

# Sundarbans National Park

## 1. World Heritage Property Data

### 1.1 - Name of World Heritage property

Sundarbans National Park

### 1.2 - World Heritage property details

### 1.3 - Geographic information table

Name	Coordinates	Property (ha)	Buffer zone (ha)	Total (ha)	Inscription year
Sundarbans National Park	21.945 / 88.896	133010	0	133010	1987
Total (ha)		133010	0	133010	

### 1.4 - Map(s)

Title	Date	Link to source
Map of Sunderbans Tiger Reserve	1986	

### 1.5 - Web and Social Media data of the property (if applicable)

- [The Official Website of Ministry of Tourism](#)
- [Natural site datasheet from WCMC](#)

### Comment

sundarbantigerreserve.org

## 2. Other Conventions/Programmes under which the World Heritage property is protected (if applicable)

### 2.1 - Records indicate that your World Heritage property (in whole or in part) is designated and/or protected under the Conventions/programmes shown in the prefilled table below. Please check and amend as necessary.

		The World Heritage property (in whole or in part) <u>is</u> designated and/or protected under this convention/programme	The World Heritage property (in whole or in part) <u>is not</u> designated and/or protected under this convention/programme
2.1.1	<b>International Register of Cultural Property under Special Protection</b> (1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict)		×
2.1.2	<b>List of Cultural Property under Enhanced Protection</b> (Second Protocol to the 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict)		×
2.1.3	<b>The List of Wetlands of International Importance (The Ramsar List)</b> (Convention on Wetlands of International Importance (Ramsar Convention))	×	
2.1.4	<b>World Network of Biosphere Reserves</b> Man and the Biosphere (MAB) Programme	×	
2.1.5	<b>Global Geoparks Network</b> UNESCO Global Geoparks		×

### 2.2 - Please provide comments on 2.1 if necessary

Sundarban Wetland, India (Site Number : 2370, Area; 423000 ha) was designated as a Ramsar Site in 2019.

### 2.3 - Do your national authorities intend to request the granting of Enhanced Protection (if relevant) under the Second Protocol to the 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict for the World Heritage property in the next three years?

Not applicable

### 2.4 - Do your national authorities intend to designate whole or part of the World Heritage property for inclusion in the List of Wetlands of International Importance (The Ramsar List), if relevant, in the next three years?

Not applicable

### 2.5 - Do your national authorities intend to designate whole or part of the World Heritage property as a Man and Biosphere Reserve (if relevant) in the next three years?

Not applicable

**2.6 - Do your national authorities intend to apply for whole or part of World Heritage property to be designated as a UNESCO Global Geopark (if relevant) in the next three years?**

Not applicable

**2.7 - Please indicate the level of cooperation at property level between designations under different Conventions/Programmes**

<b>2.7.1</b>	<b>1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict</b>	
2.7.1	There is <b>no contact</b> with the Focal Point(s) of this designation/programme.	✕
2.7.2	The World Heritage Site Manager <b>occasionally</b> communicates with the Focal Point(s) of this designation/programme.	
2.7.3	The World Heritage Site Manager <b>regularly</b> communicates with the Focal Point(s) of this designation/programme.	
2.7.4	The World Heritage Site Manager <b>also manages</b> this designation/programme.	
<b>2.7.2</b>	<b>Second Protocol to the 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict</b>	
2.7.1	There is <b>no contact</b> with the Focal Point(s) of this designation/programme.	✕
2.7.2	The World Heritage Site Manager <b>occasionally</b> communicates with the Focal Point(s) of this designation/programme.	
2.7.3	The World Heritage Site Manager <b>regularly</b> communicates with the Focal Point(s) of this designation/programme.	
2.7.4	The World Heritage Site Manager <b>also manages</b> this designation/programme.	
<b>2.7.3</b>	<b>Convention on Wetlands of International Importance (Ramsar Convention)</b>	
2.7.1	There is <b>no contact</b> with the Focal Point(s) of this designation/programme.	
2.7.2	The World Heritage Site Manager <b>occasionally</b> communicates with the Focal Point(s) of this designation/programme.	✕
2.7.3	The World Heritage Site Manager <b>regularly</b> communicates with the Focal Point(s) of this designation/programme.	
2.7.4	The World Heritage Site Manager <b>also manages</b> this designation/programme.	
<b>2.7.4</b>	<b>Man and the Biosphere (MAB) Programme</b>	
2.7.1	There is <b>no contact</b> with the Focal Point(s) of this designation/programme.	
2.7.2	The World Heritage Site Manager <b>occasionally</b> communicates with the Focal Point(s) of this designation/programme.	✕
2.7.3	The World Heritage Site Manager <b>regularly</b> communicates with the Focal Point(s) of this designation/programme.	
2.7.4	The World Heritage Site Manager <b>also manages</b> this designation/programme.	
<b>2.7.5</b>	<b>UNESCO Global Geoparks</b>	
2.7.1	There is <b>no contact</b> with the Focal Point(s) of this designation/programme.	✕
2.7.2	The World Heritage Site Manager <b>occasionally</b> communicates with the Focal Point(s) of this designation/programme.	
2.7.3	The World Heritage Site Manager <b>regularly</b> communicates with the Focal Point(s) of this designation/programme.	
2.7.4	The World Heritage Site Manager <b>also manages</b> this designation/programme.	

