

World Heritage

Patrimoine mondial

43 COM

Paris, 23 November 2018
Original: English / français

UNITED NATIONS EDUCATIONAL,
SCIENTIFIC AND CULTURAL ORGANIZATION

ORGANISATION DES NATIONS UNIES
POUR L'EDUCATION, LA SCIENCE ET LA CULTURE

CONVENTION CONCERNING THE PROTECTION OF THE WORLD
CULTURAL AND NATURAL HERITAGE

CONVENTION CONCERNANT LA PROTECTION DU PATRIMOINE
MONDIAL, CULTUREL ET NATUREL

WORLD HERITAGE COMMITTEE / COMITE DU PATRIMOINE MONDIAL

Forty-third session / Quarante-troisième session

Baku, Azerbaijan / Bakou, Azerbaïdjan
30 June - 10 July 2019 / 30 juin - 10 juillet 2019

Item 7 of the Provisional Agenda: State of conservation of properties inscribed on the
World Heritage List and/or on the List of World Heritage in Danger

Point 7 de l'Ordre du jour provisoire: Etat de conservation de biens inscrits sur la
Liste du patrimoine mondial et/ou sur la Liste du patrimoine mondial en péril

MISSION REPORT / RAPPORT DE MISSION

Phong Nha-Ke Bang National Park (Viet Nam) (951bis)
Parc national de Phong Nha-Ke Bang (Viet Nam) (951 bis)

11-20 July 2018

**REPORT ON THE JOINT
WORLD HERITAGE CENTRE/IUCN
REACTIVE MONITORING MISSION
TO PHONG NHA-KE BANG NATIONAL PARK
(VIET NAM)**

FROM 11 TO 20 JULY 2018

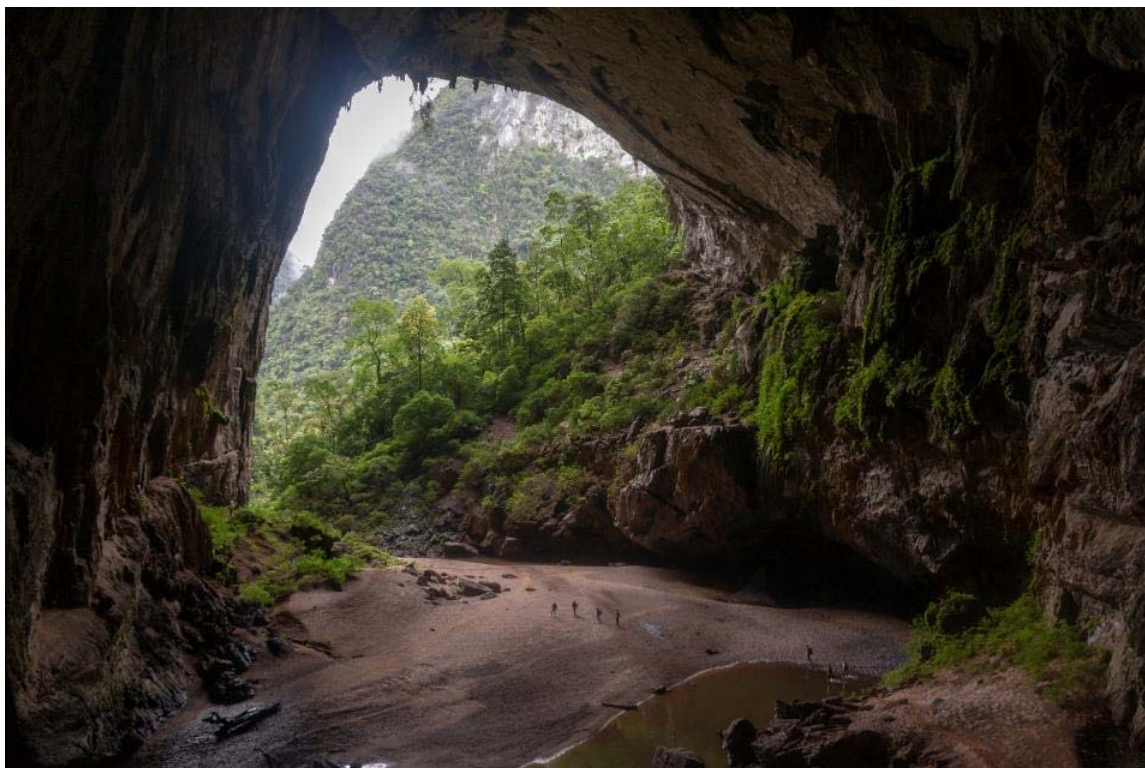


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July 2018

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ACKNOWLEDGEMENTS

The mission is grateful to the numerous officials and experts of Viet Nam for their hospitality, support, availability and assistance and would especially like to convey their gratitude to Mr Tran Tien Dung, Vice-Chairman, People's Committee of Quang Binh Province, Mr Le Thanh Tinh, Director of Phong Nha-Ke Bang National Park, for the general organization and hospitality, and Mr Vo Van Tri, Head of Research Department of Phong Nha-Ke Bang National Park, who provided technical documents and information on the current situation of the property before and during the mission and helped clarify complex issues. Mr Dung Nguyen Thai and Mr Tran Xuan Mui from the Management Board accompanied the mission during its visits to the Park.

Special thanks must be extended to the Ministry of Culture, Sports and Tourism of Viet Nam, especially to Deputy Minister Ms Dang Thi Bich Lien, Dr Nguyen The Hung, Director, Department of Cultural Heritage, Ms Nguyen Phuong Hoa, Deputy Director-General for International Cooperation Department and Mr Nguyen Viet Cuong, Head of the Relics and Monuments Management Division, who met the mission before and after the field survey and introduced the situation of the property. The mission especially wishes to thank Ms Vu Ha Ngan, Vice Head, Division of Relics and Monuments Management of the Ministry of Culture and Mr Nguyen Nam Khanh from the Vietnamese Ministry of Foreign Affairs and the Vietnamese National Commission for UNESCO, who accompanied the mission throughout its visit. We are also very grateful to Mr Nguyen Hai, General Manager of Hai's Ecotour, who acted as an interpreter during the mission.

While it is not possible to name all the officials, experts, consultants and stakeholders who supported the mission, we would like to highlight our appreciation for the support of Mr Howard Limbert, member of the British Cave Research Association and Technical Director of Oxalis Adventure Tours and all the staff of the expedition team, who ensured the safety and security of the mission during the expedition to Hang En (Swallow Cave) and Son Doong (Mountain River) Cave. The mission also thanks the members of villages situated in the property and its buffer zone, and Mr Ngo Van Hong, Director, Centre for Indigenous Knowledge Research & Development for their availability to discuss socio-economic issues related to the conservation of the property.

Finally, the mission team expresses its gratitude to colleagues at the UNESCO Office in Viet Nam. Particular thanks go to the Head and Representative to Viet Nam, Mr Michael Croft, for his great support during and after the mission. The National Programme Officer for Culture at the UNESCO Office in Viet Nam, Ms Huong Pham Thi Thanh, generously provided her professional support, advice and assistance throughout the mission to ensure its smooth running, with the assistance of Ms Tran Thi Thu Thuy.

EXECUTIVE SUMMARY, OVERALL APPRAISAL AND LIST OF RECOMMENDATIONS

As requested by the World Heritage Committee in Decision **41 COM 7B.33** (Krakow, 2017), a joint World Heritage Centre/IUCN Reactive Monitoring mission¹ visited Phong Nha-Ke Bang National Park (Viet Nam) from 11 to 20 July 2018, to evaluate the general state of conservation of the property, and in particular to assess the status of reported plans for the development of a cable car project to access Son Doong Cave; to review the property's management effectiveness and planning tools, especially in relation to tourism development and wildlife management; and to assess the extent of illegal activities such as logging and poaching, along with the impact of invasive species on the property. The property was inscribed on the World Heritage List in 2003 on the basis of criterion (viii) for its geological values and was extended in 2015 to include a larger area and to re-inscribe it on the basis of biodiversity criteria (ix) and (x), in addition to criterion (viii). The mission was carried out by Ms Nao Hayashi, representing the World Heritage Centre (UNESCO WHC), and Mr Remco van Merm and Mr Brian Clark, both representing IUCN.

Several meetings were organised with the Ministry of Culture, Sports and Tourism, the Quang Binh Provincial People's Committee and the Management Board of Phong Nha-Ke Bang National Park, before and after the field survey and site visits of the mission team.

The mission conducted four categories of survey:

- 1) direct observations on key spots for biodiversity and wildlife conservation;
- 2) visits to major tourism activity sites;
- 3) a 3-day expedition to Son Doong and En caves;
- 4) interviews with key staff, members of local communes NGOs and private sector representatives

Although the significant size of the property and the complex and intricate issues cannot be assessed in their entirety during a 7-day mission, the visits and meetings with various stakeholders enabled the mission to collect information on the current structure and operation of the Management Board, the ongoing activities for the preservation of biodiversity, and the scope of tourism activities within and adjacent to the property. Encounters with members of local communities, ethnic minorities, actors of the private sector and NGOs provided accounts of the realities of local populations living in the heart and at the margins of the World Heritage site, and allowed to determine which impacts they feel thanks to their intimate connection with the World Heritage site.

The mission was able to review the key management tools in use before and during the field visit:

- the Sustainable Tourism Development Plan 2010-2020 (dated September 2010);
- the Operational Management Plan 2013-2020 (dated October 2012);
- the Strategic Management Plan 2013-2025 (dated October 2012),

They are supplemented by two important Decisions by the Prime Minister issued in 2015 and 2017.

A report on the performance of forest law enforcement to prevent and control illegal logging and poaching in the Park, dated June 2018, provides an overview of the law enforcement activities from 2015 to 2017. Important additional information on the practical organization of the everyday work of the Management Board was provided during the mission, including a

¹ From 16 to 18 July, the core team split into two activities, Ms Nao Hayashi and Mr Remco van Merm conducted a three-day field expedition to Son Doong Cave, while Mr Brian Clark continued to carry out field surveys.

sample of the ranger patrolling system and wildlife observation, and their integration into a SMART (Spatial Monitoring and Reporting Tool) Survey computerised database. A sample of counting of populations of key wildlife species was also provided, pending the rollout of the general survey, which should be ready by November 2018.

OVERALL CONSERVATION STATUS, WILDLIFE CONSERVATION AND INVASIVE SPECIES

The World Heritage property 'Phong Nha Ke Bang National Park' covers an area of 123,326 ha under the National Park (decision N° 1062/QĐ-TTg of 5 July 2013), divided into three distinctive zones of management and a buffer zone of 220,055 ha. In 2015, it was reported that the buffer zone was home to a population estimated at 54,000 and two Arem villages were within the boundaries of the existing property, with 401 individuals and 72 households. During the mission, it was mentioned that there is currently a population of around 70,000 peoples living in buffer zones in 13 communes.

The Management Board has deployed its efforts in addressing a number of daily management issues, such as ensuring regular surveying and patrolling within the property, despite the scarcity of human resources (currently one ranger per 1,000 ha). The Management Board has been involving local populations from the Buffer Zones in patrols, thereby allowing them to contributing to maintaining a critical link between the forest and local communities.

A stricter application of law enforcement measures, combined with a stronger interagency coordination, capacity building for rangers, and educational and conservation awareness programmes for local populations have been put in place.

Species monitoring is undertaken with the use of SMART (Spatial Monitoring and Reporting Tool), which was introduced to the property two years ago. A biodiversity survey was ongoing at the time of the mission, the report of which is expected to be available by November 2018.

The ban on hunting and logging in natural forests is a governmental policy. The increased enforcement and enhanced educational activities act as a deterrent to the involvement of populations and intermediaries in such activities. However, the mission noted that poaching continues to be a threat.

In addition to the expansion of *Merremia boissiana*, which is considered an overabundant native species, the mission observed the spread of several invasive alien species (IAS). It is crucial to allocate appropriate financial and human resources to developing and implementing prevention and control measures for IAS, which represent a significant management challenge.

TOURISM DEVELOPMENT AND PROSPECTS

National and provincial authorities, as well as the Management Board, confirmed that the cable car construction to Son Doong Cave will not be approved. It is not included in the approved Decision by the Prime Minister issued in 2017 and therefore no longer under consideration. However, another proposal for a cable car to Hang En, only 3.5 km from Son Doong, is still being considered. The mission notes with significant concern that such a construction would lead to a drastic change in the nature of tourism offers and the environment of the remote area in the heart of the property, and certainly would cause irreversible impacts on the largely pristine environment, which is home to several endangered species. **In the mission's view, further consideration or implementation of either of the abovementioned cable car projects—or similar projects that would significantly increase visitation to currently undisturbed or little disturbed caves in the property or alter the physical conditions of such caves, for example through the construction of infrastructure in or near caves—would represent a clear potential danger to the Outstanding Universal Value of the property in accordance with Paragraph 180 of the *Operational Guidelines*, and should lead to the immediate inscription of the property on the List of World Heritage in Danger.**

The property has witnessed a constant increase of visitors and its management authorities view tourism development as a primary opportunity to cope with its social and demographic evolution, as well as a means to increase resources for environmental conservation through taxation. The mission noted the comment by the management authorities that visitation to the property is still lower (with 7-9% yearly increase) than that being experienced in Ha Long Bay and in the Trang An Landscape Complex World Heritage Areas and it seemed to the mission that there is some sort of background expectation of World Heritage properties to attract very high visitation, while no effort is made to understand and manage the impacts thereof. The mission also noted an increase in the number of tourist spots at the property between 2015 and 2017. Two Prime Ministerial Decisions adopted in 2015 and 2017 provide a set of development objectives for the property and its buffer zone. The development of mass tourism in the administrative zone within the property and the urbanization of the buffer zone are cause for concern, and should be subject to appropriate and thorough assessments, including Environmental Impact Assessments which assess direct, indirect and cumulative impacts, prior to any project being approved. The improvement of existing tourism offers and the re-evaluation of the planned new products are recommended, including a reflection on the complementarity of existing and new offers, with the aim of enhancing the property's values while placing a stronger focus on conservation and education.

Outreach and educational activities on heritage values both for the personnel involved in park management and the public could be addressed through a capacity-building initiative.

GOVERNANCE AND PLANNING FOR SUSTAINABLE MANAGEMENT OF THE PROPERTY

In general, the mission concluded that the request by the Committee to revise the existing management and planning tools considering the significant extension of the inscribed property in 2015 has not been fully addressed and that there is a crucial need to operationalize these tools. In this regard, it would be critical to update and integrate all existing management tools into a single document, accompanied by yearly action plans and providing a clearer definition of functional and tourism use zoning. The competent authorities are advised to engage in this process, while at the same time strengthening the implementation capacities of the Management Board. This process also requires the re-confirmation of fundamental principles already stated in the existing tools, ensuring the balance between the conservation of the property and the development of tourism activities. This should enable benefit sharing with local communities, leading to an increased awareness of a shared responsibility of the authorities and stakeholders, including tourists, towards the sustainable management of the property. A wider understanding of the requirements and parameters resulting from the property's inscription on the World Heritage List would be necessary so that all future planning, decision-making and implementation of actions are given appropriate consideration in light of the overall objective of preserving Outstanding Universal Value of the property.

The mission noted in particular the issuance of two additional Decisions of the Prime Minister in 2015 and 2017, and expresses its concern about the massive tourism development (new tourism products and locations, including the world's longest zip-line) in and around the property and planned urbanization of the Buffer Zones indicated in those decisions, which contradict the objectives of the Sustainable Tourism Development Plan. Seeking further consistency and synergy among various management documents, under a stronger overarching objective of sustainable preservation of the World Heritage property would lead to a more effective governance, coordination and implementation of actions concerning the property.

LOCAL POPULATIONS AND BENEFIT SHARING

While some measures have been taken with the aim of promoting the integration and improvement of livelihoods for local populations and ethnic minorities, some ethnic minorities are now deprived of traditional access to the forest and its resources. Integration and benefit sharing are highlighted in the recent adoption of a policy for the integration of sustainable

development principles into the management of World Heritage sites, as per the policy adopted by the General Assembly of States Parties to the World Heritage Convention. The mission recommends that the authorities not only continue providing assistance to local populations and ethnic minorities to prevent their marginalization from social and economic life, but also seek to apply policies to reduce, in the long term, their dependence on subsidies and tourism-related income. The World Heritage Listing of the property should act as a driver for local communities, including ethnic minorities, to reap fairly shared benefits and contribute to the preservation of the property by means of their knowledge of the natural environment. The rich culture of ethnic minorities may be a resource for reflection on their future participation in the socio-economic activities of the property while taking the utmost care not to 'museum-ify' their lives and cultures.

The full set of the recommendations is given below.

Management Effectiveness and Governance

MANAGEMENT STRUCTURE AND GOVERNANCE

R1. Reinforce the management mechanism for Phong Nha-Ke Bang National Park in terms of human resources and financial provisions in order to enable the implementation of the requests made by the World Heritage Committee and the recommendations of the mission, including by:

- a) Undertaking an overall review of staffing, to ensure a more balanced implementation of management actions related to preservation, research, coordination and development;
- b) Establishing an official mission statement, which clearly sets the Management Board's institutional vision, emphasizing the primary management objective of maintaining the Outstanding Universal Value (OUV) of the property;
- c) Undertaking a Training Needs Assessment to plan for long-term institutional capacity building in key areas of management, and rolling out a training and awareness-raising programme to ensure that staff are well aware of the property's OUV and the requirements of the World Heritage Convention and its *Operational Guidelines*.

MANAGEMENT PLANNING

R2. By 1 December 2019, integrate and harmonize the current Sustainable Tourism, Strategic and buffer zone Development Plans together with the master plans for the construction of Phong Nha-Ke Bang (PNKB) National Park and the Development of the PNKB Tourism Centre indicated by the Prime Minister's decisions of 2015 and 2017, into a single Integrated Development and Management Plan (IDMP) for the property, covering the period 2020 to 2040, and ensure that:

- a) A detailed Action Plan for the period 2020 to 2025 is appended to the IDMP;
- b) Subsequent five-year action plans are prepared throughout the time covered by the IDMP;
- c) The IDMP adopts the Tourism Use Zoning System as detailed in the current Sustainable Tourism Development Plan;

- d) The development of the IDMP takes into consideration management guidelines provided by the World Heritage Centre and IUCN,² and the draft IDMP is submitted to the World Heritage Centre and IUCN for review prior to its final adoption.

MANAGEMENT ZONES

R3. Further clarify the functional zoning of the property, including by:

- a) Fully integrating the 2015 extension of the property in its functional zoning system by ceasing to refer to it as an extension area in any texts or maps in the proposed IDMP, except where necessary in describing the history of the property's establishment;
- b) Providing to the World Heritage Centre an explanation of the difference(s) between the management objectives, management requirements and/or desired outcomes for the four sub-areas of the Strictly Protected Area as defined in the Operational Management Plan.

R4. Elaborate details of what development and uses will or will not be permitted in those parts of functional zones not specifically zoned for tourism use, clarify how the existing tourism activities provided along the Chay River (in the High Volume Tourism Use Zone) will be modified to respond to the planning requirement to "promote appreciation of heritage and conservation values" to a high volume of visitors, and include these specifications within the proposed IDMP.

Tourism Development and Management

TOURISM

R5. Rigorously ensure that all future tourism developments/activities approved within the property will strictly comply with the requirements detailed in the current Tourism Use Zoning system, and, on the basis of scientific studies and assessments of carrying capacity, establish a strict upper limit to the number of visitors to the property and to individual tourist spots to ensure that tourism remains compatible with the primary objective of conserving the property's OUV.

R6. Modify the tourism activity at Paradise Cave to at least partly include the specific management requirements for the Strict Ecotourism Zone and the Ecological Restoration Area, i.e.:

- a) Provide a visitor experience with a strong emphasis on understanding and appreciation of local ecology, including through the provision of high-quality information and interpretation on environmental conservation;
- b) Manage and support activities for low visitation levels in small groups;
- c) Provide site-specific regulations and restrictions for visitors and commercial tourism operations, including:
 - i. Prohibit any food or beverage (except for bottled water) into the cave;
 - ii. Prohibit leaving behind any waste in the cave, and refrain from providing waste bins inside the cave to encourage visitors to carry their waste back out;
 - iii. Put in place procedures for regulating the appropriate volume of visitors and appropriate visitor activities and behaviour, including by requiring visitors to only enter the cave with an adequately trained guide.

