of the sites carrying capacity as follow up to this process with both of these expected to support a revised management plan for the property (State Party of Viet Nam, 2019; Mackay, 2020). Some progress on management has been reported by the State Party but progress is limited and further work is needed.

**Effectiveness of management system**

Ha Long Bay Management Department appears to have sufficient staff capacity for conducting its roles and responsibilities, but there is a continued need for capacity building to strengthen management capacity and to ensure that management effectiveness indicators are built into the planning, monitoring and evaluation of the property (IUCN, 2013; Mackay, 2020). Management is also constrained by budgetary levels and limited coordination between the Provincial authority and the central government. The Department requires a greater degree of independence, authority and decision-making power to effectively conduct its day-to-day management activities as well as its enforcement roles (Mackay, 2020).

**Boundaries**

The park boundaries largely contain and protect the landscape and the areas required to maintain the values of the property. The inscription of the property acknowledges the changes to the boundaries to meet the initial requirements for inscription under natural heritage criterion (World Heritage Committee, 1994). The property includes all of the components that provide the framework for its aesthetic and geological values but there is a need to expand the buffer zone of the property to effectively address impacts on its values from outside the boundaries and limit impacts from development that is occurring (Mackay, 2020). There is ongoing discussions of plans to increase the boundaries to include neighboring areas around Cat Ba Island, which would also provide an opportunity for the State Party to consider options to realign the boundaries of the buffer zone (IUCN, 2018). Consideration should also be given to
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Integration into regional and national planning systems

Site planning occurs at the provincial level and there is very little coordination with the central Government. The site level planning is integrated into port and road infrastructure planning at the provincial level although there is a need for increased consideration of the impacts on the site. There does not appear to be much integration into planning systems beyond the provincial level, in particular as related to tourism but also relevant to road and infrastructure development and commercial activities in areas immediately adjacent to the property. Some improvement appears to be underway in this regard in terms of coordination with neighbouring Cat Ba Archipelago, which falls under the administration of a different province.

Relationships with local people

The level of consultation on issues related to the property with local communities is unclear, especially given ongoing concerns in regard to the level of habitation within the property and this is likely to have impacted on the relationships with local communities. Efforts are being made to address this concern and measures have been introduced in an effort to limit the impacts of the floating fishing villages, including improved waste management, better control of the numbers and standards of house boats, stricter accreditation of house boat owners and residents, and beneficial State-supported opportunities for fishermen to change career and re-locate to the mainland (IUCN, 2013; State Party of Viet Nam, 2019).

Legal framework

The property is protected under strong legislative foundations including the Law on Cultural Heritage (2001) as amended in 2009 as well as other laws that regulate activities within the property. Essentially day-to-day management is a provincial matter that is implemented by the Ha Long Bay Management Department, a unit of Quang Ninh Provincial People's Committee. There are some concerns over the level of enforcement of the legislation.

Law enforcement

There is insufficient data available to fully assess the implementation of law enforcement related activities. There is a need to ensure strict planning conditions and enforcement are in place to address the impacts of inappropriate development in the buffer zone and areas surrounding the property. Law enforcement in regards to the limitations placed on aquaculture and illegal fishing appears to be largely effective. A focus needs to be maintained on enforcement of operational matters in the property, in particular waste management and management of grey and black water (IUCN, 2015). Tourism boat licenses need to ensure legal enforcement of environmental management provisions.

Implementation of Committee decisions and recommendations

The State Party continues to respond constructively to the Committee’s requests and the relevant authorities are making genuine efforts to address any concerns raised through better planning, regulation, education, promotion and direct management intervention to improve management and address issues raised in Committee decisions and recommendations (IUCN, 2013; IUCN, 2018). The relevant provincial authorities and the Ha Long Bay Management Department appear to continue to make a concerted effort to improve the management of tourism in the property and to address the concerns of the World Heritage Committee.

Sustainable use

The most significant threat comes from the continued rapid growth in and management of tourism. This threat is diminishing due to the implementation of a tourism management plan, which will require regular revision to ensure a continued adequate response to tourism as it continues to grow and expand into new areas. However, planned infrastructure that will make visiting the site easier (e.g. a planned international airport, highway improvements that will reduce the travel time from Hanoi, larger wharf
facilities) will mean tourism management is increasingly important (IUCN, 2018).

**Sustainable finance**

Financing and revenue generation should be reformed to increase the income from purchase of tickets and access to facilities and activities, especially from foreign tourists. Commercial concessions should be established requiring tourism operators to contribute more to funding the costs of management in the property. More tourist revenue should be contributed directly toward enhancing the capacity and capability of the Ha Long Bay Management Department for managing tourism in the property.

**Staff capacity, training, and development**

The Ha Long Bay Management Department has wide-ranging roles and responsibilities for protecting and promoting the natural values of the World Heritage property. With a complement of almost 400 staff and an annual budget of approximately 2.15 million USD, the Department is relatively well resourced. However, the Department is hindered in enforcing regulations and conducting other management functions within the property by its dependence on other government agencies (IUCN, 2013). Numerous decisions by the World Heritage Committee have previously noted the need for increased support and capacity building for staff of the Ha Long Bay Management Authority (World Heritage Committee, 2004, 2006).