**2.8 - Please add any further comments on cooperation with the other designation(s)/programme(s)**

**2.9 - Are you aware of any elements associated with the World Heritage property that have been inscribed on the Representative List of the Intangible Cultural Heritage?**

Not aware

**2.10 - Please list any elements associated with the World Heritage property inscribed under the Convention for the Safeguarding of the Intangible Cultural Heritage of which you are aware**

**2.11 - Are you aware of any documentary heritage listed under the Memory of the World Programme associated with the World Heritage property?**

Not aware

**2.12 - Please list any documentary heritage associated with the World Heritage property listed under the Memory of the World Programme of which you are aware.**

**3. Statement of Outstanding Universal Value**

**3.1 - Statement of Outstanding Universal Value for the property as adopted by the World Heritage Committee**

**Statement of Outstanding Universal Value**

## Brief synthesis

The Sundarbans contain the world's largest mangrove forests and one of the most biologically productive of all natural ecosystems. Located at the mouth of the Ganges and Brahmaputra Rivers between India and Bangladesh, its forest and waterways support a wide range of fauna including a number of species threatened with extinction. The mangrove habitat supports the single largest population of tigers in the world which have adapted to an almost amphibious life, being capable of swimming for long distances and feeding on fish, crab and water monitor lizards. They are also renowned for being "man-eaters", most probably due to their relatively high frequency of encounters with local people.

The islands are also of great economic importance as a storm barrier, shore stabiliser, nutrient and sediment trap, a source of timber and natural resources, and support a wide variety of aquatic, benthic and terrestrial organisms. They are an excellent example of the ecological processes of monsoon rain flooding, delta formation, tidal influence and plant colonisation. Covering 133,010 ha, the area is estimated to comprise about 55% forest land and 45% wetlands in the form of tidal rivers, creeks, canals and vast estuarine mouths of the river. About 66% of the entire mangrove forest area is estimated to occur in Bangladesh, with the remaining 34% in India.

**Criterion (ix):** The Sundarbans is the largest area of mangrove forest in the world and the only one that is inhabited by the tiger. The land area in the Sundarbans is constantly being changed, moulded and shaped by the action of the tides, with erosion processes more prominent along estuaries and deposition processes along the banks of inner estuarine waterways influenced by the accelerated discharge of silt from sea water. Its role as a wetland nursery for marine organisms and as a climatic buffer against cyclones is a unique natural process.

**Criterion (x):** The mangrove ecosystem of the Sundarbans is considered to be unique because of its immensely rich mangrove flora and mangrove-associated fauna. Some 78 species of mangroves have been recorded in the area making it the richest mangrove forest in the world. It is also unique as the mangroves are not only dominant as fringing mangroves along the creeks and backwaters, but also grow along the sides of rivers in muddy as well as in flat, sandy areas.

The Sundarbans support a wealth of animal species including the single largest population of tiger and a number of other threatened aquatic mammals such as the Irrawaddy and Ganges River dolphins. The site also contains an exceptional number of threatened reptiles including the king cobra and significant populations of the endemic river terrapin which was once believed to be extinct. The property provides nesting grounds for marine turtles including the olive ridley, green and hawksbill. Two of the four species of highly primitive horseshoe crab (*Tachyleus gigas* and *Carcinoscorpius rotundicauda*) are found here. The Sajnakhali area, listed as an Important Bird Area, contains a wealth of waterfowl and is of high importance for migratory birds.