² E.g. *Managing Natural World Heritage*, UNESCO/ICCROM/ICOMOS/IUCN, 2012.

R7. Permanently and unequivocally abandon all proposed cable car developments at Son Doong Cave and Hang En and provide assurance that any future proposed cable car developments in the Strictly Protected Area, the Ecological Restoration Area, the Nature and Heritage Tourism Zone, the Strict Ecotourism Zone, and areas not specifically zoned for any tourism development will not be approved.

R8. In relation to tourism at Hang En and Son Doong Cave:

- a) Clarify the scope and nature of projects foreseen in Decision 2128/QĐ-TTg of the Prime Minister, dated 29 December 2017, to develop sightseeing points at Son Doong Cave and Hang En, and to construct a Ba Da – Son Doong tour, including clarification regarding the type of infrastructure and activities that would be involved in these developments;
- b) Make a commitment not to intensify visitation of Hang En and Son Doong Cave, setting the current number of visitors per annum at either cave as upper limits, and to ensure that any development of the tourism product at these caves does not result in increased and/or permanent impacts on the caves' environments and/or a deterioration of visitor experience.

R9. In relation to the proposed developments of a zip-line at Nuoc Mooc and outdoor activities (hiking and mountain biking) in Sinh Ton (Abandoned Valley):

- a) Clarify in which tourism zone Sinh Ton is included and clearly identify the location of the proposed developments on a map, which should also delineate the boundary of the property;
- b) Prepare comprehensive Environmental Impact Assessments for both the zip-line and the proposed developments at Sinh Ton, including a specific assessment of impacts on Outstanding Universal Value of the property, in accordance with IUCN's World Heritage Advice Note on Environmental Assessment;
- c) Clarify how the proposed zip-line and the developments at Sinh Ton will comply with the planning requirement for tourism activities to provide an appreciation of the property's heritage and conservation values.

R10. Evaluate the existing interpretation facilities and materials and establish a plan for enhancing the interpretation of the property's natural values, fully consistent with its Outstanding Universal Value and the importance of its conservation.

R11. Explore the possibility of developing signature souvenir products, on the basis of a study of locally available and sustainably sourced assets.

R12. Prepare individual management plans for each cave (or part of such cave) being used for cave tourism (the show caves Phong Nha, Tien Son, and Paradise Cave and any cave used for commercial adventure caving), and:

- a) Ensure that cave management plans are consistent and compliant with the cave management prescriptions required by the Strategic Management Plan;
- b) Strictly prohibit the practice of mud and/or sand bathing in caves, or any other unnecessary interference with cave sediments;
- c) Ensure that kayaking into caves is only permitted as part of a structured adventure caving activity, led by a competent guide, and focussed on transferring an understanding of the cave's World Heritage values;
- d) Submit individual cave management plans to the World Heritage Centre for review by IUCN, as soon as they are available.

R13. Strictly require that all tourists visiting caves within the property be supervised by a certified guide, ensuring that:

- a) Comprehensive training and a certification system are prepared, implemented and made compulsorily for all cave guides;
- b) Limit the maximum of tourists to 25 per guide in show caves and 10 tourists per guide in adventure caves and ensure close observance of these limits;
- c) Guides are supported in their role by the presence of competent guards situated in the caves to assist the guides as required with enforcement of behaviour as determined by each cave management plan/prescription.

R14. Include an appropriate level of environmental interpretation in areas around and including Dark Cave and the Nuoc Mooc Eco-trail to foster an understanding and appreciation of the property's purpose and significance, including in particular Mooc Spring itself as an excellent example of major karst resurgence.

OVERALL TOURISM MANAGEMENT

R15. By 1 December 2019, submit to the World Heritage Centre, for review by IUCN, a report detailing the progress achieved in implementing the above recommendations R5, R6, R9, R10, and R12 – R14, and in meeting the activities and requirements detailed in the Operational Plan and the Sustainable Tourism Development Plan, and delay the implementation of the privatization of the Tourism Centre pending the satisfactory implementation of these recommendations.

Wildlife Management

ILLEGAL EXPLOITATION AND LAW ENFORCEMENT

R16. Continue current efforts to improve law enforcement, including by:

- a) Further increase the number and frequency of patrols to the extent possible, ensuring that they cover the entire perimeter of the property as well as high-risk areas within the property;
- b) Conduct an independent and thorough investigation into allegations that some Phong Nha-Ke Bang National Park Forest Protection Unit rangers are involved in illegal activities, including trade in protected and/or endangered wildlife species, and take appropriate disciplinary and legal action against any rangers involved in such activities.

ALIEN AND INVASIVE SPECIES

R17. Develop (ideally as part of the proposed IDMP) a long-term Invasive Alien Species (IAS) eradication and control plan, including a control plan for *Merremia boissiana*, which is considered native but behaves like an IAS, and secure adequate financial resources to ensure the implementation of this eradication and control plan over a period of at least 10 years. In the development and implementation of a control plan for *M. boissiana*, build on the lessons learned during trials elsewhere in Viet Nam and abroad (e.g. at Bukit Barisan Selatan National Park in Indonesia).

Other Conservation Issues

WORLD HERITAGE AND LOCAL COMMUNITIES – BENEFIT SHARING

R18. Put in place a mechanism that will ensure adequate engagement of various stakeholders, including local communities, in the management of the property, notably in decision-making processes, and significantly increase efforts, whenever possible, to provide the resettled ethnic

minorities with opportunities to express their opinions on the access to formerly customarily granted rights, without prejudice to the preservation of the property and its natural resources.

R19. Explore the possibility of documenting and researching traditional and historical cultural practices which bear testament to the customary practices of local populations and their relations to the property, as part of efforts to enhance the interpretation of the values of the property, which are not limited to its OUV.

TRANSBOUNDARY COLLABORATION WITH LAO PDR

R20. Noting that the 2005-2015 Hunting & Wildlife Trade Control Action Plan between the property and adjoining Hin Nam No National Protected Area in the Lao People's Democratic Republic has lapsed, ensure continued close collaboration between the Phong Nha-Ke Bang National Park Management Board and the management body of Hin Nam No National Protected Area on transboundary issues of common concern, capitalizing on the ongoing consideration by the State Party of Lao PDR to put forward a nomination for Hin Nam No as a transnational extension to the property as a means to strengthen collaboration on the conservation of the significant geological and biodiversity values of this transboundary karst system.

1 BACKGROUND TO THE MISSION

1.1 INSCRIPTION HISTORY

Phong Nha-Ke Bang National Park was inscribed on the World Heritage List in 2003 under criterion (viii) and extended in 2015 with the addition of criteria (ix) and (x). With this re-inscription, the total surface area was extended from 85,754 hectares to 126,236 hectares (a 46 % increase). The Park's landscape is formed by limestone plateaus and tropical forests. It features great geological diversity and offers spectacular phenomena, including a large number of caves and underground rivers. The site harbours a high level of biodiversity and many endemic species. The extension includes a more coherent ecosystem while providing additional protection to catchment areas that are of vital importance for the integrity of limestone landscapes. The inclusion of criteria (ix) and (x) reflects the property's significant biodiversity values, including unique cave ecosystems and one of the largest remaining areas of relatively intact moist forest on karst in Indochina.

1.2 STATEMENT OF OUTSTANDING UNIVERSAL VALUE OF PHONG NHA-KE BANG NATIONAL PARK

Brief synthesis

Phong Nha-Ke Bang National Park is located in the middle of the Annamite Mountain Range in Quang Binh province, Viet Nam, and shares its boundary with the Hin Namno Nature Reserve in the Lao PDR to the west. The property comprises an area of 123,326 ha and contains terrestrial and aquatic habitats, primary and secondary forest, sites of natural regeneration, tropical dense forests and savannah and is rich in large, often spectacular and scientifically significant caves.

The property contains and protects over 104km of caves and underground rivers making it one of the most outstanding limestone karst ecosystems in the world. The karst formation has evolved since the Palaeozoic period (some 400million years ago) and as such is the oldest major karst area in Asia. Subject to massive tectonic changes, the karst landscape is extremely complex, comprising a series of rock types that are interbedded in complex ways and with many geomorphic features. The karst landscape is not only complex but also ancient, with high geodiversity and geomorphic features of considerable significance.

The karst formation process has led to the creation of not only underground rivers but also a variety of cave types including dry caves, terraced caves, suspended caves, dendritic caves and intersecting caves. With a length of over 44.5km Phong Nha Cave is the most famous of the system with tour boats able to penetrate inside to a distance of 1,500m and adventure caving kayaks to 6Km. The Son Doong Cave is believed to contain the world's largest cave passage in terms of diameter and continuity.

A large number of faunal and floral species occur within the property with over 800 vertebrate species recorded comprising 154 mammals, 117 reptiles, 58 amphibians, 314 birds and 170 fish. The property clearly has impressive levels of biodiversity within its intact forest cover, notwithstanding some gaps in knowledge of the population status of some species.

Criterion (viii): Phong Nha-Ke Bang National Park is part of a larger dissected plateau, which encompasses the Phong Nha, Ke Bang and Hin Namno karsts. The limestone is not continuous and demonstrates complex interbedding with shales and sandstones. This has led to a particularly distinctive topography. The caves demonstrate a discrete sequence of events, leaving behind different levels of ancient abandoned passages; evidence of major changes in the routes of underground rivers; changes in the solutinal regime; deposition and later resolution of giant speleothems and unusual features such as sub-aerial stromatolites. On the

surface, there is a striking series of natural landscapes, ranging from deeply dissected ranges and plateaux to an immense polje. There is evidence of at least one period of hydrothermal activity in the evolution of this ancient mature karst system. The Son Doong Cave, first explored in 2009, contains the world's largest known cave passage in terms of diameter and continuity. The plateau is one of the finest and most distinctive examples of a complex karst landform in Southeast Asia and the property is of great importance for enhancing our understanding of the geologic, geomorphic and geo-chronological history of the region.

Criterion (ix): Phong Nha-Ke Bang National Park consists of a complex limestone landscape, which includes very large caves and underground rivers. The property includes karst formations which are some of the oldest and largest in Asia, and it has geological, climatic, hydrographic and ecological conditions which are distinct from other limestone karst landscapes. Its cave ecosystems and habitats are unique with high levels of endemism and adaptations displayed by cave-dependent species. The property constitutes one of the largest remaining areas of relatively intact moist forest on karst in Indochina, with a forest cover estimated to reach 94%, of which 84% is thought to be primary forest. Furthermore, the property protects globally significant ecosystems within the Northern Annamites Rainforests and Annamite Range Moist Forests priority ecoregions.

Criterion (x): A high level of biodiversity is found within the property, with over 2,700 species of vascular plants and over 800 vertebrate species. Several globally threatened species are also present: 133 plant species and 104 vertebrate species have been reported, including several large mammals such as the endangered Large-antlered Muntjac, Clouded Leopard, and the critically endangered Saola. The level of endemism is high, especially in the cave systems. Furthermore, it is estimated that over 400 plant species endemic to Viet Nam are found within the property, as well as 38 animal species endemic to the Annamite range. Several new species to science have recently been found, including cave scorpions, fish, lizards, snakes and turtles, and more species are likely to be discovered. Importantly, four threatened primate taxa endemic to the Annamites are found within the property: the Hatinh Langur (specialised in karst forest and endemic to Viet Nam and the People's Democratic Republic of Lao), the black form of the Hatinh Langur (which may prove to be a separate species), the Red-shanked Douc Langur, and the largest remaining population of White-cheeked Gibbon.

Integrity

The property constitutes one of the largest protected karst landscapes in South East Asia. Covering an area of 123,326 ha all the elements necessary to manifest the outstanding geological values of the property of Phong Nha-Ke Bang National Park are contained within the boundaries of the property. It is completely surrounded and protected by the Hin Namno Nature Reserve (Lao PDR) to the west and a buffer zone of 220,055 ha abutting the northern, eastern and southern boundary. The property has three designated management zones: a strictly protected, an ecological restoration and an administrative/service zone. The watershed protection forests in the buffer zone also protect the integrity of the property.

There are, however, a number of issues that affect the integrity of the property. Wildlife poaching and illegal harvesting of forest products are a direct threat to biodiversity values. The property has also suffered from past developments and its integrity could be threatened by further uncontrolled tourism developments, notably by the proposed construction of a cable car and access roads. There is a need for the implementation of Environmental Impact Assessments for any projects which could negatively affect the site. This would ensure that the natural landscape, geologic and geomorphic values, and key features such as primitive forest, caves, rivers and streams within the inscribed area remain intact. The property is situated within an area of high population density and as such a number of activities, such as cultivation, tourism, transport and freshwater fisheries could also impact on its integrity.

Protection and management requirements

Originally designated as a Nature Reserve in 1986, Phong Nha-Ke Bang National Park was established in 2001 under the Decision 189/QĐ-TTg by the Prime Minister and is managed by a Management Board. The Management Board is responsible for the protection of forest resources and biodiversity and was established in 1994. Cave conservation and the provision of a tourism service are the responsibility of the Cultural and Ecological Tourist Centre under the Management Board. The property is also included in the Special National Heritage List (2009), and the Special Use Forest system (1999). The National Park is effectively protected by a number of national laws and government decisions, which prohibit any action inside or outside the boundaries of the National Park or a World Heritage property that may have a significant impact on the heritage values.

A Strategic Management Plan has been in place since 2012 and is based on existing plans, including the Sustainable Tourism Development Plan, the National Park Operation Management Plan and the Buffer Zone Development Plan. The Management Board oversees law enforcement programmes including ranger patrols and joint law enforcement operations on the border with Lao PDR. Nevertheless, the rugged nature of the country and community dependence on natural resources coupled with relatively limited resources for enforcement means that wildlife poaching and illegal timber gathering are difficult to eradicate and remain a challenging issue.

The Ho Chi Minh highway, constructed outside and to the north of the property is appropriately located and provides important and valuable benefit to the National Park in terms of opening up views of and access to the Ke Bang forest area. However, other road construction and tourism development will require a rigorous and comprehensive assessment of environmental impact before decisions are made on whether they should be permitted or not. It is paramount that such developments do not impact the karst and biological values for which the property has been inscribed. Impacts of increased development pressure and tourism numbers will also require continual consideration, planning and management to ensure that these pressures do not damage the Outstanding Universal Value of the property. The property clearly has impressive levels of biodiversity within its intact forest cover, however, up-to-date data on large mammal species is also needed to confirm the population status of reported large mammals including tiger, Asiatic black bear, Asian elephant, Large-antlered Muntjac, Asian wild dog, Gaur and the critically endangered Saola.

1.3 EXAMINATION OF THE STATE OF CONSERVATION BY THE WORLD HERITAGE COMMITTEE

In 2004, the Committee examined the property's state of conservation and requested the State Party to mitigate the negative impacts of the road construction project linking the Ho Chi Minh Highway and Route 20, provide information on the regulations that apply to the management of the buffer zone and on actions that will be taken to control illegal logging and other forest crimes. In 2005, the Committee noted the measures taken to mitigate the negative impacts of the road construction, the increased law enforcement and involvement of local people in forest protection. The Committee also noted that other positive initiatives such as possible transboundary cooperation with Lao People's Democratic Republic and programmes for buffer zone management and tourism management were ongoing.

In 2015, upon the re-inscription of the property with a significant extension (Decision **39 COM 8B.6**), the Committee expressed concerns over the possible construction of a cable car providing access to Son Doong Cave and requested the State Party to conduct an Environmental Impact Assessment prior to taking a decision on any tourism development project, and to ensure that development proposals are not permitted if they would negatively impact the OUV of the property. The Committee also requested the State Party to revise the Sustainable Tourism Development Plan, reflecting the property's extension and to ensure an integrated and environmentally sensitive approach to tourism, to submit updated data on the population status of key large mammal species, as well as to provide data on law enforcement

addressing illegal logging and poaching. The Committee reiterated these concerns and requests during its 40th session in 2016 (Decision **40 COM 7B.91**).

In 2017, the Committee further noted that data provided by the State Party regarding the methodology and mechanism of law enforcement and wildlife monitoring did not enable an assessment of their effectiveness nor of the status and trend of wildlife populations, and requested further clarifications on the methods used (Decision **41 COM 7B.33**). The Committee also expressed its concern over the inadequacy of conservation funding, impacts of climate change and invasive species, and further requested the State Party to submit to the World Heritage Centre the relevant tourism planning documents for the property. The Committee again reiterated its concern over the proposed cable car project to Son Doong cave, located within the Strictly Protected Zone of the property, and expressed its concern over the possible impacts of such a project on the local populations' job opportunities and irreversible influence on the natural environment. The inadequate funding for conservation, the impacts of climate change and the invasive species were also mentioned. The Committee took note of the State Party's confirmation, communicated during the Committee's 41st session, that *"it has no intention to build a cable car system, either in Son Doong Cave, or providing access to it"*.

Finally, the Committee requested that the State Party invite a joint World Heritage Centre/IUCN Reactive Monitoring mission to assess the state of conservation of the property, the impacts of poaching, illegal logging, and invasive species, and to provide advice to the State Party regarding sustainable tourism that is compatible with the OUV, including at Son Doong cave (Decision **41 COM 7B.33**). The Committee further re-emphasised the need for the revision of the Sustainable Tourism Development Plan in order to include the 2015 extension of the property and to ensure that an integrated and environmentally sensitive approach to tourism is adopted such that visitor use remains compatible with the OUV of the property.

The full documentation records are available on the UNESCO World Heritage Centre's web page at <https://whc.unesco.org/en/list/951/documents>.

1.4 JUSTIFICATION OF THE MISSION

Following an invitation from the Viet Nam National Commission for UNESCO and Quang Binh Provincial People's Committee, the joint World Heritage Centre/IUCN Reactive Monitoring mission to Phong Nha-Ke Bang National Park (Viet Nam) took place from 11 to 20 July 2018. The objective of the mission was to evaluate the general state of conservation of the property, in relation to impacts from poaching, illegal logging and invasive species, and to provide advice to the State Party regarding sustainable tourism that is compatible with the Outstanding Universal Value of the property, including at Son Doong Cave.

In particular, the Mission was asked to:

- Consider the overall state of Conservation of the property;
- Assess the status of reported plans for the development of a cable car project to access Son Doong Cave and any similar projects;
- Review the Sustainable Tourism Development Plan 2010-2020 and other management tools;
- Assess the impact and extent of illegal activities concerning forest products and the effectiveness of law enforcement;
- Assess the impact of invasive species;
- In line with paragraph 173 of the *Operational Guidelines*, assess any other relevant conservation issues that may negatively impact on the Outstanding Universal Value of the property.

The mission was also tasked with holding meetings with the Vietnamese authorities at national and provincial levels, as well as with stakeholders including park rangers, representative(s) of NGOs, and representatives of local communities and ethnic minorities.

The Terms of Reference and the Mission Itinerary are included in Annexes I and II respectively.

The Reactive Monitoring Mission team was composed of Ms Nao Hayashi, representing the World Heritage Centre (UNESCO WHC), Mr Remco van Merm, and Mr Brian Clark, both representing IUCN.

2 LEGAL AND MANAGEMENT FRAMEWORK

The World Heritage properties of Viet Nam (8 properties) are all included in the list of Special-Country-level heritage, and the Phong Nha-Ke Bang National Park was included as Special-Country-level heritage via Decision 1272/QĐ-TTg dated 12 August 2009.