**Education and interpretation programs**

A limited amount of visitor information is available and mostly relies on individual tourism operators providing information. There is no standard information provided and no quality control of the information that is provided by individual tourism operators. Social networks have been increasingly used to share information in regard to the property and there has been an expansion of printed material available with a focus on cooperation and tourism management (State Party of Viet Nam, 2019).

**Tourism and visitation management**

Tourism management has greatly improved under guidance of the tourism management plan 2013 - 2015 and with input from experts, supported by IUCN. Enforcement of regulations is better with significant improvements in visitor services, tour boat operations, safety and security and waste management, while diversification of activities and opening of new areas for tourists are beginning to reduce the pressure from overcrowding of the most popular sites. There are currently 505 tourist boats operating in the site (State Party of Viet Nam, 2019) with the numbers of boats decreasing since 2016 and there are plans for an assessment of carrying capacity with subsequent adjustment of tourist numbers. The need for monitoring of growing tourist numbers was highlighted at the time of inscription (World Heritage Committee, 1994) and remains an on-going requirement.

**Monitoring**

Limited monitoring evident in regards to the values of the property or on-going impacts. Some monitoring of water quality issues resulting from recommendations from previous committee decisions and concern around industrial development.

**Research**

Effective monitoring programmes are in place in regards to water quality and potential impacts from development in surrounding areas. An IUCN (2015) report provides some useful information. However, it is recommended that targeted research on the OUV and the threats to OUV is undertaken, particularly to investigate the impacts of climate change and other emerging threats.

**Overall assessment of protection and management**

Improvements to management and a willingness to address issues raised by the Committee in decisions and recommendations are noted. In the past, management has been unable to keep pace with the rapid growth in tourism numbers, but more recently there has been marked improvement
guided by a tourism management plan and requests for input from experts. Management limitations have been characterized by funding constraints, poor law enforcement and poor cooperation and support from local authorities stemming from a lack of autonomy of the Management Department. Efforts are being undertaken to improve this situation.

Assessment of the effectiveness of protection and management in addressing threats outside the site

Laws and regulations protecting the site are technically sound however, law enforcement is not fully effective. The Ha Long Bay Management Department (HLBMD), in terms of numbers, has sufficient staff capacity to implement its function, including its various roles and responsibilities. There remains a need for appropriate financial support for administrative functions and autonomy to enable the HLBMD to exercise its jurisdictional responsibilities and management functions within the property. Management mechanisms need to be fully implemented including waste management and compliance with local regulations. Law enforcement and staff capacity are variable. Improvements have been made in regards to a number of key threats and management issues but many issues remain unresolved.

Best practice examples

The State Party has responded constructively to the Committee’s requests to lower the population pressure and reduce the impacts from residents in the property. Measures introduced to improve waste management, better control of the numbers and standards of house boats, stricter accreditation of house boat owners and residents, and beneficial State-supported opportunities for fishermen to change career and re-locate to the mainland could provide potential examples of good practice.

State and trend of values

Assessing the current state and trend of values

World Heritage values

A spectacular seascape of limestone pillars

The values for which the property was inscribed in regard to the seascape of limestone pillars are reported to be in relatively good condition despite the large number of threats identified for the property. Many of these threats are anthropogenic in nature and while they are considered to be largely manageable many of them, such as high levels of tourism, crowded visitation areas and pollution from a lack of waste management are having a direct impact on the spectacular seascape.

Exceptional scenic beauty

Some current data and information regarding a number of the identified threats to the property is provided in State of Conservation and State Party reports. While there are some areas of concern about the effectiveness of management, the property is largely retaining its aesthetic values, with a delicate balance being sought between the provision of visitor access and the maintenance of the OUV of the property (IUCN, 2013). That being said, levels of tourism, waste management issues (water quality and solid waste) and developments in surrounding areas are widely reported to be impacting on and degrading the values of the site (IUCN, 2018).
The most extensive and best known example of marine-invaded tower karst in the world

The values for which the property was inscribed in regard to the seascape of limestone pillars are reported to be in good condition and threats are considered manageable. Very few of the threats identified impact directly on the geological values for which the property was inscribed. However, there is limited data available to assess whether the karsts themselves are being impacted by threats such as climate change.

Full range of karst formation processes

The values for which the property was inscribed in regard to containing the full range of karst formation processes remain in good condition and threats are considered manageable. There is no data available on the ongoing processes that have led to the formation of the karsts and the impact of threats like ocean acidification on the property remain largely unknown.

Summary of the Values

Assessment of the current state and trend of World Heritage values

The geological values for which the property was inscribed are largely reported to be in good condition, remaining the same as with previous assessments and the identified threats are considered manageable. The aesthetic values for which the property was inscribed are being impacted by a large number and variety of threats. Consistently high levels of tourism and waste management (water quality and solid waste) are recognized as a concern requiring additional management effort.