## Integrity

The property is situated within a larger UNESCO Biosphere Reserve that was designated in November, 2001. It is well protected and largely undisturbed as it is surrounded by three wildlife sanctuaries which act as a buffer zone, as recommended in the original 1987 evaluation report. However, the salinity of the Indian Sundarbans, largely due to the eastward shift of the mouth of the Ganges, is being influenced by upstream diversion of up to 40% of the dry season flow of the Ganges, the repercussions of which are not clearly understood. Oil spills are a potential threat which cause immense damage, especially to aquatic fauna and seabirds and probably also to the forest itself into which oil could be carried by high tides. An average of 45 people were killed annually by tigers from 1975-1982. This has caused certain conflicts with local people who use the adjacent Tiger Reserve for collection of honey and firewood and for fishing.

## Protection and management requirements

The legal protection provided to the property is adequate. The Indian Forest Act, 1927 with its amendments, Forest Conservation Act 1980, Wildlife Protection Act, 1972 and Environment Protection Act 1986 are being effectively implemented, with rules and regulation regarding environmental pollution strictly enforced. The existing laws are sufficiently strict in respect to the protection and conservation of the property.

The property is currently in a good state of conservation with regular maintenance undertaken according to a set maintenance schedule. There is an approved Management Plan of the property.

With the existing infrastructure, the Forest Department is making its best efforts, although there is a need to maintain and enhance the level of financial and human resources to effectively manage the property. This includes an ecosystem approach that integrates the management of the existing protected areas with other key activities occurring in the property, including fisheries and tourism. There is a need to develop alternate livelihood options for the local population to eliminate the dependence of people on the Sundarbans ecosystem for sustenance. Maintenance of participatory approaches in planning and management of the property is needed to reinforce the support and commitment from local communities and NGOs to the conservation and management of the property. Research and monitoring activities also require adequate resources

## 3.2 - Please list the key attributes of Outstanding Universal Value of your property and give an assessment of their condition. As a guideline, it is suggested to focus on approximately five key attributes (no more than 15 overall).

	Brief identification of attribute	Preserved	Compromised	Seriously compromised	Lost
3.2.1	Some 78 species of mangroves have been recorded in the area making it the richest mangrove forest in the world.	×			
3.2.2	The islands are also of great economic importance as a storm barrier, shore stabiliser, nutrient and sediment trap, a source of timber and natural resources.	×			
3.2.3	The land area in the Sundarbans is constantly being changed, moulded and shaped by the action of the tides. It is one of the tectonically active deltas in the World.		×		
3.2.4	The Sundarbans support a wealth of animal species including the single largest population of tigers in the world.	×			
3.2.5	Number of other threatened aquatic mammals such as the Irrawaddy and Ganges River dolphins.	×			
3.2.6	Exceptional number of threatened reptiles including the king cobra and significant populations of the endemic river terrapin.	×			
3.2.7	Nesting grounds for marine turtles including the olive ridley, green and hawksbill.	×			
3.2.8	The Sajnakhali area, listed as an Important Bird Area, contains a wealth of waterfowl and is of high importance for migratory birds.	×			
3.2.9	It is well protected and largely undisturbed as it is surrounded by three wildlife sanctuaries which act as a buffer zone.	×			

3.2.10	The salinity of the Indian Sundarbans is being influenced by upstream diversion of flow of the Ganges.		✕		
3.2.11	Encounters with tigers has caused certain conflicts with local people who use the adjacent Tiger Reserve for collection of honey and fishing.		✕		
3.2.12					
3.2.13					
3.2.14					
3.2.15					

### 3.3 - Comments, conclusions and/or recommendations related to Statement of Outstanding Universal Value

## 4. Factors Affecting the Property

### 4.1. Buildings and Development

#### 4.1.1 - Housing

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.1.2 - Commercial development

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.1.3 - Industrial areas

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.1.4 - Major visitor accommodation and associated infrastructure

Previous answer Cycle 2 (30/07/2011):

- Not relevant











Relevant	✕ Not relevant
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#### 4.1.5 - Interpretative and visitation facilities

Previous answer Cycle 2 (30/07/2011):

- Relevant, Positive, Current, Outside

✕ Relevant	Not relevant
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	Impact		Origin		Trend of impact		
Impact	 Current	 Potential	 Inside	 Outside	 Decreasing	 Stable	 Increasing
 Positive ✕	✕	✕		✕			
 Negative							

#### 4.1.6 - Please comment as necessary on how the factors selected as relevant in 4.1 are affecting the property either negatively or positively

Limited visitors allowed for awareness purpose.