2.1. NATIONAL LEGISLATION

The property benefits from a strong legal framework. Relevant **national laws and regulations** concerning the property include:

- Law on Cultural Heritage, dated June 29th, 2001 and amended in 2009;
- Law on Organizing People's Council and People's Committee, dated November 26th, 2003;
- Law on Forest Protection and Development, dated December 3rd, 2004;
- Law on Environmental Protection, dated November 29th, 2005;
- Law on Biodiversity, dated November 13th, 2008;
- Law on Tourism, dated June 14th, 2005;
- Law on Land, dated November 26th, 2003;
- Law on Investment, dated November 29th, 2005

The relevant **national and regional level decisions** concerning the property include:

- Decision No. 189/2001/QĐ-TTg of the Prime Minister on upgrading Phong Nha – Ke Bang Nature Reserve to National Park dated December 12th, 2001;
- Decision 18/2007/QĐ-UBND of QB PPC on issuing regulations on Management of PNKB NP dated August 16th, 2007;
- Decision 1272/QĐ-TTg on Special-Country-level heritage dated 12 August 2009;
- Decree 92/2002/ND-CP further detailing the Law on Cultural Heritage of 2001 dated 11 November 2002;
- Decree No. 109/2017/ND-CP on the protection and management of world cultural and natural heritage in Viet Nam;
- Decree No. 23/2006/NĐ-CP on the implementation of the Law on Forest Protection and Development dated on March 3rd, 2006;
- Decree No. 80/2006/NĐ-CP on detailing and guiding the implementation of a number of Articles of the law on environmental protection dated on August 9th, 2006;
- Decree No. 92/2007/NĐ-CP of Government dated on June 1st, 2007; on detailing the implementation of some articles in the Law on Tourism;
- Decree No. 92/2002/NĐ-CP of Government dated on November 11th, 2002 on detailing the implementation of some articles in the Law on Cultural heritage;
- Decree No. 59/2007/NĐ-CP on managing solid waste dated on April 4th, 2007;
- Decree No 181/2004/ND-CP dated October 29th, 2004 on the implementation of the Land Law;
- Decree No. 108/2006/NĐ-CP of Government dated on September 22nd, 2006 on detailing the implementation of some articles in the Law on Investment;

- Decision No. 186/2006/QĐ-TTg on promulgating the Regulations on Forest management dated on August 8th, 2006;
- Decision No. 02/2003/QĐ-BTNMT of Ministry of natural resources and environment promulgation the regulation on Environmental protection on the field of tourism dated July 29th, 2003;
- Decision No. 22/2006/QĐ-BTNMT dated on December 18th, 2006 of the Ministry of Natural resources and environment on applying Vietnamese standards on the environment;
- Decision No. 104/2007/QĐ-BNN promulgating regulations on Management of Ecotourism activities in National Parks and Nature Reserves dated pm December 27th, 2007;
- Decree No 34/2000/ND-CP dated on August 8th, 2000 by the Government on Regulations for Border Areas of Socialist Republic of Viet Nam (SRV);
- Decree No. 21/2008/ND-CP dated August 9th, 2008 amending and supplementing a number of articles of the Government's Decree No. 80/2006/ND-CP, detailing and guiding the implementation of a number of articles of the Law on environment protection
- Circular No. 179/2001/TT-BQP dated on January 1st, 2001 by the Ministry of National Defense on implementation guidelines of Decree No 34/2000/ND-CP dated on 18/8/2000 by the Government on Regulations for Border Areas of Socialist Republic of Viet Nam (SRV);
- Coordination Regulations on management of national territories and border lines in the province of Quang Binh (issued with attached Decision No 59/2006/QĐ-UBND dated on December 25th, 2006 by Quang Binh PPC);
- Decision No. 36/2012-UBND dated 28 December 2012 by Quang Binh PPC regulating functions, mandates, rights and organizational structure of Phong Nha-Ke Bang National Park;
- Decision No. 1896/QĐ-TTg of the Prime Minister, dated 17 December 2012, regarding the Master Plan on the Prevention and Control of Invasive Alien Species in Viet Nam to 2020;
- Decision No. 808/QĐ-UBND dated April 9th, 2013, approval for the Strategic Management Plan 2013-2025 for Phong Nha-Ke Bang National Park;
- Decision No. 209/QĐ-TTg of the Prime Minister on approving the general planning of construction of Phong Nha – Ke Bang National Park in Quang Binh Province by 2030 dated February 8th, 2015;
- Decision No. 2128/QĐ-TTg of the Prime Minister on approving of the overall Master Plan for the development of Phong Nha – Ke Bang National Tourism Centre, Quang Binh Province by 2030 dated December 29th, 2017.

Besides the legislation concerning the preservation of nature, development and heritage management, an important number of national legislation on the issues of ethnic minorities are applied to ethnic minorities living in and around the property. As examples, these legislations include:

- Directive No. 39/1998 / CT-TTg of 3 December 1998 of the Prime Minister on promoting cultural and information activities in mountainous regions and ethnic minority regions;
- Decision No. 124 / QĐ-TTg dated 17 June 2003 of the Prime Minister approving the project of preserving and developing the culture of ethnic minorities in Viet Nam;

- Decision No. 1270 / QD-TTg dated 27 July 2011 of the Prime Minister approving the project of preserving and developing the culture of ethnic minorities in Viet Nam up to 2020;
- Decree No. 05/2011/ND-CP dated 14 January 2011 of the Government on ethnic minorities work;
- Circular No.12/2014/TT-BVHTTDL of the Ministry of Culture, Sports and Tourism detailing the Decree 05/2011/ND-CP.

These policies are consistent with the Constitution and the 2009 Law on Cultural Heritage.

The main authorities responsible for the implementation of legislation and decisions on the management include:

- The Ministry of Culture, Sports and Tourism, which is responsible for the management of all World Heritage properties in Viet Nam, therefore in charge of coordinating with Quang Binh Provincial People's Committee and with related ministries and branches in the implementation of the management tools for Phong Nha-Ke Bang National Park;
- The Ministry of Planning and Investment and the Ministry of Finance are in charge of synthesizing and balancing expenditure from a part of the state's budget to implement relevant activities as defined by the law on state's budget and related documents;
- Related ministries and branches within the assigned function and responsibility coordinate with the Ministry of Culture, Sport and Tourism, Quang Binh PPC and related agencies to implement the master plan. These include, for example, the Ministry of Agriculture and Rural Development and the Ministry of Natural Resources and Environment;
- Quang Binh Provincial People's Committee supervises the programmes and actions of the Phong Nha-Ke Bang National Park Management Board, as defined by the law, and guarantees the effectiveness of operational activities, promulgates management regulations of Phong Nha-Ke Bang National Tourism Centre (NTC), and carries out regular control and periodically reports the related matters to the Ministry of Culture, Sports and Tourism. Local budget is assigned to the development of technical, urban and environmental infrastructure within the Phong Nha-Ke Bang National Park and its buffer zone.

2.2. RELEVANT INTERNATIONAL LEVEL AGREEMENTS

The most relevant **international-level agreements** and texts are as follows:

- Convention Concerning the Protection of the World Cultural and Natural Heritage, dated 16 November 1972;
- *Operational Guidelines for the Implementation of the World Heritage Convention*, UNESCO World Heritage Centre, 2017;

2.3. INSTITUTIONAL FRAMEWORK AND MANAGEMENT STRUCTURE

The operational bodies with powers of control and management are found across various responsible executive departments, and decisions on heritage-related questions are made at the following levels, according to the importance of the decisions:

- 1) Prime Minister's office

- 2) The Ministry of Culture, Sports and Tourism of the Socialist Republic of Viet Nam
- 3) The Quang Binh Provincial People's Committee
- 4) The Management Board of Phong Nha-Ke Bang National Park

The system for the preservation and use of heritage sites is vertically organized, but the main operational responsibilities reside in the power of the Quang Binh Provincial People's Committee including the decision-making on the important development issues and budget allocation. The implementation of technical activities concerning preservation, monitoring, research and promotion of the Phong Nha-Ke Bang National Park is carried out by the Management Board which also controls human resources and technical expertise for daily operation. For instance, the periodic ranger patrolling in the forests is organised by the Management Board.

Major projects and important directives are issued at the national level, through Prime Ministerial Decisions.

There is no procedure for the integration of Environmental Impact Assessment in the planning phases of programmes and projects related to heritage properties.

3. IDENTIFICATION AND ASSESSMENT OF ISSUES / THREATS

3.1. MANAGEMENT EFFECTIVENESS

3.1.1. MANAGEMENT STRUCTURE AND GOVERNANCE

Responsibility for the management of all World Heritage properties in Viet Nam is delegated to the Ministry of Culture, Sports and Tourism which has oversight of the Quang Binh Provincial People's Committee's supervision of the Phong Nha-Ke Bang National Park Management Board, the government agency directly responsible for protection and management of the property.

Compared with the organigramme presented in the Sustainable Tourism Management Plan of 2010, the Management Board structure has known some change, but the main part of human resources is allocated to the forest protection unit (FPU) and Tourism Centre.

Interagency collaboration has progressed with the increased effectiveness of collaboration with local authorities and functional agencies in the local area for forest protection and management. From 2015 to 2017, FPU has strengthened the collaboration in forest protection with the buffer zone authorities and relevant agencies in the area by developing and implementing related action plans. That arrangement includes the conclusion and implementation of collaborative plan on forest protection and management, forest fire management, prevention and control of transportation of illegal forest products and prevention of cross-border smuggling in the PNKB NP region with 6 Border Army Stations; Signing and implementing the regulation on collaboration between the PNKB FPU and FPUs of Bo Trach, Minh Hoa and Quang Ninh districts in communication and dissemination of the relevant lawful regulations, in investigation, prevention and handling of violations; in forest fire management as well as in information exchange; Implementing the regulation on collaboration in forest protection and management; forest fire management with the state forest companies who have been assigned to manage and develop the adjacent forest areas: North Quang Binh and Long Dai Forestry Companies.

Concerning the involvement of local communes, an action plan has been implemented to minimize violations of forest protection and development legislation in PNKB NP region with 13 buffer zone communes which share the boundary with the NP and the continuation of contracts for forest protection with 60 forest protection units under the Special-use Forest Protection and Development Project, 28 forest protection groups (with the involvement of 275 households) and 21 village conservation groups (140 members) in the buffer zone communes. As a result, hundreds of joint forest patrol trips have been implemented in the PNKB forest areas which share the boundary with the buffer zone communes; infringe information has been provided and exchanged in a timely manner, enabling adequate patrolling, searching, prevention, chasing away of suspected people and coordination with relevant agencies in handling of violation cases in a timely way.

The Management Board deploys efforts to enhance relevant rules and disciplines in the National Park, in particular by improving the law enforcement capacity of forest rangers, considering that the capacity and morality of law enforcement staff a very important role, which decides the quality and effectiveness of forest protection and management. The Board has enhanced the management of human resources, tightened the discipline performance and been determined to strictly handle the cases that any staff and forest ranger has negative work performance practices, lack of responsibilities, violate the relevant regulations of the NP; use their influence and power for his/her own benefits, etc. to clean up the NP management system and thus strengthening the effectiveness of law enforcement.

During the period of 2015-2017, training has been conducted based on the realistic requirements of task performance of forest rangers, focusing on practical skills and technology application in forest protection and management in the following fields:

- Training in criminal investigation in forest protection and management for 21 forest rangers (in 2015)
- Training in SMART (Spatial Monitoring and Reporting Tool) in forest patrolling and biodiversity monitoring for 39 forest rangers (in 2015 and 2016)
- Training in professional knowledge and skills in forest protection for 59 forest rangers (with the support of Phong Nha-Ke Bang Region Project, in 2015 and 2016)
- Training in monitoring skills on tourism routes in PNKB NP for 50 forest rangers (in 2016)
- Training in the Management Effectiveness Tracking Tool (METT) for 12 PNKB NP staff
- Training in the handling of administrative violations in forest protection, management and development and management of forest products for 40 rangers (in 2017).

The Management Board also has developed local community livelihood supporting initiatives to decrease the pressure on the environment (see section F below)

A lack of human resource is apparent in terms of both numbers and capacity of staff to cope with highly complex issues in managing such a large protected area.

As the limited resource allocation is necessarily directed to the protection and patrolling of the Park, institutional capacity such as in conserving biodiversity, managing evolutionary processes and ecosystems, interdisciplinary approaches including the capacity of planning diverse activities in considering a right balance between the site's preservation and sustainable tourism activities, seems insufficient. International assistance should be sought to build a stronger institutional capacity in several fields of key importance, such as biodiversity conservation and analysis of development impacts on the natural environment.

Despite challenging conditions, the Management Board has constantly shown its commitment to implement most of the previous decisions and recommendations of the World Heritage Committee. It should be useful that the Management Board establish an official institutional vision and mission statement, and assess their actual needs in terms of financial and human resources to be considered by the line authorities.

The mission also observed that an enhanced awareness of the requirements and obligations of the World Heritage Convention resulting from the property's inscription on the World Heritage List would lead to a better decision making and planning process, based upon adequate cultural, social, and environmental considerations, Environmental Impact Assessments, and enhanced coordination between national and local authorities within the development co-ordination framework in Phong Nha-Ke Bang National Park. It is of utmost importance to ensure that the consideration of impacts on Outstanding Universal Value (OUV) in the decision-making processes of relevant ministries and provincial authorities be thoroughly taken into account before permits are issued for any development that could negatively impact the OUV. The mission wishes to draw the State Party's attention to the need to promote recognition and awareness across all relevant national and regional agencies, of the World Heritage status of the properties on its territory. For the case of Phong Nha-Ke Bang National Park, capacity building and awareness raising of World Heritage requirements are critical for the decision makers at national and local levels, and within the Management Board, especially the staff assigned to tourism-related activities.

3.1.2. MANAGEMENT PLANNING

The three main documents upon which management of the property is based are a 2010 – 2020 Sustainable Tourism Development Plan (STDP), a 2013 – 2025 Strategic Management

Plan (SMP) and a 2013 – 2020 Operational Management Plan (OMP). From close evaluation of these plans, it is clear that the SMP is the primary management plan setting overarching principles for the preservation of the Outstanding Universal Value of the property, and is supported by the other two documents and a third document, the Buffer Zone Development Plan which was not available to the mission.

In this section of this report, these documents are jointly referred to as 'the Plan'.

In addition, there is a 2015 'General Planning on Construction of Phong Nha-Ke Bang National Park' and a 2017 'Master Plan for the Development of the PNKB National Tourism Centre by 2030' which have not been directly sighted by the mission although their contents are detailed in the Prime Minister's Decisions dated February 2015 (ref 209/QĐ-TTg) and December 29th 2017 (ref 2128/ QĐ-TTg). These 'Master Plans' are very prescriptive and are clearly based on the principles and directions provided by the Plan.

The planning process has been very comprehensive, finely detailed and generally unambiguous despite the high risk of this in preparing overlapping planning documents. Together the three documents are repetitive in their background information and cross-referencing them to monitor compliance of the master plans is made difficult by variances in terminology used between the Plan(s) and the subsequent master plans. The mission noted that the STDP was not revised despite requests by the World Heritage Committee following the extension and re-inscription of the property in 2015 in order to include the extension of the property and ensure that an integrated and environmentally sensitive approach to tourism is adopted so as to guarantee that visitor use remains compatible with management of the Outstanding Universal Value of the property.

Subsequent to the mission's review of the management plan evolution and in light of the looming expiry of the STDP and OMP, as well as the adoption of the two abovementioned Prime Minister's decisions (2015 and 2017), both involving the property and its buffer zones, it is considered that management effectiveness would be enhanced by greater consistency between management planning and management outcomes derived from the property having a single *integrated development and management plan*. This plan would include both protection of the property and tourism use under the stronger overarching objective of providing sustainable management *and* presentation of the Outstanding Universal Value of the property. The mission noted with significant concern the perspectives of buffer zone development/urbanization planning indicated in the above-mentioned decisions, as the activities to be implemented in buffer zones could have a significant impact on the long-term conservation of the property.

3.1.3. MANAGEMENT ZONES

The management of the property is very much focused on a system of zoning both by function and proposed tourism use.

3.1.3.1. FUNCTIONAL ZONING

The Plan describes the property as 123,326 ha divided into three functional areas:

- a) Strictly Protected Area: 102,466 ha,
- b) Ecological Restoration Area: 17,449 ha
- c) Administrative and Service Area: 3,411 ha

With a Buffer zone of 220,055 ha abutting the northern, eastern and southern boundaries while the western boundary abuts the Lao PDR Hin Nam No National Protected Area.

It is noted with regret that the area added to the Strictly Protected Area in 2015 is ambiguously shown on the Plan's map as the 'Extension Area'.

Page 22 of the OMP further divides the Strictly Protected Area into four sub-areas but offers no explanation of the management implication of these sub-areas.

3.1.3.2. TOURISM USE ZONING

Overlaying the functional system is a *Tourism Use* zoning system which includes clearly proscribed areas designated to cater for:

- High Volume tourism
- Nature and Heritage tourism
- Strict Ecotourism
- Community Benefit Tourism
- Tourism Infrastructure Zone.

The Plan provides detailed tourism management objectives and requirements for each of these zones.

Importantly, each *functional area* can have one or more *tourism use* zones and parts not zoned for tourism use at all. For example, the *Administration and Service Area* is further classified under the tourism use system as part *High Volume*, part *Nature and Heritage* and is partly un-zoned.

Of further importance and perhaps of concern is that the Plan does not indicate what can or cannot be provided in regard to tourism use in the parts of areas which have no tourism use zones proscribed.

An ambiguity of note is found on page 57 of the STDP which describes the Chay River, including Nuoc Mooc Eco-trail and Dark Cave as being within the *Nature and Heritage Tourism zone* but the map on page 62 indicates these areas to be within the *High Volume Tourism zone*. These zones have significantly different management requirements (although both are required to provide activities which include an appreciation of heritage and conservation values).

3.2. TOURISM DEVELOPMENT AND MANAGEMENT

The mission noted that the authorities view tourism-related economic expansion as a crucial solution to meet the needs of the increasing demography in the buffer zone of the property and to increase income for environmental conservation.

The mission noted the directives shown in the two aforementioned decisions of the Prime Minister, the former (2015) stipulating the planning area of 40,860 ha in Son Trach and some parts of communes of Phuc Trach, Hung Trach, Xuan Trach, Tan Trach, Thuong Trach, Bo Trach district, by focusing on ecotourism and gateway tourism services of the Phong Nha-Ke Bang National Park. Of this planning area, 20,860 ha are located within the property and 20,000 ha in the buffer zone. The decision of 2015 states very clearly that it aims to preserve the status quo and comprehensive value of the World Heritage site, as well as the association of preservation activities with local economic development, and by creating a human and sustainable community, sustaining, preserving and enriching the cultural values of ethnic minorities. However, the mission also noted with concern that there is a clear ambition towards the urbanisation of the buffer zone: in the designated area of 40,860 ha, the decision foresees a total population of 52,000 by 2020, of which 18,000 would live in urban areas (urbanisation rate 34%) and a total population of 62,000 by 2030, of which 43,000 would live in urban areas (urbanisation rate 69%). As for the tourism forecast, it foresees the arrival of 65,000 visitors by 2020 and 135,000 visitors by 2030. Within the planning area, 5.3% of the total natural land is

foreseen for ecotourism sites, urban populations and rural populations. However, it is not clear to what extent the property would be directly affected by these projected developments.

The 2015 Prime Minister's decision clearly states that no mass tourism is to be developed in zone I and II, nor in the Ecological Restoration zone, but that the development of mass tourism is foreseen in the Service and Administrative zone of the property (123 ha is assigned for this within the National Park out of 20,860 ha of construction planning area). The mission notes that this contradicts the STDP and considers that a thorough assessment over the possible impacts of the development of mass tourism inside the property on its OUV should be undertaken before any strategic decision is taken in this regard. Such an assessment could take the form of a Strategic Environmental Assessment.

The 2015 decision aims at developing a network of high-quality ecotourism sites providing access to a variety of caves and to the headquarters of the Management Board. The development of ethnic minority cultural tourism in association with Arem village and the connection of this village by road to other villages are also mentioned. For the buffer zone, Phong Nha town, Trooc town and Son Trach Commune were designated for some development. The decision also mentions Strategic Environmental Assessment to maintain integrity of natural heritage and to preserve traditional culture, highlighting the importance of environmental protection, socio-cultural life of local communities and their participation in conservation, as well as the sustainable architectural planning and prevention of negative impacts of tourism activities on the environment (EIS monitoring, waste and water management). The management of caves is given utmost importance, with reference being made to guidelines by the International Union of Speleology (Union Internationale de Spéléologie), (UIS 2012) and the limitation of daily visitor numbers to caves such as Son Doong and Va Caves.