Assessment of the current state and trend of other important biodiversity values

Despite concerns raised regarding potential negative impacts from unsustainable fishing practices in the vicinity of the property, there is insufficient data available to be able to draw conclusions on the current state and trend of fish stocks. Similarly, insufficient data is available to assess the current state and trend of flora in the property.

Additional information

Benefits

Outdoor recreation and tourism, Natural beauty and scenery

The ongoing benefits of tourism development, facilitating visitation to the site and the delivery of health and recreation, also include revenue raising, which in turn contributes to management, conservation and research and promotion of the values of the property.

Factors negatively affecting provision of this benefit:
- Climate change: Impact level - Moderate, Trend - Increasing
- Pollution: Impact level - High, Trend - Continuing
- Overexploitation: Impact level - High, Trend - Continuing
- Invasive species: Impact level - Low, Trend - Continuing
Waste management issues and overcrowding in some areas, with frequent reports of collisions between tourist boats, are deteriorating visitor experience.

**Direct employment, Tourism-related income, Provision of jobs**

Levels of residency inside the property have been restricted and efforts have been made to provide livelihoods linked to the property for those who remain within its boundaries (IUCN, 2013). High levels of tourism provides not only direct employment but wider benefits through tourism related income (Hampton et al., 2018). However, the opportunities for local people, especially those who previously lived within the property, appear to be somewhat limited and more work is needed to ensure benefits reach those living around the property.

Factors negatively affecting provision of this benefit:
- Climate change: Impact level - Low, Trend - Continuing
- Pollution: Impact level - Moderate, Trend - Continuing
- Overexploitation: Impact level - Moderate, Trend - Continuing
- Invasive species: Impact level - Low, Trend - Continuing
- Habitat change: Impact level - Low, Trend - Continuing

Pollution, overexploitation and increasing impacts from climate change are likely to negatively affect the visitor experience of the site and as a result could lead to dissatisfaction and potential decreases in visitation and tourism, in turn reducing the financial contributions to the economy. Despite concerns of overcrowding this has not seemed to impact visitor numbers to date.

**Fishing areas and conservation of fish stocks**

The property provides ecosystem services for people living adjacent to the site, most notably the provision of valuable fisheries to the surrounding communities.

Factors negatively affecting provision of this benefit:
- Climate change: Impact level - Low, Trend - Continuing
- Pollution: Impact level - Moderate, Trend - Continuing
- Overexploitation: Impact level - Low, Trend - Continuing
- Invasive species: Impact level - Low, Trend - Continuing
- Habitat change: Impact level - Low, Trend - Continuing

The majority of the families that previously benefited from aquaculture within the property have now been relocated out of the park with only two locations still operating within the boundaries, primarily for tourism and education. This has limited the benefits from the property. However, it is still likely to play an important role as a source location for fisheries that occur outside the boundaries.

**Importance for research**

The property provides an opportunity for research and monitoring into both biological, social and cultural values. However, there is very little if any work being undertaken and no baseline data is available against which to assess impacts, both positive and negative. Further work is needed to implement activities that can take full advantage of the research and subsequent knowledge, opportunities presented by the site.

Factors negatively affecting provision of this benefit:
- Climate change: Impact level - Moderate, Trend - Increasing
- Pollution: Impact level - Moderate, Trend - Decreasing
- Overexploitation: Impact level - Low, Trend - Continuing
- Invasive species: Impact level - Low, Trend - Continuing
- Habitat change: Impact level - Low, Trend - Continuing

**Summary of benefits**
The natural features of Ha Long Bay assume significant importance in Vietnamese culture and add this adds to the broader values of the park noted in its inscription to the World Heritage List. The natural phenomena encompassed in the property provide a significant draw-card to a huge and ever-increasing number of international and domestic tourists. With tourism come the benefits of income generation through employment and investment in local communities as well as the promotion of livelihoods linked directly to the property and indirectly through goods and service provision. However, to date these benefits have not been fully explored or supported for local communities and would benefit from further attention and efforts. The property provides significant ecosystem services, most notably the provision of valuable fisheries to the surrounding communities. The property also delivers significant ongoing possibilities for research and education.

**Projects**

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<th>Organization</th>
<th>Brief description of Active Projects</th>
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<tr>
<td>1</td>
<td>IUCN</td>
<td>The U.S. government, in partnership with the provincial (Quang Ninh) People’s Committee, launched the Ha Long Bay Alliance in 2014. Funded by the U.S. Agency for International Development (USAID), the alliance aims to improve environmental management and foster stronger cooperation and communication among stakeholders to address some of the impacts from high levels of visitation and rapid regional industrialization.</td>
<td><a href="https://www.iucn.org/content/vietnam-ha-long-bay-alliance">https://www.iucn.org/content/vietnam-ha-long-bay-alliance</a></td>
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<td>2</td>
<td>JICA</td>
<td>Improving coordination and exchange of information, experience and technology</td>
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# REFERENCES

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