### 4.2. Transportation Infrastructure

#### 4.2.1 - Ground transport infrastructure

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.2.2 - Underground transport infrastructure

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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4.2.3 - Air transport infrastructure

Previous answer Cycle 2 (30/07/2011):

- Relevant, Negative, Current, Outside

Relevant	✕ Not relevant
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4.2.4 - Marine transport infrastructure

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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4.2.5 - Effects arising from use of transportation infrastructure

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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4.2.6 - Please comment as necessary on how the factors selected as relevant in 4.2 are affecting the property either negatively or positively

4.3. Services Infrastructures

4.3.1 - Water infrastructure

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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4.3.2 - Renewable energy facilities

Previous answer Cycle 2 (30/07/2011):

- Not relevant

✕ Relevant		Not relevant					
	Impact		Origin		Trend of impact		
Impact	 Current	 Potential	 Inside	 Outside	 Decreasing	 Stable	 Increasing
 Positive ✕	✕		✕	✕			
 Negative							

4.3.3 - Non-renewable energy facilities

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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4.3.4 - Localised utilities

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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4.3.5 - Major linear utilities

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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4.3.6 - Please comment as necessary on how the factors selected as relevant in 4.3 are affecting the property either negatively or positively

Solar Street light & Power Plant used for protection camps.















4.4. Pollution

4.4.1 - Pollution of marine waters

Previous answer Cycle 2 (30/07/2011):

- Relevant, Negative, Current, Potential, Outside




✕ Relevant	Not relevant
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	Impact		Origin		Trend of impact		
Impact	 Current	 Potential	 Inside	 Outside	 Decreasing	 Stable	 Increasing
 Positive							
 Negative 							

#### 4.4.2 - Ground water pollution

Previous answer Cycle 2 (30/07/2011):





- Relevant, Negative, Potential, Outside

 Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	 Current	 Potential	 Inside	 Outside	 Decreasing	 Stable	 Increasing
 Positive							
 Negative 							

#### 4.4.3 - Surface water pollution

Previous answer Cycle 2 (30/07/2011):


- Relevant, Negative, Current, Potential, Outside

 Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	 Current	 Potential	 Inside	 Outside	 Decreasing	 Stable	 Increasing
 Positive							
 Negative 							

#### 4.4.4 - Air pollution

Previous answer Cycle 2 (30/07/2011):

- Not relevant

 Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	 Current	 Potential	 Inside	 Outside	 Decreasing	 Stable	 Increasing
 Positive							
 Negative 							

#### 4.4.5 - Solid waste

Previous answer Cycle 2 (30/07/2011):

- Relevant, Negative, Current, Potential, Outside

 Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	 Current	 Potential	 Inside	 Outside	 Decreasing	 Stable	 Increasing
 Positive							
 Negative 							

#### 4.4.6 - Input of excess energy

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant				 Not relevant			
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#### 4.4.7 - Please comment as necessary on how the factors selected as relevant in 4.4 are affecting the property either negatively or positively

As the whole area is interlinked with numerous creeks & channels so these water bodies are influenced by the tidal effects and that becomes a cause of bringing industrial effluents, agricultural waste, household sewage, plastic etc from outside into the forest area and affect the aquatic environment.

#### 4.5. Biological resource use/modification

#### 4.5.1 - Fishing/collecting aquatic resources

Previous answer Cycle 2 (30/07/2011):

- Relevant, Negative, Current, Potential, Inside, Outside

✕ Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	🔥 Current	🔥 Potential	📍 Inside	📍 Outside	↘ Decreasing	→ Stable	↗ Increasing
🟢 Positive							
🔴 Negative ✕	✕	✕	✕	✕			↗

#### 4.5.2 - Aquaculture

Previous answer Cycle 2 (30/07/2011):

- Relevant, Negative, Current, Outside

✕ Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	🔥 Current	🔥 Potential	📍 Inside	📍 Outside	↘ Decreasing	→ Stable	↗ Increasing
🟢 Positive ✕	✕	✕		✕			↗
🔴 Negative							