The 2017 Prime Minister's decision approves the overall Master Plan for Phong Nha Ke Bang national tourism centre (NTC) development by 2030 (which the mission did not obtain), setting the following directives:

- 1) The surface area assigned for the tourism centre is about 2500 ha and stretches over Xuan Trach, Phuc Trach, Son Trach, Hung Trach, Thuong Trach and Tan Trach and Bo Trach district;
- 2) The project's main concept is to promote the natural sceneries and biological diversity, as well as the interregional and inter-sectorial connection for sustainable tourism development and sustainable economic development in the buffer zone;
- 3) The decision clearly sets the target for tourism development, with the projected number of 3,5 million visitors by 2030 and corresponding needs for rooms (2,500 rooms by 2030), expected incomes (8200 billion Dong by 2030) and labour creations (14,000 jobs by 2030).

The strategic directives for tourist market development and tourism products indicate the diversification of tourism offers, both in types of tourist profile and nature of activities, with clearer branding initiatives. The idea of zoning (centre, north, south, east and west) and creating 'routes' within the NTC in order to upgrade existing tourism routes (including the route to Son Doong Cave), develop new tours branded as 'Phong Nha-Ke Bang cave kingdom' as well as the development of walking routes in the forest starting from the central zone. The decision also foresees the development of a high ranking accommodation centre, including ecological tourism villages with ethnic minorities, recreation and entertainment centres, commercial service centres with restaurants and souvenir shops, and quarters for visitors' security with medical facilities. The budget includes state budget, ODA funding, private sector investment and states clearly that the state budget will be allocated in priority to technical infrastructure (promotion, construction of NTC brand name, human resource development, preserving and promoting cultural values and environmental protection. The human resource development strategy is mainly focusing on the capacity in managing tourism-related activities and high-quality service delivery.

Overall, the tourism brand name promotion highlights the cave system as the central value. On the other hand, there is a clear indication to apply stipulations of strict control of visitor quantity, monitor environmental impacts of tourism activities in the NTC to create methods of adjustment and protection. A concrete measure to implement this directive is necessary.

The mission considers that there is an urgent need for an integrated management document, as mentioned in the previous chapter, in order to ensure synergy among the existing planning documents and considering the overall governance directives indicated in the Strategic Management Plan 2013 to 2025, which need to be referred to as the most important directives concerning the overall governance. This document states clearly the utmost importance of nature and biodiversity preservation, as irreplaceable resources.

The mission notes the tourism growth of 7 to 9% per annum reported by the Management Board and considers it is not inconsistent with predictions in the Plan. The mission further notes that if tourism within the property and its buffer zone is developed in accord with the provisions of the Plan then tourism growth at this rate should be manageable until it plateaus at a reasonable and sustainable level.

The mission further notes the comment by the Board in regard to such growth being lower than that being experienced in Ha Long Bay and in the Trang An Landscape Complex World Heritage Areas and it seemed to the mission that there is some sort of background expectation of World Heritage properties to attract very high visitation.

Tourism growth at high levels is generally unsustainable as human resource and supporting infrastructure capacity lags behind need with the end result being damage to the attraction and unsatisfactory visitor experience. If a drastic change occurs in terms of the nature of tourism activities, it would significantly alter the demands for service, leading to significant modification of the socio-cultural context of surrounding communities. It will certainly create additional pressure on the biodiversity and environment.

In addition, the QBPPC levies an environmental tax from visitors, which is re-invested in conservation projects at the property.

It is acknowledged that State Parties have the right, and possibly an obligation, to exploit its natural and cultural heritage resources for the economic development of the country. Such exploitation must be tempered by the concept of conservation or 'wise use' of those resources, particularly so when such resources are deemed to be of Outstanding Universal Value and declared a World Heritage property. In the case of Phong Nha – Ke Bang National Park the mission strongly urges the State Party to ensure that guidelines and provisions for tourism development and management detailed in the Plan are strictly adhered to and that the Management Board is encouraged to focus on quality rather than quantity by developing products which attract a high yield market rather than a mass tourism/thrill seeker market.

The mission conducted visits to diverse tourism activities in the buffer and administrative zones, exemplified by the visits to spectacular cave systems (Phong Nha Cave, Paradise Cave) and other natural sceneries (Mooc spring).

The mission particularly noted the difficulties to access outreach and educational facilities, and thus suggests enhancing the interpretation of the site's remarkable features, which are directly related to the values and reasons of the World Heritage inscription (explanation about the natural features, educational activities, eco-tours, presentation of ethnic minorities' traditions and cultures, etc.). The mission also noted the relative rarity of typical local signature souvenir products – the rich culture of ethnic minorities may be resources for a future reflection.

The following observations relate to specific issues:

3.2.1. CAVES

In existing planning documents, there seems to be a distinction between caves which are currently stated 'easily accessible from major population centres in Viet Nam' and other caves,

such as Hang En and Son Doong Cave, which are situated in the heart of the National Park and which require another level of consideration in terms of access control and possible tourism recreation. The Strategic Management plan suggests an additional legal protection for sub-surface features in a karst landscape (i.e. the caves) (2.2.1 Protecting geodiversity) and the Operational Management plan suggests monitoring tourism impacts in caves, considering sensitive changes affecting cave climates (6.2. Monitoring and Evaluation).

3.2.1.1. PARADISE CAVE

The mission notes with considerable concern the development and management of Paradise Cave which is situated in the '*Strict Ecotourism Zone*' of the Ecological Restoration Area where *"tourism infrastructure development must support modest levels of tourism activities and prevent easy levels of accessibility that supports high volumes of visitors"* as specified in the STDP.

The development of access infrastructure very specifically encourages high volumes of visitors and the Paradise Cave experience as witnessed by the mission (with visitor numbers reported (anon.) to reach tens of thousands in a single day) is far from *modest*. It is a mass tourism development inappropriate for both the Strict Ecotourism zone and the Ecological Restoration Area.

The management of Paradise Cave demonstrates a significant inconsistency with the Plan in that there is no evidence of a site-specific management plan, there is no effective control of visitor numbers or behaviour, and there is no emphasis on providing visitors with an interpretation of the purpose and significance of the cave or the World Heritage values of the property embodied in the cave. Visitors to the cave are not required to enter with a guide, and the guides that are available do not benefit from an adequate training programme.

Food being carried into and left in the cave has encouraged rats and mice to occupy the cave and threaten the biodiversity values of the cave.

3.2.2. CABLE CARS AND ZIP-LINES

The mission was tasked with assessing the status of a plan to construct a cable car to access Son Doong Cave in the *Strict Eco-tourism zone* of the Strictly Protected Area, and to assess the likely impacts of this and other proposed tourism developments in and around the property. During the initial briefing meeting with the Ministry of Culture, Sports and Tourism (MOCST) prior to the field visit, the mission was informed that the cable car was only an idea of some investors. MOCST assured the mission that no cable car is included in the Master Plan for tourism development (referring to Decision No. 209/QĐ-TTg and Decision No. 2128/QĐ-TTg of the Prime Minister, adopted in 2015 and 2017, respectively), and that such a project would not be approved by the Prime Minister. Therefore, it was stated by MOCST that the cable car project will not happen in the near future. The Quang Binh Provincial Committee and the Management Board provided the same confirmation.

While the mission was assured that there are no plans to build a cable car to Son Doong Cave, there have been discussions about a cable car to Hang En, which is 3.5 km from and provides the only access to Son Doong Cave. The Management Board noted that while there are no active plans to construct a cable car to Hang En, doing so would generate many perceived economic benefits, as it would attract more tourists and create more jobs. For example, it would increase visitation to Hang En from the current 2000 visitors per year to some 300,000 visitors per year. No details were made available regarding what such a project would entail, but the mission expresses its significant concern over irreversible environmental impacts that would be likely to occur as a result of such a development. The natural environment surrounding the two caves is home to several endangered species and is largely pristine, and access to the two caves is only possible with professional guides to ensure safety and security. It is

noteworthy that despite the perceived economic benefits, public opinion³ is strongly against the construction of a cable car in the Strictly Protected Area of the property, as stated to the mission by various sources, including the Management Board. The Management Board expressed the view that it may be necessary to accept a small impact to the OUV (as a result of a cable car) in order to reduce a bigger impact (from illegal logging and poaching) and as a solution for job creation, as well as for income generation for the property. It is however noteworthy that any construction of a cable car inside the property would be a violation of Vietnamese law.

SON DOONG CAVE CABLE CAR PROJECT

During its three-day expedition to Hang En and Son Doong, the mission was able to assess the situation at these caves and obtain further information regarding the different proposals for cable car developments that have been discussed.

The original proposal for a cable car to Son Doong Cave was an idea of Sun Group, who abandoned it for a variety of reasons (not clarified to the mission). The concept was then taken over by FLC Group, who conducted some surveys at Son Doong. Following intense media attention, FLC did not further develop their concept. The mission notes with appreciation that both MOCST and QBPPC acknowledge the negative impacts that such a development would have on Son Doong Cave and have no intention to approve it. The following description of what the project would have entailed in its original design is provided for the record, as the mission was tasked with reviewing all available information about this project.

The proposal as explained to the mission would have started the cable car at Phong Nha Cave, taking passengers overland to Son Doong. At Son Doong Cave, the cable car would have entered the cave through a large collapse window (referred to as Doline 2), travelled through the cave and exited through another, smaller collapse window (referred to as Doline 1). From Doline 1, the cable car would have returned overland to Phong Nha Cave. From what the mission was able to understand, this original proposal would not have included a disembarkation station at Son Doong Cave, and would only have proposed a round trip. However, it is clear that the infrastructure required for such a development would have caused significant and irreversible negative impacts on the cave and its environment, and therefore on the OUV of the property.

HANG EN/SWALLOW CAVE CABLE CAR PROJECT

While little detail was available to the mission regarding the concept of a cable car to Hang En, the mission understands that there would be a disembarkation station likely placed in the valley between Hang En and Son Doong, but with visitation restricted to Hang En. The mission notes with significant concern the huge predicted increase in visitor numbers from 2000 to 300,000 per year and their likely impact on the swifts which give Hang En (Swallow Cave) its name, the likely demand for supporting infrastructure and service facilities (snack bars, toilets, etc.) at the disembarkation station, and the likelihood that visitors would want to also visit Son Doong. In the mission's view, all of these factors make this proposal entirely incompatible with the conservation of the property's OUV. In addition, it should be noted that Hang En and Son Doong, and the valley between these caves, are subject to very severe floods during the rainy season (October-December) when water levels can increase⁴ by as much as 80 metres. Therefore, the construction of a disembarkation station that could withstand the annual floods in this area appears virtually impossible and would be unlikely to be economically viable.

NUOC MOOC – DARK CAVE ZIP-LINE PROJECT

³ <https://www.change.org/p/stop-cable-car-construction-to-son-doong-cave-hang-en-cave-and-pn-kb-national-park-s-core-area>

⁴ The mission was able to confirm the extreme flooding through a time-lapse video recorded in Hang En, and shown to the mission as part of the security briefing at Oxalis' offices, prior to the expedition to Son Doong.

During the visit the mission had the opportunity to inspect the zip-line development near Dark Cave on the Chay River and the Nuoc Mooc Eco-trail development, also on the Chay River, and noted with some concern that there is a plan for a new zip-line of several kilometres in length running from the Nuoc Mooc Eco-trail to the existing zip-line development, all of which are in the *High Volume Tourism* zone. The mission's concern in this regard relates in particular to the clear focus on developing a thrill-seeking type tourism in the property and to seemingly very little effort to educate visitors about the unique geological and biodiversity values of the property that warrant its inclusion on the World Heritage List, and how visitors can contribute to its conservation.

The project design document for this development was initially provided to the mission in Vietnamese, and an English summary was provided later. The mission reiterates its concern about the apparent focus on developing mass-tourism and thrill-seeking type tourism inside the property and considers that these types of tourism would more appropriately be developed in the buffer zone, where there is ample opportunity to do so. Tourism development within the property should focus more on pure eco-tourism with a strong educational element.

OTHER TOURISM DEVELOPMENT PROJECTS

The mission also learned of a proposal to develop a network of walking/mountain biking trails in the Abandoned Valley (Sinh Ton) which is unmentioned and unmapped in any of the plans but believed to be situated in the un-zoned section of the Administration and Services Area. Again, the mission expresses its concern over the apparent focus on developing a thrill-seeking type of tourism, rather than a form of ecotourism more suited to the exceptional nature of a World Heritage property.

The mission further notes that the Decisions of the Prime Minister dated 2015 and 2017 both refer to objectives to develop tourist routes to Son Doong and Hang En, including the ambition to “conquer” Son Doong. Worryingly, the Prime Minister's Decision of 2017 foresees two projects for Son Doong; the first is for the development of a “Son Doong cave sightseeing point” (implementation stage 2017-2020), and the second is to “Construct Ba Da – Son Doong tour” (implementation period 2021 – 2025). The latter is classified as a “project of developing, upgrading tourism routes and technical infrastructure”, which raises concern about the type of infrastructure that would be involved. The 2017 Decision of the Prime Minister also foresees a project to develop a sightseeing point at Hang En (implementation period 2017 – 2020). No details are available about the scope and nature of any of these projects.

The mission notes that the current tourism product at Hang En and Son Doong, which involves hiking, camping, and adventure caving and is run by a professional company which employs highly experienced cavers, guides and porters, is having only a minor and temporary impact on the environments of these caves. Operating only during the dry season, any traces left in the caves by these expeditions are washed away by the severe floods of the rainy season, returning the caves to a nearly pristine state.

The mission further notes that the expeditions to Hang En and Son Doong in their current format generate many jobs for local people, who are employed as guides, security personnel, porters, and cooks (for example, a 4-day expedition to Son Doong for a group of maximum 10 tourists involves one experienced caver, a local English-speaking guide, ten security personnel, and 20 porters). The mission was impressed with the professionalism with which these expeditions are organized and executed.

It is the mission's view that tourism at Hang En and Son Doong should continue to be controlled by maintaining the appropriate level of visitation and ensuring professional standards for the whole expedition, including the use of the highest quality equipment. This consideration is necessary to ensure the safety and security of visitors first. The current tourism product at these caves should not be intensified to cater for mass tourism, as this would deteriorate visitor experience, and would undoubtedly lead to more significant and lasting impacts on the caves' environments. In the mission's view, further consideration or implementation of either of the

abovementioned cable car projects, or similar projects that would significantly increase visitation to currently undisturbed or little disturbed caves in the property, or alter the physical conditions of such caves (for example through the construction of infrastructure) would represent a clear potential danger to the Outstanding Universal Value of the property in accordance with Paragraph 180 of the Operational Guidelines, and should lead to the immediate inscription of the property on the List of World Heritage in Danger.

3.2.3. ADDRESSING KEY TOURISM DEVELOPMENT/MANAGEMENT OBJECTIVES

The mission noted that the Plan requires that tourism is developed in a way which improves the existing product and introduces new products which complement the Park's values in order to encourage the existing/dominant market segments to experience newer products with a stronger conservation focus and to attract a higher yield and more conservation-oriented market.

3.2.3.1. IMPROVING THE EXISTING PRODUCT

The existing product (at the time of writing the Plan) was Show-cave tourism,⁵ which has been expanded by the development of Paradise Cave as a show-cave, but the product has not been improved even though the Plan provides an excellent prescription for the management of cave tourism and states clearly *that PNKB will use cave management prescriptions and Cave Management Plans to regulate development of tourism to caves so as to protect the Outstanding Universal Value of PNKB's caves and karst World Heritage values* (see for example Annex XIV of the STDP).

Despite these prescriptions, the mission found no evidence of there being any cave management plans, and notes with concern that management of the show-caves evidently does not attempt to comply with the broad cave management prescription provided in the Plan such that:

- overcrowding is an ongoing issue with no realistic mechanism to address the problem.
- there is no requirement for visitors to be accompanied and supervised by guides who have been assessed as competent to manage cave-visitor behaviour and to provide a meaningful presentation of the purpose and significance of the caves.
- the 'optional' guides that may be engaged by visitors are not adequately trained.
- there is no real attempt at crowd control and visitors are not effectively prevented from touching and damaging speleothems nor are visitors prevented from depositing waste in the caves. To the contrary, the provision of waste bins inside the cave is promoting the depositing of rubbish and should be avoided.
- the placement and use of lights do not conform to best practice. Many lights are too bright, pointed towards the visitor, and switched on continuously. The growth of lampenflora on some speleothems is becoming problematic.

3.2.3.2. INTRODUCING NEW PRODUCTS

Products introduced subsequent to the Plan and currently implemented in the property include:

- Adventure Caving

This valid high yield activity can very effectively promote awareness of World Heritage/OUV but in order to protect these important karst assets, each must have a cave specific management plan as required by the Plan.

⁵ Tours of caves which have been significantly modified by the addition of access infrastructure such as pathways and artificial lighting

- Kayaking into caves

Is a form of adventure caving but only valid if it is compliant with the management plan for the cave in which it is conducted AND is led by a competent guide on a tour structured to transfer an understanding of the cave's World Heritage values. If it is simply recreational kayaking it is not compliant with the Plan.

- Mud and/or sand bathing in caves

This activity is being provided as a pseudo-adventure caving activity where tourists are taken into a cave and encouraged to wallow in mud (a cave sediment) which is subsequently smeared over the surrounding cave walls and speleothems. It is highly inappropriate to encourage the disturbance of cave sediments and smear such sediments over speleothems. It is interfering with natural processes and biodiversity values and inconsistent with the clear objective of attracting more conservation-oriented markets.

- Aquatic recreation

The Nuoc Mooc Eco-trail, the Botanical Gardens and the Dark Cave area have been developed and marketed to encourage their use as play areas where visitors jump into or are catapulted by zip-lines into the river to swim or just splash-about and play on boats and rafts.

While this activity may effectively contribute to the economic exploitation of the Park it is inconsistent with attracting a conservation-oriented audience.

Mooc Spring should be used to interpret the significance of the spring itself (an excellent example of a major karst resurgence) and the aquatic habitats it and the adjacent river provide. The development and use⁶ of the Botanical Garden area should be the subject of a concept plan to ensure its compliance with presenting World Heritage values.

- Zip-lining

A 'zip-line' is a tensioned cable-way from which a person is suspended and by means of gravity, transferred from one place to another (lower) place. They can be used to provide access into and around a protected area of difficult terrain to promote an understanding and appreciation of the protected area in a way that cannot be achieved without the use of a zip-line.

However, they are inherently at risk of becoming the attraction itself, drawing a *thrill-seeking* market segment with no interest in or regard for the natural/heritage values of the protected area.

The zip-lines at Dark Cave do not contribute to attracting the desired conservation oriented market and the proposed extension of the zip-lines put the property (further) at risk of becoming a theme park for thrill-seekers.

3.2.4. OVERALL TOURISM MANAGEMENT REVIEW

The stated objective for tourism development according to the Plan (and specifically the STDP) is to ensure that the conservation of the property's heritage values is supported through tourism development that emphasizes research, learning and awareness-raising about those heritage values (in particular following UNESCO's Guidelines on Caves Management).

The detailed activities/requirements to meet this objective include the development of:

⁶ It is acknowledged that the Botanical Gardens area does include a network of walking trails but there is no structured presentation to foster an understanding of the property's values to visitors, the vast majority of whom are independent tourists who go there to swim or play in the waterfall).

- a Tourism Monitoring and Management Programme;
- a Site Visitor Management Plan for Phong Nha Cave, Tien Son Cave and Phong Nha Visitor Centre, Eight Volunteers Cave and any cave or part of a cave to be used for adventure caving or other tourism activity;
- a water-based tourist product in the park and Buffer Zone;
- a concept plan for tourism operations in the Botanical Garden, Bamboo Valley, the Gao Forest and U Bo Peak;
- interpretation material for the Phong Nha Visitor Centre;
- site-specific interpretation plans and materials for priority sites;
- site interpretation tailored to reach the various audiences that visit the property including the construction of a visitor interpretation centre;
- a competency check and issuing of certification, only allowing certified guides knowledgeable about cave protection and safety to lead groups into the caves;
- environmental and social impact assessments together with an impact mitigation plan for any tourism development in the park particularly if the development or activity involves a cave;
- a sustainable project working towards the privatization of the Park's (2,500 ha) Tourism Centre.