#### 4.5.3 - Land conversion

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.5.4 - Livestock farming/Grazing of domesticated animals

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.5.5 - Crop production

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.5.6 - Commercial wild plant collection

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.5.7 - Subsistence wild plant collection

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.5.8 - Commercial hunting

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.5.9 - Subsistence hunting

Previous answer Cycle 2 (30/07/2011):


- Not relevant

Relevant	✕ Not relevant
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#### 4.5.10 - Forestry/Wood production

Previous answer Cycle 2 (30/07/2011):

- Not relevant

✕ Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	 Current	 Potential	 Inside	 Outside	 Decreasing	 Stable	 Increasing
 Positive ✕	✕	✕		✕			
 Negative							

#### 4.5.11 - Please comment as necessary on how the factors selected as relevant in 4.5 are affecting the property either negatively or positively

Fresh water Aquaculture is also a practice for supporting livelihood benefits. Regeneration of Mangrove Plantation have been done in the newly formed land to increase the forest cover.

### 4.6. Physical resource extraction

#### 4.6.1 - Mining

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.6.2 - Quarrying

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.6.3 - Oil and gas

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.6.4 - Water (extraction)

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.6.5 - Please comment as necessary on how the factors selected as relevant in 4.6 are affecting the property either negatively or positively

### 4.7. Local conditions affecting physical fabric

#### 4.7.1 - Wind

Previous answer Cycle 2 (30/07/2011):

- Relevant, Negative, Current, Potential, Inside, Outside

✕ Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	 Current	 Potential	 Inside	 Outside	 Decreasing	 Stable	 Increasing
 Positive							
 Negative ✕	✕	✕	✕	✕			

#### 4.7.2 - Relative humidity

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.7.3 - Temperature

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.7.4 - Radiation/Light

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.7.5 - Dust

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.7.6 - Water (rain/water table)

Previous answer Cycle 2 (30/07/2011):

- Relevant, Negative, Current, Potential, Outside

✕ Relevant	Not relevant
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	Impact		Origin		Trend of impact		
Impact	🔥 Current	🔥 Potential	📍 Inside	📍 Outside	↘ Decreasing	→ Stable	↗ Increasing
➕ Positive ✕	✕	✕	✕	✕		→	
➖ Negative							

#### 4.7.7 - Pests

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
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#### 4.7.8 - Micro-organisms

Previous answer Cycle 2 (30/07/2011):

- Relevant, Positive, Current, Inside, Outside

✕ Relevant	Not relevant
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	Impact		Origin		Trend of impact		
Impact	🔥 Current	🔥 Potential	📍 Inside	📍 Outside	↘ Decreasing	→ Stable	↗ Increasing
➕ Positive ✕	✕	✕	✕	✕		→	
➖ Negative							

#### 4.7.9 - Please comment as necessary on how the factors selected as relevant in 4.7 are affecting the property either negatively or positively

Rain water is charging the ground water table as well recharging the water holes.

#### 4.8. Social/Cultural uses of heritage

##### 4.8.1 - Ritual/Spiritual/Religious and associative uses

Previous answer Cycle 2 (30/07/2011):

- Not relevant

✕ Relevant	Not relevant
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	Impact		Origin		Trend of impact		
Impact	🔥 Current	🔥 Potential	📍 Inside	📍 Outside	↘ Decreasing	→ Stable	↗ Increasing
➕ Positive ✕	✕			✕		→	
➖ Negative							

##### 4.8.2 - Society's valuing of heritage

Previous answer Cycle 2 (30/07/2011):

- Relevant, Positive, Current, Outside

✕ Relevant	Not relevant
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	Impact		Origin		Trend of impact		
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Impact	 Current	 Potential	 Inside	 Outside	 Decreasing	 Stable	 Increasing
 Positive ✕	✕			✕			
 Negative							

#### 4.8.3 - Indigenous hunting, gathering and collecting

Previous answer Cycle 2 (30/07/2011):

- Not relevant

✕ Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	 Current	 Potential	 Inside	 Outside	 Decreasing	 Stable	 Increasing
 Positive							
 Negative ✕	✕	✕		✕			

#### 4.8.4 - Changes in traditional ways of life and knowledge system

Previous answer Cycle 2 (30/07/2011):

- Relevant, Positive, Current, Outside

✕ Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	 Current	 Potential	 Inside	 Outside	 Decreasing	 Stable	 Increasing
 Positive ✕	✕			✕			
 Negative							