Apart from developing a water-based tourism product and a plan for the development of the Park's 2,500 ha Tourism Centre there has been no notable progress in the supervision of tourists in caves, no progress in the training and certification of guides, no progress with or effective application of impact assessment, no individual site management/concept plans and no evidence of adequate interpretation materials.

In pursuing the objective that tourism development should support the conservation of the property's OUV, a key requirement should be to establish, on the basis of scientific studies and assessments, a strict upper limit for the number of visitors to each tourism spot in the property, as well as for the property as a whole. No such studies and assessments have taken place to date, and there is an urgent need to put a cap on visitation before additional tourism products are developed.

Almost 75% of the planning period for the Operational Plan has lapsed and there is little evidence of progress towards achieving the objectives of heritage and tourism management.

Given the mission's observations of implementation of the Plan's guidelines/strategies and the lack of progress in the key areas of visitor monitoring, survey, site management plans and interpretation material for the tourist caves and other key sites there is some concern regarding plans to privatize the Tourism Centre.

3.3. WILDLIFE MANAGEMENT

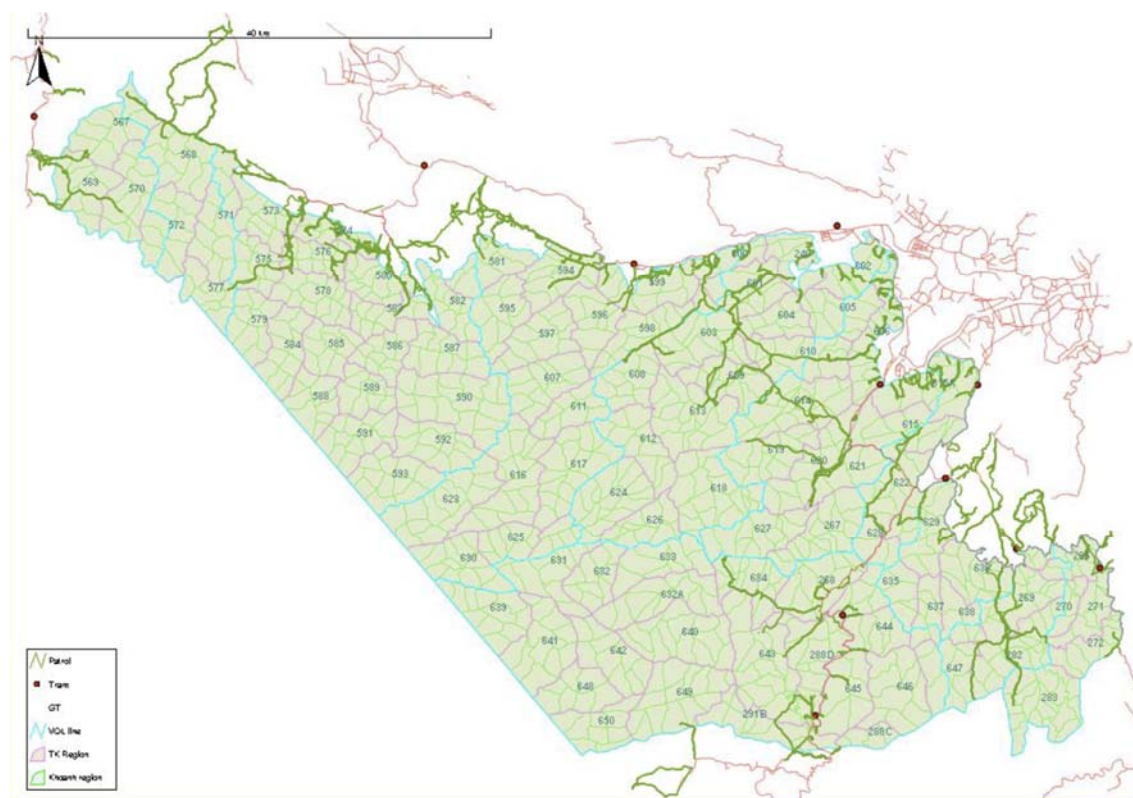
When the Committee approved the extension and re-inscription of the property under criteria (viii), (ix) and (x) in 2015, it requested the State Party to submit, by 1 February 2016, updated data on the population status of key large mammal species, in response to the observation made by the 2015 IUCN evaluation of the renominated property that sightings of large mammal species were declining. However, the State Party did not submit this data as requested, therefore the Committee at its 40th session in 2016 reiterated its request, specifying that tiger, Asiatic black bear, Asian elephant, giant muntjac, Asian wild dog (dhole), gaur and saola should be among the species for which data should be provided.

In 2017, the State Party provided information regarding the monitoring of three (unspecified) key species, as well as a list of mammal species and their distribution in the property, however,

this information was considered inadequate as a baseline for further monitoring, as it did not include estimates of population size and trends. Worryingly, the data showed that among many other species, tiger, Asian elephant, Asiatic black bear, saola and dhole had not been recently recorded in the property. The Committee, therefore, reiterated once again its request for updated data on the population status of key large mammal species to be provided, as well as clarifications on the methods used for monitoring.

During meetings with the Management Board and with rangers posted at field stations, the mission was informed that species monitoring (biomonitoring) is undertaken as part of regular patrols, using the Spatial Monitoring and Reporting Tool (SMART). The application of SMART is fairly new, having been introduced to the property only two years ago. The property is the first National Park in Viet Nam to apply SMART and is still getting used to this new tool. As can be seen from Map 1 below, patrols (and the location of ranger stations) are limited to the perimeter of the park and to the areas most frequented by tourists. Patrols, and therefore biomonitoring, do not (yet) cover the core zone of the property. The mission understands that the Management Board would require 135 more staff to provide adequate forest protection, but the national government policy to reduce the number of government employees complicates the recruitment of additional rangers.

Due to the limited patrol coverage of the property, and the absence of targeted monitoring programmes for individual species, there has been little progress so far in addressing the data gaps for species populations and trends, which were already noted by the 2015 IUCN evaluation. However, additional efforts to address this are underway. In 2018, the Quang Binh PPC decided to provide resources for a survey of the key species noted in the Committee's Decisions. This project, which includes the use of camera traps, started only a week prior to the mission's visit. It is hoped that the report of this survey will be available by November 2018, in time for the State Party's next report on the state of conservation of the property, to be submitted to the World Heritage Centre by 1 December 2018, as requested by the Committee.



Map 1: Coverage of biomonitoring in Phong Nha-Ke Bang National Park during the period January 2017 – June 2018 using SMART (Spatial Monitoring and Reporting Tool). *Source: Phong Nha-Ke Bang National Park Management Board.*

3.3.1. ILLEGAL EXPLOITATION AND LAW ENFORCEMENT

The 2015 IUCN evaluation of the re-nominated property considered that illegal logging and poaching of wildlife were ongoing threats, while also recognizing that efforts to halt illegal activities were increasing. In 2016, the Committee (Decision **40 COM 7B.91**) requested the State Party to provide data on the results of its law enforcement activities to address illegal logging and poaching. In 2017, the State Party provided further information on its law enforcement efforts, stating that the number of violations had significantly decreased compared to 2015. However, the information provided did not enable an assessment of the effectiveness of law enforcement and indicated that illegal logging and poaching remained ongoing threats, and the Committee, therefore, reiterated its request for the State Party to provide further data on the results of its law enforcement activities.

The Management Board provided the mission with a detailed report on Forest Law Enforcement covering the period 2015 – 2017, as well as raw data on law enforcement for the period January 2017 – June 2018. This report recognizes that over the past years, illegal logging and poaching represented the most serious threat to the property. Therefore, since 2015 there has been a range of efforts to improve the effectiveness of forest protection and management through improved law enforcement. This includes the introduction of SMART and the involvement of so-called village forest protection groups and village conservation groups, the members of which are local people (including former poachers and illegal loggers), whose indigenous knowledge is recognized to significantly contribute to effective forest patrolling and biodiversity monitoring.

The report on Forest Law Enforcement states that enhanced patrolling, combined with awareness raising, has resulted in a significant reduction in the number of snares (trap lines), camps, and violators being recorded over the period 2015 – 2017 (see Table 1 below). However, as Table 1 indicates, the number of patrol trips has also declined over the same period, which may well be a significant factor in the reduction reported in the results. Therefore, the data does not clearly demonstrate whether the effectiveness of law enforcement is increasing, nor whether the reduction observed in the results represents an actual reduction of offences, or is simply a consequence of fewer offences being recorded with a decreasing patrol effort.

Table 1: Results of forest patrol trips by Phong Nha-Ke Bang National Park forest rangers for the period 2015 – 2017. *Source: Phong Nha-Ke Bang National Park Management Board.*

Year	No. of patrol trips	Results		
		No. of trap lines	No. of camps	No. of violators
2015	2,252	3,338	70	1,038
2016	2,029	2,032	51	444
2017	1,901	1,854	20	155
TOTAL	6,182	7,224	141	1,637

The number of forest violation cases handled by the PNKB Forest Protection Unit (FPU) has also seen a decrease in the period 2015 – 2017 but remains at a higher level than during the previous period 2012 – 2014 (see figure 1 below). It is noteworthy in particular that the number of cases without violators has decreased since 2016, which may indicate a higher success rate at intercepting violators before they manage to escape.

During the period 2015 – 2017, the PNKB FPU has confiscated the following items:

- 73 123 m³ of timber (all kinds)
- 229 animal carcasses (species not specified)
- >550 kg of wildlife body parts

- 555 kg of non-timber forest products (NTFPs)
- 550 tools of various types
- 51 vehicles/motorcycles
- 15 chainsaws
- 19 guns of various types
- bullets
- 1.3 kg of home-made ammunition
- 1.7 kg of explosives
- detonators.

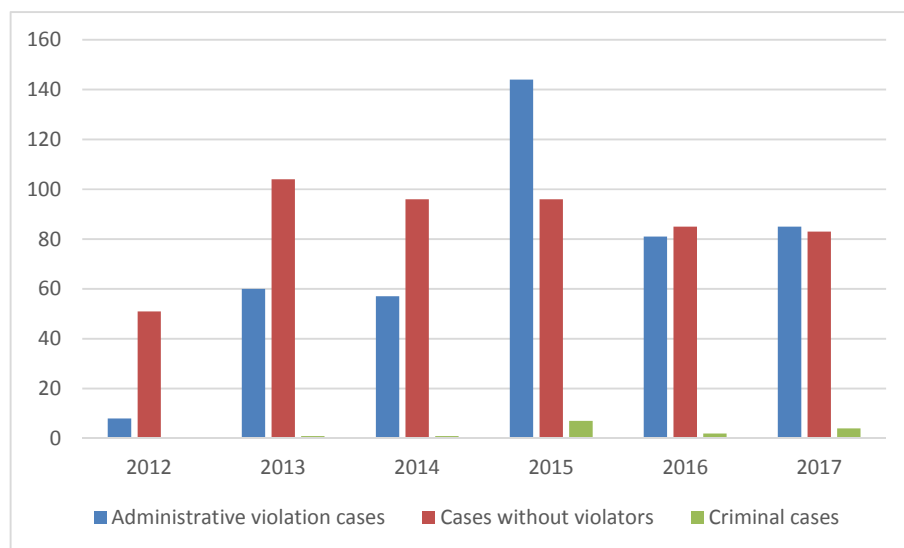


Figure 1: Number of forest violation cases handled by PNKB National Park Forest Protection Unit during the period 2012 - 2017. *Adapted from Phong Nha-Ke Bang National Park Management Board.*

Among the measures taken to support law enforcement, the Management Board has implemented several communication and awareness raising activities, including conferences held in villages to raise awareness about forest laws and regulations, engagement with schools through interpretation materials and integration of knowledge on the property in the curriculum for secondary schools, and communication of forest values through 150 information panels. The Management Board asserts that, as a result of these efforts, the number of people involved in the illegal exploitation of natural resources has decreased, while the number of people involved in forest protection, either directly through the village conservation groups or as informants, has increased.

Signed commitments not to violate forest regulations have been obtained from local businesses, including commitments by local restaurants not to trade and consume wildlife. While the mission observed that some restaurants do offer wild boar on their menu, these appear to be sourced from farmed animals.

It should further be noted that the Management Board has implemented various livelihood improvement programmes in the villages in the buffer zone, introducing alternative income generating activities such as bee-keeping, animal husbandry, vegetable cultivation, and communal forestry.

During the 2015 – 2017 period, the Park's Forest Protection Unit (FPU) has also signed cooperation agreements with a number of relevant authorities and agencies, including the

FPU of Bo Trach, Minh Hoa and Quang Ninh districts, the Border Army, state forestry companies (North Quang Binh and Long Dai Forestry Companies), and with 7 of the 13 buffer zone communes. In the framework of these agreements, these various authorities and agencies participate in the inspection and control of forest products and the handling of violation cases related to criminal law, to name but a few examples.

Other measures taken by the Management Board to improve law enforcement include the provision of various training to FPU rangers to strengthen their capacities, and stepping up disciplinary action against its own employees to correct and discourage misbehaviour. In this regard, the mission notes with concern the comments made by some respondents that some Park rangers are involved in illegal activities, including trade in protected and/or wildlife species. The mission is not in a position to ascertain the truth of these allegations and considers that they should be carefully and thoroughly investigated.

3.3.2. ALIEN AND INVASIVE SPECIES

According to the Plan, the issue of invasive species has not been considered by management prior to 2013. With the adoption of these plans in 2013, the Management Board appears to recognize the threat of Invasive Alien Species (IAS) for the first time, stating that they “*are a threat to the integrity of the [property] because they can prevent habitat regeneration and degrade natural habitats if uncontrolled*”.

The Plan identifies the following IAS as being present in the property, without providing an estimate of the extent and impact of their invasions:

- *Chromolaena odorata*
- *Mimosa diplotricha*
- *Lantana camara*
- *Imperata cylindrica*

In addition, the mission observed other species that are starting to spread around tourism areas, including an alien species of Arrowhead (*Syngonium sp.*) and an alien species of grass (possibly *Axonopus compressus*).

Given the presence of several IAS in the property, and the statement made in the Operational and Strategic Management Plans that “*campaigns to eradicate invasive species can be expensive and ineffective if not carefully planned and researched*”, the mission notes with concern that the total budget for action on invasive species (Operational Management Plan 2013-2025) was limited to a mere 5,556 EURO in 2014 to “*conduct study on invasive and alien species in the Park and develop measures to control them*”. The mission was informed that over the past three years, research on IAS has been carried out. However, there is no indication that any progress has been made to develop measures to control IAS, and in the absence of any budget set aside for IAS in the current Plan until 2025, the Management Board clearly does not have the resources to take adequate management action on this threat.

It should be noted that on 17 December 2012, the Prime Minister of Viet Nam adopted Decision 1896/QĐ-TTg regarding the Master Plan on Prevention and Control of Invasive Alien Species in Viet Nam to 2020, which puts the responsibility for IAS monitoring and control mainly with the Ministry of Natural Resources and Environment, the Ministry of Agriculture and Rural Development, and Provincial People’s Committees. Importantly, this Decision includes an objective to “*provide funding for the prevention, control and eradication of invasive alien species, focusing on investment activities to prevent, eradicate and remove the invasive alien species*”.

3.3.2.1. IMPACT AND MANAGEMENT OF *MERREMIA BOISIANA*

At its 41st session, the World Heritage Committee was alerted by the State Party to the threat posed by *Merremia boissiana*. The State Party stated in its report on the state of conservation

of the property submitted on 26 January 2017, that “[...] *invasive species, particularly Merremia boissiana, has invaded and occupied an area of over 4000 ha causing biodiversity loss, affecting the entire ecosystem*”. Notwithstanding the significant threat that *M. boissiana* represents according to this statement, there is no mention whatsoever of this species in the Plan.

The mission was able to confirm that *M. boissiana* represents a significant management challenge and a severe threat to the biodiversity of the property, as it covers large areas where it completely smothers other native vegetation. The species spreads as dense mats on the ground and can climb and cover standing trees.

During discussions with the Management Board, there was some debate as to whether the species is actually an Invasive Alien Species or whether it is native to the area. Following consultation with experts from IUCN’s Species Survival Commission (SSC) Invasive Species Specialist Group (ISSG), the mission understands that the species is regarded as being native to Viet Nam. However, the mission is of the view that despite being native, *M. boissiana* behaves like an invasive species in the property, and is causing significant damage to the ecosystem. Indeed, as noted to the mission by the ISSG, experience from other countries shows that many other species in the Convolvulaceae Family appear to be thriving and becoming problematic, including exotic but also native species. For example, in Eastern Africa, where *Ipomoea cairica* is considered to be native, it behaves like an IAS, smothering other native vegetation. Within Southeast Asia, *Merremia peltata* is considered to be native to Bukit Barisan Selatan National Park (part of the Tropical Rainforest Heritage of Sumatra, Indonesia), but has ‘invaded’ as much as 7000 ha. Considering this IAS-like behaviour of *M. boissiana* in the property, the mission is of the view that a control and eradication campaign is urgently required.

The mission understood that tests to eradicate *M. boissiana* using glyphosate injection in the stem have been successful elsewhere in Viet Nam. There are now plans to test this method on 100 ha within the property, and if successful, to expand this test to 1000 ha. The mission was significantly concerned by the extent of *M. boissiana* infestation in areas that have been degraded (likely to a large extent resulting from damage during the armed conflict of the 1960’s and 70’s) but also found *M. boissiana* in areas that looked otherwise little disturbed. It is clear that the extent of the invasion requires a monumental investment of resources to address. Injection with glyphosate will be a very labour intensive exercise and would create the complication of generating large amounts of dead vines which would need to be removed in order not to represent a fire hazard. Nevertheless, the use of herbicides combined with mechanical removal has been successfully applied on a large scale in parts of Bukit Barisan Selatan, and the mission recommends that the Management Board and the Quang Binh Provincial People’s Committee approach the relevant actors in Indonesia to exchange experiences and lessons learned, which have been documented (in Indonesian) by Subiakto *et al.* (2016)⁷. Some of the key observations made by Subiakto *et al.* (2016) include:

- 1) Control of *Merremia* is more effective if targeted at areas with new invasions, in order to prevent further expansion;
- 2) Being a light-loving species, regrowth of *Merremia* can be controlled by closing the canopy to limit the amount of sunlight on the forest floor, by planting fast growing native species;
- 3) For areas where the invasion is massive, a long-term (>10 years) control plan is required;
- 4) The total cost to control *Merremia* in the Sumatran context was Rp 4 653 000 (approx.. 340 USD) per hectare, while the total cost of ecological restoration was Rp 14 125 000 (approx.. 1 000 USD) per hectare.

⁷ Subiakto A., Mawazin, Irianto R, Garsetiasih R., Setyawati T, Tjitrosoedirjo S, and Sunardi, 2016. *Pedoman Pengendalian dan Restorasi Hutan Konservasi Terinvasi Merremia peltata di Taman Nasional Bukit Barisan Selatan*. Bogor (ID): FORIS Indonesia.

Noting the need for a long-term plan to control *Merremia boissiana* in the property, the mission considers that this urgent management intervention represents an opportunity to create jobs for local communities. It is of utmost importance that adequate financial resources are secured to commence *Merremia* control measures and sustain them over a period of at least 10 years.

3.4. OTHER CONSERVATION ISSUES

Paragraph 173 of the Operational Guidelines for the implementation of the World Heritage Convention requires that all missions review the state of conservation of a property including a follow up to previous decisions of the World Heritage Committee, and any issues that may affect the conservation of its Outstanding Universal Value and that have not previously been identified by the Committee.

3.4.1. WORLD HERITAGE AND LOCAL COMMUNITIES

Phong Nha-Ke Bang National Park and its buffer zone are home to a population estimated at 70,000 people, including two villages within the boundaries of the property.

With the establishment of the national park in 2001, these local populations have been affected by the prohibition of access to forest resources and, in some cases, relocation. This has led to some impacts for part of these communities, notably for ethnic minorities, resulting from the loss of forest-dependent livelihoods. While local communities do receive government subsidies to compensate for the loss of access to forest resources, the mission was informed that some communities still suffer food shortages both as a result of access restrictions and the limited availability of agricultural lands. During the mission's discussions with representatives from local communities, concerns were expressed regarding a perceived increase in the allocation of local lands (used for agriculture) to investors and the conversion of these lands to resorts. This was stated to be leading to a deficit in the availability of arable land, which, given the high proportion of people still dependent on agriculture and the increasing demand for food both from a growing population and a growing number of visitors, was highlighted as a major concern.

During the period of 2015-2017, the Management Board, in coordination with the Management Unit of the Forest Protection and Development Project of Bo Trach district, have implemented some livelihood improvement programmes for several villages in the buffer zone, focused on the development of alternative income-generating activities, such as beekeeping, animal husbandry, vegetable cultivation, plantations for timber or paper (e.g. *Dalbergia tonkinensis*, *Acacia* sp.) and the establishment of 5000 ha of community protected forests in Tan Trach and Thuong Trach communes. Members of those communities can and do obtain permits from the local ranger station for the extraction of NTFPs, such as the medicinal plant: *Millettia reticulata*.

Xuan Trach commune (adjacent to the property) reported that 70 people are involved in forest patrolling every month. A total of 13 communes in the buffer zone participate in similar programmes, in the framework of national policy 661 on forest protection. The mission was assured that their traditional knowledge of forests is respected and transmitted to younger generations. Formal training is also provided for observing different species, use of equipment and recording. The village representatives met by the mission stated that their participation in forest protection is important for their communities, not only to stay connected to the forest but also to maintain the unity of the village through collective activity. Overall, agriculture still represents a primary source of income, but day labour and employment in the tourism sector are increasingly significant, with one village (Chay Lap) reporting 125 people employed in tourism out of a total population of 1032 (12%). As an example of the potential benefits that tourism can bring to local communities, the mission noted that Oxalis, the company which organizes tours to Hang En and Son Doong, employs most of its staff from Phong Nha or Tan Hoa villages, enabling them to maintain their traditional ties with the forest and caves.

It deserves to be noted that not all local communities are able to maintain their traditional ties with the caves, and many traditional practices of ethnic minorities involving access to caves or natural resources are no longer permitted within the property. For example, the Arem ethnic minority used to go to Hang En in May, to collect young birds by climbing the wall of the cave by means of ropes made of tree branches. With the establishment of the national park, this activity is no longer allowed. The Chut people (including the Arem, Ruc and May) have a longstanding cultural relationship with cave use, which may be expressed in terms of spiritual engagement, dwelling, hunting, fishing, burial grounds, etc. However, much of this cultural relationship is poorly documented and threatened by lack of recognition, access restrictions, and lack of benefit-sharing arrangements while many of their traditional caves are being developed for tourism. Given the significant role that traditional knowledge has and continues to play in cave discovery in the area, there is potential to integrate these traditional cultural relationships with cave use into the development of tourism products, which would require the involvement of ethnic minorities in decision-making, employment, and sharing of benefits derived from tourism. However, the mission found little evidence of efforts being made to realize this potential. Having said that, cultural tourism focussed on ethnic minorities is one of the suggestions provided by the tourism development directives as per the Prime Minister's decision. Such cultural tourism should pay great attention to respect the dignity of ethnic minorities, and avoid turning them into museum objects. The involvement of ethnic minorities in the co-management of the property should be encouraged, and respect their traditional knowledge and customary practices. The Quang Binh Provincial People's Committee noted that there might be a possibility of considering a review of the regulations to allow ethnic minorities to continue some customary practices.

The mission wishes to highlight that in the *Policy Document for the Integration of a Sustainable Development Perspective into the Processes of the World Heritage Convention*, adopted by the General Assembly of States Parties to the World Heritage Convention at its 20th session (UNESCO, 2015), it is clearly stated that States Parties should, in addition to protecting the OUV of World Heritage properties, recognise and promote the properties' inherent potential to contribute to all dimensions of sustainable development and work to harness the collective benefits for society, also by ensuring that their conservation and management strategies are aligned with broader sustainable development objectives and without compromising the properties' OUV. Notably, the Policy Document recalls Article 5 of the World Heritage Convention, calling upon States Parties to "adopt a general policy which aims to give the cultural and natural heritage a function in the life of the community". States Parties should further recognise that full inclusion, respect and equity of all stakeholders, including local and concerned communities and minority groups, together with a commitment to gender equality, are a fundamental premise for inclusive social development. Enhancing quality of life and well-being in and around World Heritage properties is essential and inclusive social development must be underpinned by inclusive governance. Noting the intimate historical relationship between the World Heritage site and local populations, it would be advisable to recognize and document the cultural values of local communities, their customary relationship with natural resources and further involve them in the preservation and sustainable use of the property.

Following a review of earlier reports the issues which remain outstanding and restated here are:

- All members of the Management Board are government officials and even though many activities for the involvement, outreach and education of local communities have been conducted, no formal or permanent engagement mechanism is yet in place to ensure the participation of a wider group of stakeholders (community leaders, private sector, ethnic minorities, NGOs, etc.) in the management of the property. Greater involvement of stakeholders, particularly local communities and ethnic minorities, would enable better consideration of their concerns in the management of the property and should lead to improved benefit sharing. Such mechanism would allow the Management Board to channel crucial message for engagement, awareness about heritage value and commitment to

shared management practices to protect the property and possibly to show their will to direct benefits of economic and social developments towards local populations in a clearer manner.

- With regard to ethnic minorities, the Strategic Management Plan states in section 1.8.2. (Land Tenure and Use Rights) that 'nothing in this document is intended to diminish in any way their land rights or user rights, either legally recognized or customarily.' A clarification may be needed here and a possible review of on-going regulations/management practices concerning this point may be of interest.

3.5. OTHER ISSUES

The 2005-2015 Hunting & Wildlife Trade Control Action Plan between the property and the Hin Nam No National Protected Area has lapsed and no evidence of this important strategy being maintained was presented prior to or during the mission.

There is no systematic measurement of management effectiveness in regard to:

- visitor management/impacts (particularly on caves)
- spread of invasive/alien plant species
- wildlife monitoring
- capacity building
- site interpretation and awareness raising.

For the period 2007-2015 the government allocated about 200,000 USD annually to support the Board but considering the number of staff this allocation was considered to be inadequate in view of the (then) USD1 million annual revenue from ticket sales and tourism activities in addition to the very considerable investment by NGOs and international donors.

Capacity in understanding and conducting Environmental/Heritage Impact Assessments remains inadequate.

4. STATE OF CONSERVATION OF THE PROPERTY

The mission recognises that the property continues to demonstrate its OUV, but a number of challenges remain to be addressed, including the need to control and where feasible eradicate invasive alien species and the native but hyper-abundant *Merremia peltata*. Biological monitoring needs to be strengthened to enhance management and protection of the property's biodiversity. The implementation of SMART (Spatial Monitoring and Reporting Tool) is in that regard an encouraging recent development, as is the involvement of local communities in so-called forest protection and conservation groups, which support rangers on forest patrols. Capacities for the implementation of SMART will need to be strengthened through dedicated ranger training. The various management plans for the property (2010–2020 Sustainable Tourism Development Plan, a 2013–2025 Strategic Management Plan and a 2013–2020 Operational Management Plan) are well written but not consistently implemented, in particular when it comes to tourism planning and management. Management could be further streamlined by integrating the aforementioned plans and the Prime Minister's 2015 and 2017 Decisions into a single Integrated Development and Management Plan. The availability of human resources for the management of the property remains a significant challenge – while the Management Board recognizes the need to increase staff numbers to increase forest patrol coverage, structured data collection and prevention of illegal activities, addressing this need is challenging due to the national policy to reduce government staff.

The mission appreciated the Management Board's efforts to improve interagency coordination, implement a number of public awareness activities and involvement of communities concerning the conservation of the property and its biodiversity. However, a fundamental improvement is needed in terms of education and awareness raising as part of the tourism products on offer, which currently focus on providing a thrilling experience without giving any information about the property, its World Heritage values and the need to conserve them.

Phong Nha-Ke Bang National Park and its buffer zone will continue to experience increasing pressure from growing human populations and visitation. The rapid socio-economic development of the area, including the ongoing development of various tourism activities and infrastructure, require careful consideration of direct, indirect and cumulative impacts on the property's OUV. There is a need to ensure the equitable sharing of benefits, in conformity with the Policy Document for the Integration of a Sustainable Development Perspective into the Processes of the World Heritage Convention, adopted by the General Assembly of States Parties at its 20th session (2015).

It might be useful to include training on heritage values and the provisions of the World Heritage Convention and its *Operational Guidelines* for tourism sector staff, as well as on ways to engage local communities in the stewardship of World Heritage. A deeper and generalised awareness of heritage values and coordination in the decision-making processes, in considering various parameters and prescriptions by the status of World Heritage site, is desirable.

5. CONCLUSIONS AND RECOMMENDATIONS

OVERALL CONSERVATION STATUS, WILDLIFE CONSERVATION AND INVASIVE SPECIES

The World Heritage property 'Phong Nha Ke Bang National Park' covers an area of 123,326 ha under the National Park (decision N° 1062/QĐ-TTg of 5 July 2013), divided into three distinctive zones of management and a buffer zone of 220,055 ha. In 2015, it was reported that the buffer zone was home to a population estimated at 54,000 and two Arem villages were within the boundaries of the existing property, with 401 individuals and 72 households. During the mission, it was mentioned that there is currently a population of around 70,000 peoples living in buffer zones in 13 communes.

The Management Board has deployed its efforts in addressing a number of daily management issues, such as ensuring regular surveying and patrolling within the property, despite the scarcity of human resources (currently one ranger per 1,000 ha). The Management Board has been involving local populations from the Buffer Zones in patrols, thereby allowing them to contributing to maintaining a critical link between the forest and local communities.

A stricter application of law enforcement measures, combined with a stronger interagency coordination, capacity building for rangers, and educational and conservation awareness programmes for local populations have been put in place.

Species monitoring is undertaken with the use of SMART (Spatial Monitoring and Reporting Tool), which was introduced to the property two years ago. A biodiversity survey was ongoing at the time of the mission, the report of which is expected to be available by November 2018.

The ban on hunting and logging in natural forests is a governmental policy. The increased enforcement and enhanced educational activities act as a deterrent to the involvement of populations and intermediaries in such activities. However, the mission noted that poaching continues to be a threat.

In addition to the expansion of *Merremia boissiana*, which is considered an overabundant native species, the mission observed the spread of several invasive alien species (IAS). It is crucial to allocate appropriate financial and human resources to developing and implementing prevention and control measures for IAS, which represent a significant management challenge.

TOURISM DEVELOPMENT AND PROSPECTS

National and provincial authorities, as well as the Management Board, confirmed that the cable car construction to Son Doong Cave will not be approved. It is not included in the approved Decision by the Prime Minister issued in 2017 and therefore no longer under consideration. However, another proposal for a cable car to Hang En, only 3.5 km from Son Doong, is still being considered. The mission notes with significant concern that such a construction would lead to a drastic change in the nature of tourism offers and the environment of the remote area in the heart of the property, and certainly would cause irreversible impacts on the largely pristine environment, which is home to several endangered species. **In the mission's view, further consideration or implementation of either of the abovementioned cable car projects—or similar projects that would significantly increase visitation to currently undisturbed or little disturbed caves in the property or alter the physical conditions of such caves, for example through the construction of infrastructure in or near caves—would represent a clear potential danger to the Outstanding Universal Value of the property in accordance with Paragraph 180 of the Operational Guidelines, and should lead to the immediate inscription of the property on the List of World Heritage in Danger.**

The property has witnessed a constant increase of visitors and its management authorities view tourism development as a primary opportunity to cope with its social and demographic evolution, as well as a means to increase resources for environmental conservation through taxation. The mission noted the comment by the management authorities that visitation to the

property is still lower (with 7-9% yearly increase) than that being experienced in Ha Long Bay and in the Trang An Landscape Complex World Heritage Areas and it seemed to the mission that there is some sort of background expectation of World Heritage properties to attract very high visitation, while no effort is made to understand and manage the impacts thereof. The mission also noted an increase in the number of tourist spots at the property between 2015 and 2017. Two Prime Ministerial Decisions adopted in 2015 and 2017 provide a set of development objectives for the property and its buffer zone. The development of mass tourism in the administrative zone within the property and the urbanization of the buffer zone are cause for concern, and should be subject to appropriate and thorough assessments, including Environmental Impact Assessments which assess direct, indirect and cumulative impacts, prior to any project being approved. The improvement of existing tourism offers and the re-evaluation of the planned new products are recommended, including a reflection on the complementarity of existing and new offers, with the aim of enhancing the property's values while placing a stronger focus on conservation and education.

Oureach and educational activities on heritage values both for the personnel involved in ark management and the public could be addressed through a capacity-building initiative.

GOVERNANCE AND PLANNING FOR SUSTAINABLE MANAGEMENT OF THE PROPERTY

In general, the mission concluded that the request by the Committee to revise the existing management and planning tools considering the significant extension of the inscribed property in 2015 has not been fully addressed and that there is a crucial need to operationalize these tools. In this regard, it would be critical to update and integrate all existing management tools into a single document, accompanied by yearly action plans and providing a clearer definition of functional and tourism use zoning. The competent authorities are advised to engage in this process, while at the same time strengthening the implementation capacities of the Management Board. This process also requires the re-confirmation of fundamental principles already stated in the existing tools, ensuring the balance between the conservation of the property and the development of tourism activities. This should enable benefit sharing with local communities, leading to an increased awareness of a shared responsibility of the authorities and stakeholders, including tourists, towards the sustainable management of the property. A wider understanding of the requirements and parameters resulting from the property's inscription on the World Heritage List would be necessary so that all future planning, decision-making and implementation of actions are given appropriate consideration in light of the overall objective of preserving Outstanding Universal Value of the property.

The mission noted in particular the issuance of two additional Decisions of the Prime Minister in 2015 and 2017, and expresses its concern about the massive tourism development (new tourism products and locations, including the world's longest zip-line) in and around the property and planned urbanization of the Buffer Zones indicated in those decisions, which contradict the objectives of the Sustainable Tourism Development Plan. Seeking further consistency and synergy among various management documents, under a stronger overarching objective of sustainable preservation of the World Heritage property would lead to a more effective governance, coordination and implementation of actions concerning the property.

LOCAL POPULATIONS AND BENEFIT SHARING

While some measures have been taken with the aim of promoting the integration and improvement of livelihoods for local populations and ethnic minorities, some ethnic minorities are now deprived of traditional access to the forest and its resources. Integration and benefit sharing are highlighted in the recent adoption of a policy for the integration of sustainable development principles into the management of World Heritage sites, as per the policy adopted by the General Assembly of States Parties to the World Heritage Convention. The mission

recommends that the authorities not only continue providing assistance to local populations and ethnic minorities to prevent their marginalization from social and economic life, but also seek to apply policies to reduce, in the long term, their dependence on subsidies and tourism-related income. The World Heritage Listing of the property should act as a driver for local communities, including ethnic minorities, to reap fairly shared benefits and contribute to the preservation of the property by means of their knowledge of the natural environment. The rich culture of ethnic minorities may be a resource for reflection on their future participation in the socio-economic activities of the property while taking the utmost care not to 'museum-ify' their lives and cultures.

5.1. MANAGEMENT EFFECTIVENESS AND GOVERNANCE

5.1.1. MANAGEMENT STRUCTURE AND GOVERNANCE

R1. Reinforce the management mechanism for Phong Nha-Ke Bang National Park in terms of human resources and financial provisions in order to enable the implementation of the requests made by the World Heritage Committee and the recommendations of the mission, including by:

- a) Undertaking an overall review of staffing, to ensure a more balanced implementation of management actions related to preservation, research, coordination and development;
- b) Establishing an official mission statement, which clearly sets the Management Board's institutional vision, emphasizing the primary management objective of maintaining the Outstanding Universal Value (OUV) of the property;
- c) Undertaking a Training Needs Assessment to plan for long-term institutional capacity building in key areas of management, and rolling out a training and awareness-raising programme to ensure that staff are well aware of the property's OUV and the requirements of the World Heritage Convention and its *Operational Guidelines*.

5.1.2. MANAGEMENT PLANNING

R2. By 1 December 2019, integrate and harmonize the current Sustainable Tourism, Strategic and buffer zone Development Plans together with the master plans for the construction of Phong Nha-Ke Bang (PNKB) National Park and the Development of the PNKB Tourism Centre indicated by the Prime Minister's decisions of 2015 and 2017, into a single Integrated Development and Management Plan (IDMP) for the property, covering the period 2020 to 2040, and ensure that:

- a) A detailed Action Plan for the period 2020 to 2025 is appended to the IDMP;
- b) Subsequent five-year action plans are prepared throughout the time covered by the IDMP;
- c) The IDMP adopts the Tourism Use Zoning System as detailed in the current Sustainable Tourism Development Plan;
- d) The development of the IDMP takes into consideration management guidelines provided by the World Heritage Centre and IUCN,⁸ and the draft IDMP is submitted to the World Heritage Centre and IUCN for review prior to its final adoption.

⁸ E.g. *Managing Natural World Heritage*, UNESCO/ICCROM/ICOMOS/IUCN, 2012.

5.1.3. MANAGEMENT ZONES

R3. Further clarify the functional zoning of the property, including by:

- a) Fully integrating the 2015 extension of the property in its functional zoning system by ceasing to refer to it as an extension area in any texts or maps in the proposed IDMP, except where necessary in describing the history of the property's establishment;
- b) Providing to the World Heritage Centre an explanation of the difference(s) between the management objectives, management requirements and/or desired outcomes for the four sub-areas of the Strictly Protected Area as defined in the Operational Management Plan.

R4. Elaborate details of what development and uses will or will not be permitted in those parts of functional zones not specifically zoned for tourism use, clarify how the existing tourism activities provided along the Chay River (in the High Volume Tourism Use Zone) will be modified to respond to the planning requirement to "promote appreciation of heritage and conservation values" to a high volume of visitors, and include these specifications within the proposed IDMP.

5.2. TOURISM DEVELOPMENT AND MANAGEMENT

5.2.1. TOURISM

R5. Rigorously ensure that all future tourism developments/activities approved within the property will strictly comply with the requirements detailed in the current Tourism Use Zoning system, and, on the basis of scientific studies and assessments of carrying capacity, establish a strict upper limit to the number of visitors to the property and to individual tourist spots to ensure that tourism remains compatible with the primary objective of conserving the property's OUV.

R6. Modify the tourism activity at Paradise Cave to at least partly include the specific management requirements for the Strict Ecotourism Zone and the Ecological Restoration Area, i.e.:

- a) Provide a visitor experience with a strong emphasis on understanding and appreciation of local ecology, including through the provision of high-quality information and interpretation on environmental conservation;
- b) Manage and support activities for low visitation levels in small groups;
- c) Provide site-specific regulations and restrictions for visitors and commercial tourism operations, including:
 - i. Prohibit any food or beverage (except for bottled water) into the cave;
 - ii. Prohibit leaving behind any waste in the cave, and refrain from providing waste bins inside the cave to encourage visitors to carry their waste back out;
 - iii. Put in place procedures for regulating the appropriate volume of visitors and appropriate visitor activities and behaviour, including by requiring visitors to only enter the cave with an adequately trained guide.

R7. Permanently and unequivocally abandon all proposed cable car developments at Son Doong Cave and Hang En and provide assurance that any future proposed cable car developments in the Strictly Protected Area, the Ecological Restoration Area, the Nature and Heritage Tourism Zone, the Strict Ecotourism Zone, and areas not specifically zoned for any tourism development will not be approved.

R8. In relation to tourism at Hang En and Son Doong Cave:

- a) Clarify the scope and nature of projects foreseen in Decision 2128/QĐ-TTg of the Prime Minister, dated 29 December 2017, to develop sightseeing points at Son Doong Cave and Hang En, and to construct a Ba Da – Son Doong tour, including clarification regarding the type of infrastructure and activities that would be involved in these developments;
- b) Make a commitment not to intensify visitation of Hang En and Son Doong Cave, setting the current number of visitors per annum at either cave as upper limits, and to ensure that any development of the tourism product at these caves does not result in increased and/or permanent impacts on the caves' environments and/or a deterioration of visitor experience.