#### 4.8.5 - Identity, social cohesion, changes in local population and community

Previous answer Cycle 2 (30/07/2011):

- Not relevant

✕ Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	 Current	 Potential	 Inside	 Outside	 Decreasing	 Stable	 Increasing
 Positive ✕	✕	✕		✕			
 Negative							

#### 4.8.6 - Impacts of tourism/Visitation/Recreation

Previous answer Cycle 2 (30/07/2011):

- Relevant, Negative, Potential, Outside

✕ Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	 Current	 Potential	 Inside	 Outside	 Decreasing	 Stable	 Increasing
 Positive ✕	✕	✕		✕			
 Negative							

#### 4.8.7 - Please comment as necessary on how the factors selected as relevant in 4.8 are affecting the property either negatively or positively

Eco-tourism helps in educating and creating awareness among the visitors which in turn helps in conservation of the natural world heritage.

#### 4.9. Other human activities

##### 4.9.1 - Illegal activities

Previous answer Cycle 2 (30/07/2011):

- Relevant, Negative, Potential, Outside

✕ Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	 Current	 Potential	 Inside	 Outside	 Decreasing	 Stable	 Increasing

Positive							
Negative							

4.9.2 - Deliberate destruction of heritage

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	Not relevant
----------	--------------

4.9.3 - Military training

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	Not relevant
----------	--------------

4.9.4 - War

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	Not relevant
----------	--------------

4.9.5 - Terrorism

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	Not relevant
----------	--------------

4.9.6 - Civil unrest

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	Not relevant
----------	--------------

4.9.7 - Please comment as necessary on how the factors selected as relevant in 4.9 are affecting the property either negatively or positively

Anthropogenic activities like poaching & illegal entry into the forest area for fishing and honey collection adversely affect the wildlife and forest ecosystem.

4.10. Climate change and severe weather events

4.10.1 - Storms

Previous answer Cycle 2 (30/07/2011):

- Relevant, Negative, Potential, Outside

Relevant	Not relevant						
	Impact		Origin		Trend of impact		
Impact	Current	Potential	Inside	Outside	Decreasing	Stable	Increasing
Positive							
Negative							

4.10.2 - Flooding

Previous answer Cycle 2 (30/07/2011):

- Relevant, Negative, Potential, Outside

Relevant	Not relevant						
	Impact		Origin		Trend of impact		
Impact	Current	Potential	Inside	Outside	Decreasing	Stable	Increasing
Positive							
Negative							

4.10.3 - Drought

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	Not relevant
----------	--------------

#### 4.10.4 - Desertification

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
----------	----------------

#### 4.10.5 - Changes to oceanic waters

Previous answer Cycle 2 (30/07/2011):

- Relevant, Negative, Potential, Outside

✕ Relevant	Not relevant						
	Impact		Origin		Trend of impact		
Impact	🔴 Current	🟡 Potential	🟢 Inside	🟢 Outside	📉 Decreasing	➡ Stable	📈 Increasing
🟢 Positive							
🔴 Negative ✕	✕	✕		✕		➡	

#### 4.10.6 - Temperature change

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
----------	----------------

#### 4.10.7 - Other climate change impacts

Previous answer Cycle 2 (30/07/2011):

- Relevant, Negative, Potential, Outside

✕ Relevant	Not relevant						
	Impact		Origin		Trend of impact		
Impact	🔴 Current	🟡 Potential	🟢 Inside	🟢 Outside	📉 Decreasing	➡ Stable	📈 Increasing
🟢 Positive							
🔴 Negative ✕		✕	✕	✕			📈

#### 4.10.8 - Please comment as necessary on how the factors selected as relevant in 4.10 are affecting the property either negatively or positively

Climate change and severe weather events like super cyclones (Bulbul, Amphan), greatly affect the Sundarbans and its adjacent areas.