R9. In relation to the proposed developments of a zip-line at Nuoc Mooc and outdoor activities (hiking and mountain biking) in Sinh Ton (Abandoned Valley):

- a) Clarify in which tourism zone Sinh Ton is included and clearly identify the location of the proposed developments on a map, which should also delineate the boundary of the property;
- b) Prepare comprehensive Environmental Impact Assessments for both the zip-line and the proposed developments at Sinh Ton, including a specific assessment of impacts on Outstanding Universal Value of the property, in accordance with IUCN's World Heritage Advice Note on Environmental Assessment;
- c) Clarify how the proposed zip-line and the developments at Sinh Ton will comply with the planning requirement for tourism activities to provide an appreciation of the property's heritage and conservation values.

R10. Evaluate the existing interpretation facilities and materials and establish a plan for enhancing the interpretation of the property's natural values, fully consistent with its Outstanding Universal Value and the importance of its conservation.

R11. Explore the possibility of developing signature souvenir products, on the basis of a study of locally available and sustainably sourced assets.

R12. Prepare individual management plans for each cave (or part of such cave) being used for cave tourism (the show caves Phong Nha, Tien Son, and Paradise Cave and any cave used for commercial adventure caving), and:

- a) Ensure that cave management plans are consistent and compliant with the cave management prescriptions required by the Strategic Management Plan;
- b) Strictly prohibit the practice of mud and/or sand bathing in caves, or any other unnecessary interference with cave sediments;
- c) Ensure that kayaking into caves is only permitted as part of a structured adventure caving activity, led by a competent guide, and focussed on transferring an understanding of the cave's World Heritage values;
- d) Submit individual cave management plans to the World Heritage Centre for review by IUCN, as soon as they are available.

R13. Strictly require that all tourists visiting caves within the property be supervised by a certified guide, ensuring that:

- a) Comprehensive training and a certification system are prepared, implemented and made compulsorily for all cave guides;
- b) Limit the maximum of tourists to 25 per guide in show caves and 10 tourists per guide in adventure caves and ensure close observance of these limits;

- c) Guides are supported in their role by the presence of competent guards situated in the caves to assist the guides as required with enforcement of behaviour as determined by each cave management plan/prescription.

R14. Include an appropriate level of environmental interpretation in areas around and including Dark Cave and the Nuoc Mooc Eco-trail to foster an understanding and appreciation of the property's purpose and significance, including in particular Mooc Spring itself as an excellent example of major karst resurgence.

5.2.2. OVERALL TOURISM MANAGEMENT

R15. By 1 December 2019, submit to the World Heritage Centre, for review by IUCN, a report detailing the progress achieved in implementing the above recommendations R5, R6, R9, R10, and R12 – R14, and in meeting the activities and requirements detailed in the Operational Plan and the Sustainable Tourism Development Plan, and delay the implementation of the privatization of the Tourism Centre pending the satisfactory implementation of these recommendations.

5.3. WILDLIFE MANAGEMENT

5.3.1. ILLEGAL EXPLOITATION AND LAW ENFORCEMENT

R16. Continue current efforts to improve law enforcement, including by:

- a) Further increase the number and frequency of patrols to the extent possible, ensuring that they cover the entire perimeter of the property as well as high-risk areas within the property;
- b) Conduct an independent and thorough investigation into allegations that some Phong Nha-Ke Bang National Park Forest Protection Unit rangers are involved in illegal activities, including trade in protected and/or endangered wildlife species, and take appropriate disciplinary and legal action against any rangers involved in such activities.

5.3.2. ALIEN AND INVASIVE SPECIES

R17. Develop (ideally as part of the proposed IDMP) a long-term Invasive Alien Species (IAS) eradication and control plan, including a control plan for *Merremia boissiana*, which is considered native but behaves like an IAS, and secure adequate financial resources to ensure the implementation of this eradication and control plan over a period of at least 10 years. In the development and implementation of a control plan for *M. boissiana*, build on the lessons learned during trials elsewhere in Viet Nam and abroad (e.g. at Bukit Barisan Selatan National Park in Indonesia).

5.4. OTHER CONSERVATION ISSUES

5.4.1. WORLD HERITAGE AND LOCAL COMMUNITIES – BENEFIT SHARING

R18. Put in place a mechanism that will ensure adequate engagement of various stakeholders, including local communities, in the management of the property, notably in decision-making processes, and significantly increase efforts, whenever possible, to provide the resettled ethnic minorities with opportunities to express their opinions on the access to formerly customarily granted rights, without prejudice to the preservation of the property and its natural resources.

R19. Explore the possibility of documenting and researching traditional and historical cultural practices which bear testament to the customary practices of local populations and their relations to the property, as part of efforts to enhance the interpretation of the values of the property, which are not limited to its OUV.

5.4.2. TRANSBOUNDARY COLLABORATION WITH LAO PDR

R20. Noting that the 2005-2015 Hunting & Wildlife Trade Control Action Plan between the property and adjoining Hin Nam No National Protected Area in the Lao People's Democratic Republic has lapsed, ensure continued close collaboration between the Phong Nha-Ke Bang National Park Management Board and the management body of Hin Nam No National Protected Area on transboundary issues of common concern, capitalizing on the ongoing consideration by the State Party of Lao PDR to put forward a nomination for Hin Nam No as a transnational extension to the property as a means to strengthen collaboration on the conservation of the significant geological and biodiversity values of this transboundary karst system.

6. ANNEXES

Annex I	Terms of Reference
Annex II	Itinerary and Programme
Annex III	Composition of the Mission Team
Annex IV	Maps (most recent maps of the boundaries of the property)
Annex V	Organigrammes and functions of management
Annex VI	List of persons met during the mission
Annex VII	Cave Management and Cave Management Prescriptions
Annex VIII	Photos

ANNEX I TERMS OF REFERENCE

Joint World Heritage Centre / IUCN Reactive Monitoring Mission Phong Nha-Ke Bang National Park (Viet Nam)

July 2018

At its 41st session, the World Heritage Committee requested the State Party of Viet Nam to invite a reactive monitoring mission to Phong Nha-Ke Bang National Park World Heritage property, to be conducted jointly by the World Heritage Centre and IUCN (Decision **41 COM 7B.33**, Appendix 1). The objective of the monitoring mission is to assess the state of conservation of the property, in particular in relation to impacts from poaching, illegal logging, and invasive species, and to provide advice to the State Party regarding sustainable tourism that is compatible with the Outstanding Universal Value of the property, including at Son Doong Cave. In particular, the mission should undertake the following:

1. Assess the overall state of conservation of the property, in relation to all criteria for which the property was listed, and provide advice to the State Party in order to support the improvement of monitoring the status and trends of the property's values, including key wildlife species;
2. Assess the status of reported plans for the development of a cable car project to access Son Doong Cave, review available information about this and any similar projects, and assess the likely impacts of proposed tourism developments in and around the property;
3. Review the Sustainable Tourism Development Plan 2010-2020, the General Plan for Phong Nha-Ke Bang National Park to 2030, and the Special National Heritage Plan 2016-2025, in particular in terms of their address of issues of tourism development and wildlife management;
4. Assess the impacts and extent of illegal exploitation of forest products (including timber), poaching, and illegal wildlife trade, and the effectiveness of law enforcement in addressing these issues;
5. Assess the impact of invasive species on the property, in particular *Merremia boissiana*, and the effectiveness of management actions taken to address this issue;
6. In line with paragraph 173 of the *Operational Guidelines*, assess any other relevant conservation issues that may negatively impact on the Outstanding Universal Value of the property, including the conditions of integrity and protection and management.

The State Party should facilitate necessary field visits to key locations, including to Son Doong Cave. In order to enable preparation for the mission, the following items should be provided to the World Heritage Centre (copied to IUCN) as soon as possible and preferably no later than 1 month prior to the mission:

- a) All relevant tourism planning documents for the property, including the Sustainable Tourism Development Plan 2010-2020, the General Plan for Phong Nha-Ke Bang National Park 2030, and the Special National Heritage Plan 2016-2025;
- b) All available information about the proposed cable car project, as well as any other proposed tourism developments (including project designs, locations, and impact assessments where available);
- c) Reports of the monitoring and surveillance of the property, including time series figures (2015-2017) on:
 - i. Populations of key wildlife species,
 - ii. Patrolling capacity (financial, human and material resources),

- iii. Patrolling coverage (area covered, time spent in the field),
 - iv. Seizures of illegal wildlife products (any type),
 - v. Number of arrests and convictions made,
- d) The management plan for the property.

The mission should also hold consultations with the Vietnamese authorities at national, provincial and municipal levels, in particular the Ministry of Natural Resources and Environment, the Ministry of Culture, Sports and Tourism, and the Ministry of Agriculture and Rural Development. In addition, the mission should hold consultation with a range of relevant stakeholders, including i) park rangers; ii) NGOs; iii) the IUCN Office in Ha Noi; and iv) representatives of local and indigenous communities.

Based on the results of the above-mentioned assessments and discussions with the State Party representatives and stakeholders, the mission will develop recommendations to the Government of Viet Nam and the World Heritage Committee with the objective of providing guidance to the State Party for actions to be taken to address identified threats to the property, and to improve the conservation of its Outstanding Universal Value. It should be noted that recommendations will be provided within the mission report (see below), and not during the mission implementation.

The mission will prepare a concise report on the findings and recommendations within six weeks following the site visit, following the World Heritage Centre reactive monitoring mission report format.

Appendix 1

Decision: 41 COM 7B.33

The World Heritage Committee,

- 1) Having examined Document WHC/17/41.COM/7B,
- 2) Recalling Decision **40 COM 7B.91**, adopted at its 40th session (Istanbul/UNESCO, 2016),
- 3) Welcomes the State Party's efforts to enhance law enforcement, increase conservation awareness among local communities and improve the conservation of biodiversity in the property;
- 4) Notes that the data provided indicate that poaching and illegal logging remain on-going threats and do not enable an assessment of the effectiveness of law enforcement and the status and trends of wildlife populations, and reiterates its request to the State Party to provide:
 - a) Data on the results of its law enforcement activities to address illegal logging and poaching,
 - b) Updated data on the population status of key large mammal species, including the tiger, Asiatic black bear, Asian elephant, giant muntjac, Asian wild dog, gaur and saola,

and requests the State Party to include clarifications on the methods used, the frequency of patrols and the areas covered, visualized on maps;

- 5) Reiterates its concern about proposals to construct a cable car to provide access to the Son Doong cave within the property, and takes note of the confirmation of the State Party that it has no intention to build a cable car system, either in Son Doong Cave, or providing access to it;
- 6) Notes with concern that a number of other issues are affecting the property, including inadequate conservation funding, impacts of climate change and invasive species, and also requests the State Party to provide further information on the measures taken to address these issues, in particular to address the threat posed by the invasive species *Merremia boissiana*;
- 7) Recalling its request to the State Party to revise the property's Sustainable Tourism Development Plan in order to include the 2015 extension of the property and ensure that an integrated and environmentally sensitive approach to tourism is adopted so as to guarantee that visitor use remains compatible with the OUV of the property, further requests the State Party to submit to the

World Heritage Centre, for review by IUCN, the relevant tourism planning documents for the property;

- 8) Requests furthermore the State Party to invite a joint World Heritage Centre/IUCN Reactive Monitoring mission to the property in order to assess its state of conservation, the impacts of poaching, illegal logging, and invasive species, and to provide advice to the State Party regarding sustainable tourism that is compatible with the OUV, including at Son Doong cave;
- 9) Finally requests the State Party to submit to the World Heritage Centre, by **1 December 2018**, an updated report on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 43rd session in 2019.

ANNEX II AGENDA

Agenda of Reactive Monitoring Mission to Phong Nha-Ke Bang National Park

11-20 July 2018

Time	Activities	Location	Implementer/Stakeholder
July 08 th 2018	Nao Hayashi/WHC arrive at Ha Noi (mission to Ha Long Bay international conference until 10 July)	Ha Noi - Ha Long Bay	Ha Long Bay Management Board
July 10 th , 2018			
07:45 – 09:35	Remco van Merm/IUCN arrive at Noi Bai Airport	Ha Noi	Secretariat of Viet Nam National Commission for UNESCO
19:10 – 21:25	Brian Clark, International Expert of IUCN to arrive at Noi Bai Airport	Ha Noi	
July 11 th , 2018			
13:30 – 15:00	Meeting with Viet Nam National Commission for UNESCO	Ha Noi Ministry of Culture, No. 51 Ngo Quyen, Ha Noi	Chaired by Deputy-Minister of Culture, Dang Thi Bich Lien; Representative of Ministry of Culture, Secretariat of Viet Nam National Commission for UNESCO, PNKB National Park
17:20 – 18:50	The mission leaving Hanoi for Quang Binh	Don Hoi	Quang Binh Province and PNKB National Park
July 12 th 2018			
09:00 – 11:00	Meeting with Quang Binh PPC and stakeholders	Don Hoi Quang Binh PPC's headquarter, No.6Hung Vuong street, Dong Hoi city, Quang Binh	Leader of Quang Binh PPC, Representative of Quang Binh PPC's Office, Dept of Agriculture and Rural Development, Dept of Tourism, Dept of Natural Resources and Environment, Dept of Culture and Sports, Dept of Foreign Affairs, PNKB National Park Management Board, Bo Trach District People's Committee, interpreter Ministry of Culture, Secretariat of Viet Nam National Commission for UNESCO
11:00-12:00	The team leaving Dong Hoi for Phong Nha	Phong Nha Town	PNKB National Park
14:00 – 16:30	Meeting with PNKB National Park Management Board to	- PNKB National Park's headquarter	Leaders of PNKB Management Board; departments, subordinate units, interpreter; Representative of Ministry of

Time	Activities	Location	Implementer/Stakeholder
	discuss on the field trips and the relevant contents		Culture, Secretariat of Viet Nam National Commission for UNESCO
July 13th 2018			
08:00 – 16:30	<p>Working in the field</p> <p>1) Observation of invasive species on several spots in buffer zones</p> <p>2) Arem village, Tan Trach commune of the Park's in buffer zone</p> <p>3) Ranger Station, Tan Trach commune</p> <p>4) Zip-line tourism spot (Mooc spring), Son Trach commune, Bo Trach District (border of buffer and residential area)</p>	Bo Trach District, Quang Binh province	The team; PNKB Management Board; interpreter; Representative of Ministry of Culture, Secretariat of Viet Nam National Commission for UNESCO.
July 14 th 2018 08:00 – 16:30	<p>Working in the field</p> <p>Paradise Cave visit for tourism assessment</p> <p>Chay Lap Farmstay and the adjacent commune</p> <p>Meeting with the representative of the Centre for Indigenous Knowledge Research & Development</p>	Bo Trach District, Quang Binh province	The team; PNKB Management Board; interpreter; Representative of Ministry of Culture, Secretariat of Viet Nam National Commission for UNESCO.
July 15 th 2018	<p>Commune 2 (beekeeping) and Commune 4 (tree planting), Xuan Trach Commune</p> <p>Ranger Station Khe Gat Na Village (Son Trach)</p>	Bo Trach District, Quang Binh province	The team; PNKB National Park Management Board; interpreter; Representative of Ministry of Culture, Secretariat of Viet Nam National Commission for UNESCO.
From July 16 th - 18 th 2018	<p>Nao Hayashi/Remco van Merm</p> <p>Conducting a trip to Son Doong cave</p> <p>Via En Cave</p> <p>Mr Brian Clark:</p> <p>Phong Nha Cave</p> <p>Rescue Centre</p> <p>Bong Lai Rattan House</p>	PNKB National Park	The team; Quang Binh PPC; PNKB National Park Management Board; interpreter; Representative of Ministry of Culture, Secretariat of Viet Nam National Commission for UNESCO, Oxalis expedition team led by Mr Howard Limbert.
July 19th 2018			

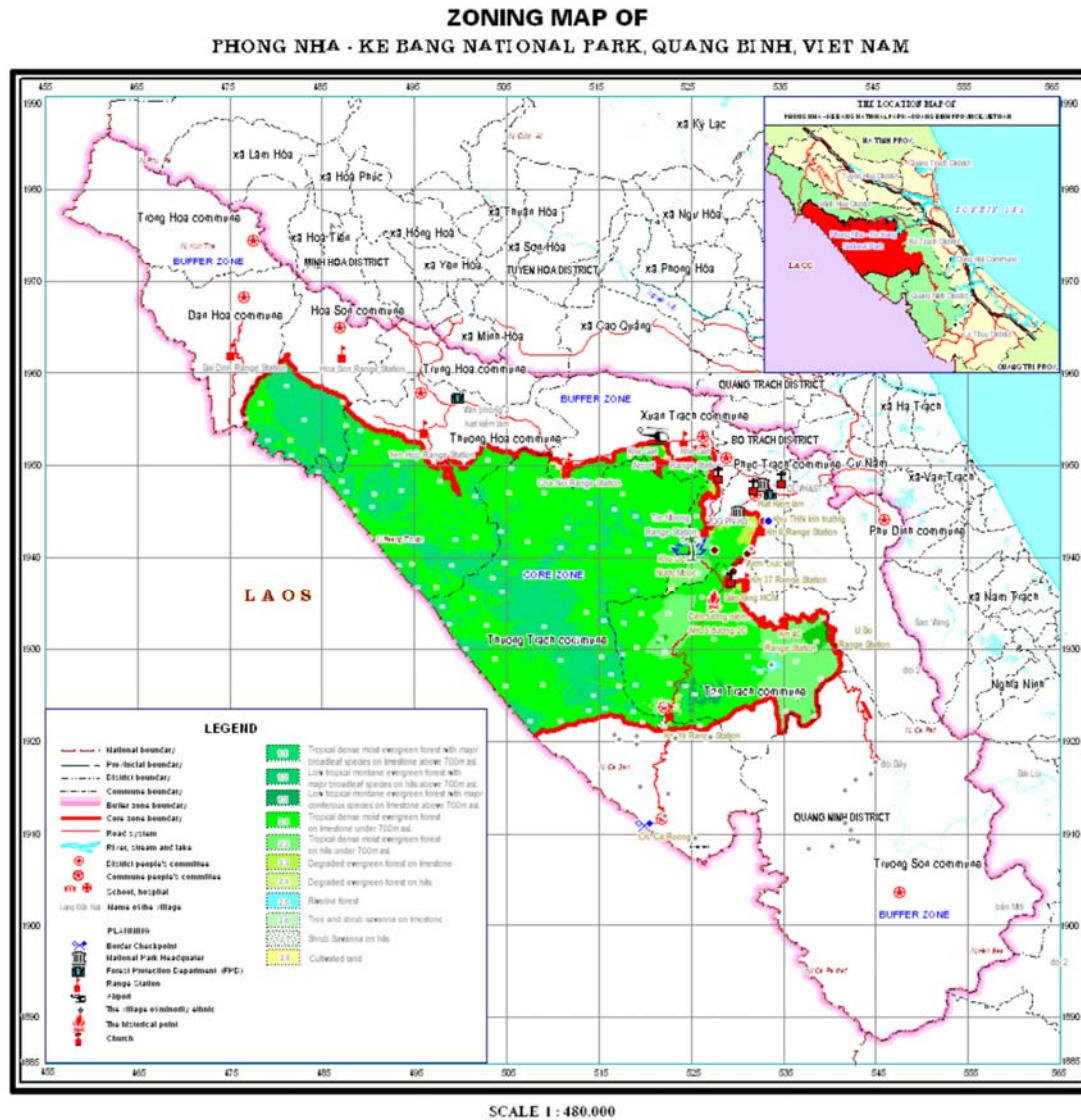
Time	Activities	Location	Implementer/Stakeholder
10:30 – 12:00	PNKB Management Board exchanges survey results and proposes solutions	Phong Nha City	PNKB Management Board; departments, subordinate divisions, interpreter; Representative of Ministry of Culture, Secretariat of Viet Nam National Commission for UNESCO
14:00-16:00	Meeting with Quang Binh PPC to exchange results and other relevant issues	Dong Hoi Quang Binh PPC's headquarter, No.6 Hung Vuong street, Dong Hoi city, Quang Binh	Leader of Quang Binh PPC, Representative of: Quang Binh PPC's Office, Dept of Agriculture and Rural Development, Dept of Tourism, Dept of Natural Resources and Environment, Dept of Culture and Sports, Dept of Foreign Affairs, PNKB Management Board, Bo Trach District People's Committee, interpreter; Representative of Ministry of Culture, Secretariat of Viet Nam National Commission for UNESCO
July 20th 2018			
07:45 – 08:45	Flight from Dong Hoi to Ha Noi	Dong Hoi-Hanoi	Reactive Monitoring Mission; Representative of Ministry of Culture, Secretariat of Viet Nam National Commission for UNESCO
10:30-11:30	Meeting with Ministry of Culture	Ha Noi, Ministry of Culture HQ, 51 Ngo Quyen, Ha Noi	Reactive Monitoring Mission; Representative of Ministry of Culture, Secretariat of Viet Nam National Commission for UNESCO; UNESCO Office Ha Noi
14:40	Brian Clark, International Expert of IUCN takes departure in Noi Bai Airport	Ha Noi – Kuala Lumpur	Covered by the Reactive Monitoring Mission
20:45	Remco van Merm/IUCN	Ha Noi – Bangkok	
23:55 – 07:00	Nao Hayashi/WHC	Ha Noi – Paris	

ANNEX III THE MISSION TEAM

1. **Ms Nao HAYASHI**, Asia and the Pacific Unit, UNESCO World Heritage Centre (Paris)
2. **Mr Remco VAN MERM**, IUCN Headquarters
3. **Mr Brian CLARK**, IUCN International Expert

ANNEX IV MAPS

Most recent maps of the boundaries of the property



ANNEX V ORGANIGRAMME AND FUNCTIONS OF THE MANAGEMENT

1) The Ministry of Culture, Sports and Tourism of the Socialist Republic of Viet Nam

No: 79/2017/NĐ-CP

DECREE

REGULATING THE FUNCTIONS, TASKS, POWERS AND ORGANIZATIONAL STRUCTURE OF THE MINISTRY OF CULTURE, SPORTS AND TOURISM

6. Regarding cultural heritages:

a / To submit to competent authorities the establishment of national museums and specialized museums under the Ministry of Culture, Sports and Tourism;

b / To submit to the Prime Minister the classification and adjustment of protection zones for special national monuments; Requesting the United Nations Educational, Scientific and Cultural Organization (UNESCO) to recognize Vietnam's World Cultural Heritage as World Heritage; the recognition of national treasures and the granting of national treasures abroad for exhibitions, exhibitions, research or preservation, and treatment plans for cultural heritage assets as prescribed by law. The

c / To guide and organize the implementation of the planning on protection and promotion of cultural heritage values after they are approved;

d / Appraising and submitting to the Prime Minister for approval the undertakings, tasks and blueprints for the overall planning of national special monuments and national monuments of large investment scale;

e / To evaluate the tasks and plans on the preservation, embellishment and restoration of national monuments; Assessing projects on the renovation of special national monuments and national relics; To evaluate projects on the renovation and construction of works outside the national and national relics protection zones under the provisions of law;

e) Ranking of national monuments, museums of Class I, adjustment of conservation areas for national monuments; Put intangible cultural heritage into the list of national intangible cultural heritages; handing over relics, antiques and national treasures to state museums according to the provisions of law; to certify the conditions for the establishment of national museums and specialized museums; Class II and III rank museums in accordance with the law;

g / Provision of archaeological exploration and excavation permits; To permit the bringing of relics and antiques to foreign countries for display, exhibition, research or preservation; To grant permits for overseas Vietnamese and foreign organizations and individuals to study and collect intangible cultural heritages in Vietnam according to the provisions of law;

h / To guide the procedures for registration of vestiges, antiques and conditions for the establishment and operation of anti-art surveying establishments;

i / To formulate mechanisms and policies for mobilization, management and use of resources for the protection and promotion of cultural heritage values;

k) Guiding and inspecting the protection and promotion of cultural heritage values.

2) Quang Binh Provincial People's Committee



3) Management Board of the Phong Nha-Ke Bang National Park

TT	Personel/structure	Management title	Expert/staff	Total	
1	Management Board	1 director, 3 vice directors		4	
2	Professional Units				
2.1	Sciences and International Cooperation Division	01 manager, 02 vice managers	7	10	
2.2	Personnel Management Division	02 vice manager	13	15	
2.3	Planning and Finance Division	01 manager, 01 vice manager	05	07	
3.	Sub-units				
3.1	Center for Wildlife Rescue, Conservation and Creature Development	01 manager, 02 vice managers	26	29	
3.2	Phong Nha-Ke Bang Tourism Center	01 manager, 03 vice managers	173	177	
3.3	Forest Guard Division	01 manager, 02 vice managers	131	132	

ANNEX VI LIST OF PERSONS MET DURING THE MISSION

Hanoi, 11 July 2018

Meeting of 11 July at the Ministry of Culture

- 1) Dr. Dang Thi Bich Lien – Deputy Minister of the Ministry of Culture, Sports and Tourism of Viet Nam
- 2) Mr. Tran Tien Dung – Vice Chairman of Quang Binh Provincial People's Committee
- 3) Mr. Mai Phan Dung, Vice Secretary-General, Viet Nam National Commission for UNESCO - Department of Cultural Diplomacy and UNESCO Affairs, Ministry of Foreign Affairs of Viet Nam
- 4) Mr. Tran Dinh Thanh - Deputy Director General of Department of Cultural Heritage in the Ministry of Culture, Sports and Tourism of Viet Nam
- 5) Ms. Nguyen Phuong Hoa - Deputy Director General of Department of International Cooperation in the Ministry of Culture, Sports and Tourism of Viet Nam
- 6) Mr. Cung Duc Han, Member Secretary, Viet Nam National Commission for UNESCO - Department of Cultural Diplomacy and UNESCO Affairs, Ministry of Foreign Affairs of Viet Nam
- 7) Mr. Le Thanh Tinh – Director of Phong Nha-Ke Bang National Park Management Board
- 8) Mr. Vo Van Tri – Manager of Science and international cooperation, Phong Nha-Ke Bang National Park Management Board
- 9) Ms. Vu Thi Ha Ngan - Deputy Chief of the Relics and Monuments Management Division (Department of Cultural Heritage in the Ministry of Culture, Sports and Tourism of Viet Nam)
- 10) Mr. Trinh Quoc Anh - Deputy Chief of the European Division (Department of International Cooperation in the Ministry of Culture, Sports and Tourism of Viet Nam)
- 11) Mr. Nguyen Nam Khanh, Desk Officer, World Heritage Division, Secretariat of Viet Nam National Commission for UNESCO - Department of Cultural Diplomacy and UNESCO Affairs, Ministry of Foreign Affairs of Viet Nam
- 12) Mr. Michael Croft – Head of Representative of the Viet Nam UNESCO Office
- 13) Ms. Tran Thi Thu Thuy - Officer of the Vietnam UNESCO Office

Dong Hoi, 12 - 19 July 2018

Meeting of 12 July 2018 at the Provincial Party's Committee Headquarters

- 14) Tran Tien Dung – Vice President of Quang Binh People's Committee
- 15) Pham Van Luong – Vice Director, Environment and Natural Resources Department
- 16) Nguyen Mau Anh - Vice Director, Agriculture and Rural Development Department
- 17) Dang DongHa - Vice Director, Tourism Department
- 18) Nguyen Mau Nam – Vice Director - Culture, Sport Department
- 19) Hoang Thi Nga – Vice Chief, Quang Binh People Committee Office
- 20) Le Duy Dong – Expert, Quang Binh People Committee Office
- 21) Nguyen Xuan Huy – Manager, International Cooperation, Foreign Affair Department
- 22) Le Thanh Tinh – Director, Management Board, Phong Nha-Ke Bang National Park
- 23) Vo Van Tri – Manager of Sciences and International Cooperation, Phong Nha-Ke Bang National Park

- 24) Nguyen Thai Dung – Vice Manager of Sciences and International Cooperation, Phong Nha-Ke Bang National Park
- 25) Hai Nguyen– Interpreter

Meeting 19 July 2018 at the Provincial Party's Committee Headquarters

- 1) Tran Tien Dung – Vice President of Quang Binh People's Committee
- 2) Pham Van Luong – Vice Director, Environment and Natural Resources Department
- 3) Nguyen Mau Anh - Vice Director, Agriculture and Rural Development Department
- 4) Dang DongHa - Vice Director, Tourism Department
- 5) Phan Cong Khanh – Ethnic Minority Affairs Department
- 6) Nguyen Mau Nam – Vice Director - Culture, Sport Department
- 7) Hoang Thi Nga – Vice Chief, Quang Binh People Committee Office
- 8) Le Duy Dong – Expert, Quang Binh People Committee Office
- 9) Nguyen Xuan Huy – Manager, International Cooperation, Foreign Affair Dpt
- 10) Le Thanh Tinh – Director, Management Board of Phong Nha-Ke Bang National Park
- 11) Vo Van Tri – Manager of Sciences and International Cooperation, Management Board of Phong Nha-Ke Bang National Park

Phong Nha, 12 to 19 July 2018

Meeting of 12 July 2018 at Phong Nka Ke Bang National Park Management Board Headquarters

- 1) Le Thanh Tinh – Director, Management Board
- 2) Vo Van Tri – Manager of Sciences and International Cooperation
- 3) Nguyen Thai Dung – Vice Manager of Sciences and International Cooperation
- 4) Nguyen Quang Vinh – Vice Manager of Forest Guard Division
- 5) Tran Ngoc Anh – Vice Manager of Center for Wildlife Rescue, Conservation and Creature Development
- 6) Nguyen Huu Thai, Vice Manager, Center for Phong Nha-Ke Bang Tourism
- 7) Hoang Minh Thang – Vice Manager, Planning and Finance Division
- 8) Nguyen Ngoc DZung – Vice Manager, Administrative Division
- 9) Hai Nguyen – Interpreter

Meeting of 19 July at Phong Nka Ke Bang National Park Management Board Headquarters

- 1) Le Thanh Tinh – Director, Management Board
- 2) Vo Van Tri – Manager of Sciences and International Cooperation
- 3) Nguyen Thai Dung – Vice Manager of Sciences and International Cooperation
- 4) Tran Ngoc Anh – Vice Manager of Center for Wildlife Rescue, Conservation and Creature Development
- 5) Le Chieu Nguyen, Vice Manager, Center for Phong Nha-Ke Bang Tourism
- 6) Hoang Minh Thang – Vice Manager, Planning and Finance Division
- 7) Nguyen Ngoc DZung – Vice Manager, Administrative Division

Meeting of 20 July at Ministry of Culture, Ha Noi

- 1) Dr. Nguyen The Hung – Director General of Department of Cultural Heritage in the Ministry of Culture, Sports and Tourism of Viet Nam
- 2) Mr. Duong Quoc Thanh, Member Secretary, Viet Nam National Commission for UNESCO - Department of Cultural Diplomacy and UNESCO Affairs, Ministry of Foreign Affairs of Viet Nam
- 3) Ms. Nguyen Phuong Hoa – Deputy Director General of Department of International Cooperation in the Ministry of Culture, Sports and Tourism of Viet Nam
- 4) Mr. Nguyen Nam Khanh, Desk Officer, World Heritage Division, Secretariat of Viet Nam National Commission for UNESCO - Department of Cultural Diplomacy and UNESCO Affairs, Ministry of Foreign Affairs of Viet Nam
- 5) Mr. Nguyen Viet Cuong - Chief of the Relics and Monuments Management Division (Department of Cultural Heritage in the Ministry of Culture, Sports and Tourism of Viet Nam)
- 6) Mr. Trinh Quoc Anh - Deputy Chief of the European Division (Department of International Cooperation in the Ministry of Culture, Sports and Tourism of Viet Nam)
- 7) Mr. Michael Croft – Head of Representative of the Viet Nam UNESCO Office
- 8) Ms. Pham Thi Thanh Huong – National Programme Officer, UNESCO Office Ha Noi
- 9) Ms. Tran Thi Thu Thuy - Officer of the Vietnam UNESCO Office

ANNEX VII CAVE MANAGEMENT AND CAVE MANAGEMENT PRESCRIPTIONS

PNKB will use cave management prescriptions and Cave Management Plans to regulate the development of tourism to caves so as to protect the Outstanding Universal Value of PNKB's caves and karst World Heritage.

Cave management prescriptions are composed of a number of requirements that place restrictions on activities undertaken in caves and on the karst around them. The prescription for each cave is designed specifically for that cave, and thus may differ due to the differences between individual caves.

The focus throughout is on conservation, with three general factors considered in each case:

1. The long-term conservation needs of the cave, its speleothems and other heritage features;
2. The long-term conservation needs of the cave flora and fauna;
3. The safety of visitors.

Achieving these three general factors is the overall goal, and cave management prescriptions can be developed by examining the specific features of each cave that contribute to these three general factors. Specific sub-factors need to be considered when determining that a cave or section of a cave should have a cave management prescription.

These sub-factors include:

- Is the number of visitors to the cave high?
- Is the cave threatened by deliberate vandalism or collectors?
- Does the cave contain delicate areas of speleothems?
- Does the cave contain flora or fauna that require protection?
- Is the cave the subject of significant research activities?
- Is the cave impacted by above ground or upstream land uses?
- Is the cave known to have high levels of CO₂?
- Is visitor safety in the cave threatened by flashflood or rockfall?

The Phong Nha - Ke Bang Management Plan has determined that a cave management plan should be developed for the Phong Nha Cave, Paradise Cave, Dark Cave, En Cave and all other existing tourist caves of the Park as a basis for protecting and professionally presenting the World Heritage OUV.

- a) The cave management plan should have regard to the management guidelines for show caves developed by the International Speleological Society. Cave formations are mostly a non-renewable resource and need to be protected.
- b) The cave management plan needs to include an environmental impact assessment process for any non-maintenance management intervention or change that may impact the World Heritage OUV (See section 4.11)
- c) For infrastructure to be placed within the cave, regard shall be had for minimising impacts. Crowd control infrastructure and within cave access facilities (such as fences, steps and elevated walkways) should not impact speleothems or other natural phenomena such as cave ecosystems. Cave lighting placement and use should be undertaken carefully and lampenflora removed and controlled. Cave lighting needs to be respectful of the natural phenomena (use of white light) and the placement of electricity cables needs to be very sensitively achieved. The placement of backlit sign-posting including World Heritage presentation information and emergency evacuation lighting needs to be carefully achieved.
- d) Any infrastructure present or installed in the cave should be professionally designed, of high quality and worthy of World Heritage presentation status. The materials used and the construction techniques applied need to be suitable for a cave environment. Wood or other organic material, for example, is not recommended by the International Union of Speleology and welding (with its associated waste-gas generation) would be a major impact on the cave.
- e) For World Heritage Presentation, the World Heritage status and OUV of Phong Nha-Ke Bang National Park and the particular cave is professionally presented for all visitors including through verbal presentations by guides, through signs and through printed information. Ideally, the World Heritage OUV presentation information would be designed to suit the unique characteristics for each cave, guides would be professionally trained and the cave presentation information provided in more than one language. The OUV information could be presented simply as well as technically (for more discerning visitors).
- f) The World Heritage cave experience for visitors is very important. It should be high quality and safe. This should usually include:

- 1) Pre-cave inspection literature, a safety briefing, a briefing about speleothem protection and the World Heritage status (and what this means) for individuals and groups;
 - 2) Pre-departure logistic advice about how the group is to be managed, pre-visit comfort stops and advice about a non-smoking policy and the reasons for this;
 - 3) Crowd control and strictly controlled group size and frequency of group use for all parts of the visit that is consistent with visitor use prescriptions provided by the cave management plan;
 - 4) Quiet enjoyment of the visit and noise minimisation on the visit; and
 - 5) The provision of a diversity of group experiences, from full technical karst explanations to lay-language presentations
- g) Impacts to the tourist cave's World Heritage OUV need to be minimised. The effective management of people is a key to achieving this. This includes:
- Designing a maximum group size, including an accompanying guide
 - Visitor ticketing and group management systems to, from, and within the cave organised so that groups receive an optimum World Heritage cave experience that minimises group interaction including orchestrated movements of groups that prevent chances of crowding
 - Financial return that is based on \$ yield rather than visitor volume and with return visitation targeted thanks to the provision of quality visitor experiences.
 - Group control and surveillance by guides to ensure visitors stay on the official pathways, don't touch or damage formations, do not steal speleothems nor leave any waste in the cave
 - Management of groups to minimise noise
 - Management of visitors to the cave (non-tourists such as electrical maintenance contractors) to minimise any potential impacts to the cave formations, cave atmosphere, cave hydrology or cave ecosystems through thorough pre-work briefings and within-cave operational guidelines
 - Management of within cave official functions to be respectful of the World Heritage status and to ensure they do not impact the cave in any way, especially the cave atmosphere from pollution (fireworks and the burning of hydrocarbons within the cave, for example, should never happen)
 - No solid or liquid pollution of the cave
 - Removal of all waste from the cave, undertake restoration work and, if appropriate, cave cleaning work.

ANNEX VIII – PHOTOS

All photos are copyright to IUCN/Remco van Merm



Photo 1: A Rem village inside the property



Photo 3: Merremia boissiana infestation



Photo 2: Mr. Brian Clark inspecting Merremia boissiana



Photo 4: Merremia boissiana infestation



Photo 5: The mission inspecting Merremia boissiana infestation



Photo 6: An exotic species of Arrowhead, used for decoration at Paradise Cave, is spreading uncontrolled



Photo 7: Mooc Spring, a massive karst resurgence



Photo 8: Thrill-seeking tourism at Mooc Spring. The resurgence is immediately behind the photographer



Photo 9: The current zip-line to Dark Cave is a playground for thrill-seekers



Photo 10: Paradise Cave



Photo 11: Inappropriately managed lighting is causing the growth of lampenflora in Paradise Cave



Photo 12: Lunch at the ranger post near A Rem village



Photo 13: Strict Protection Zone of Phong Nha-Ke Bang National Park



Photo 16: Climbing Doline 2, Son Doong Cave



Photo 14: A view of Doline 1, Son Doong Cave



Photo 17: Terraced vegetation at Doline 2, Son Doong Cave



Photo 15: Approaching Doline 2, Son Doong Cave. Note the people on the trail for scale

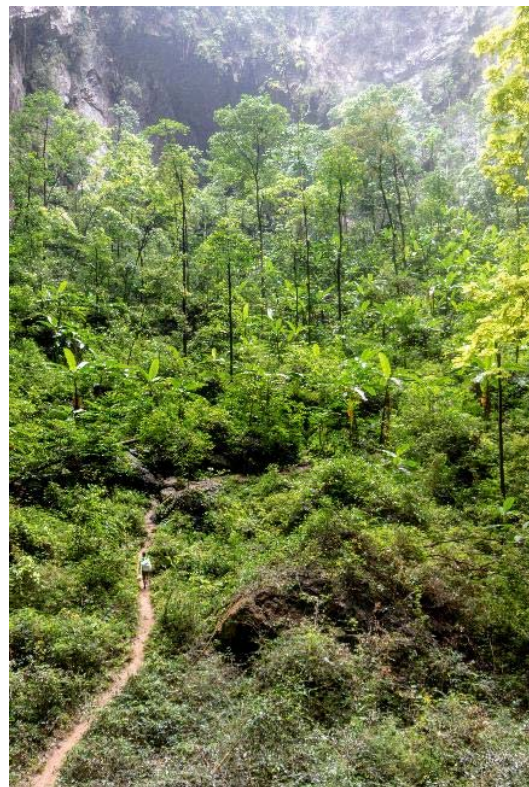


Photo 18: Traversing the jungle in Doline 2, Son Doong Cave



Photo 19: Looking back at Doline 2, Son Doong Cave



Photo 20: Endemic woodlouse in Son Doong Cave