#### 4.11. Sudden ecological or geological events

##### 4.11.1 - Volcanic eruption

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
----------	----------------

##### 4.11.2 - Earthquake

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
----------	----------------

##### 4.11.3 - Tsunami/Tidal wave

Previous answer Cycle 2 (30/07/2011):

- Relevant, Negative, Potential, Outside

✕ Relevant	Not relevant						
	Impact		Origin		Trend of impact		
Impact	🔴 Current	🟡 Potential	🟢 Inside	🟢 Outside	📉 Decreasing	➡ Stable	📈 Increasing
🟢 Positive							
🔴 Negative ✕		✕	✕	✕		➡	

#### 4.11.4 - Avalanche/Landslide

Previous answer Cycle 2 (30/07/2011):

- Not relevant












Relevant	✕ Not relevant
----------	----------------

#### 4.11.5 - Erosion and siltation/Deposition

Previous answer Cycle 2 (30/07/2011):

- Relevant, Negative, Potential, Outside

✕ Relevant	Not relevant
------------	--------------

	Impact		Origin		Trend of impact		
Impact	 Current	 Potential	 Inside	 Outside	 Decreasing	 Stable	 Increasing
 Positive ✕	✕	✕	✕	✕			
 Negative ✕	✕	✕	✕	✕			

#### 4.11.6 - Fire (wildfire)

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
----------	----------------

#### 4.11.7 - Please comment as necessary on how the factors selected as relevant in 4.11 are affecting the property either negatively or positively

Sudden ecological and geological events like tidal waves or erosion due to water affect the deltas of Sundarban area, Whereas siltation creates new land with mangroves through succession.

#### 4.12. Invasive/alien species or hyper-abundant species

##### 4.12.1 - Translocated species

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
----------	----------------

##### 4.12.2 - Invasive/Alien terrestrial species

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
----------	----------------

##### 4.12.3 - Invasive/Alien freshwater species

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
----------	----------------

##### 4.12.4 - Invasive/Alien marine species

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
----------	----------------

##### 4.12.5 - Hyper-abundant species

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
----------	----------------

##### 4.12.6 - Modified genetic material

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	✕ Not relevant
----------	----------------

#### 4.12.7 - Please comment as necessary on how the factors selected as relevant in 4.12 are affecting the property either negatively or positively

#### 4.13. Management and institutional factors

##### 4.13.1 - Management system/Management plan

✕ Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	🔴 Current	🟡 Potential	🟢 Inside	🟢 Outside	↘ Decreasing	→ Stable	↗ Increasing
➕ Positive ✕	✕		✕	✕		→	
➖ Negative							

##### 4.13.2 - Legal framework

✕ Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	🔴 Current	🟡 Potential	🟢 Inside	🟢 Outside	↘ Decreasing	→ Stable	↗ Increasing
➕ Positive ✕	✕	✕	✕	✕		→	
➖ Negative							

##### 4.13.3 - Governance

✕ Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	🔴 Current	🟡 Potential	🟢 Inside	🟢 Outside	↘ Decreasing	→ Stable	↗ Increasing
➕ Positive ✕	✕	✕	✕	✕		→	
➖ Negative							

##### 4.13.4 - Management activities

Previous answer Cycle 2 (30/07/2011):

- Relevant, Positive, Current, Inside, Outside

✕ Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	🔴 Current	🟡 Potential	🟢 Inside	🟢 Outside	↘ Decreasing	→ Stable	↗ Increasing
➕ Positive ✕	✕		✕	✕		→	
➖ Negative							

##### 4.13.5 - Financial resources

✕ Relevant				Not relevant			
	Impact		Origin		Trend of impact		
Impact	🔴 Current	🟡 Potential	🟢 Inside	🟢 Outside	↘ Decreasing	→ Stable	↗ Increasing
➕ Positive ✕	✕	✕		✕			↗
➖ Negative							

##### 4.13.6 - Human resources















Relevant			✕ Not relevant				
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##### 4.13.7 - Low impact research/monitoring activities

Previous answer Cycle 2 (30/07/2011):

- Relevant, Positive, Potential, Outside

✕ Relevant				Not relevant			
	Impact		Origin		Trend of impact		

Impact	 Current	 Potential	 Inside	 Outside	 Decreasing	 Stable	 Increasing
 Positive 							
 Negative							

#### 4.13.8 - High impact research/monitoring activities

Previous answer Cycle 2 (30/07/2011):

- Not relevant

Relevant	 Not relevant
----------	--

#### 4.13.9 - Please comment as necessary on how the factors selected as relevant in 4.13 are affecting the property either negatively or positively




























































The Sundarban National Park is an integral part of the Sundarban Tiger Reserve which is managed as per the approved Tiger Conservation Plan. Financial resources accrued from eco-tourism are utilised in eco developmental activities of fringe population as well as conservation activities in the National Park.

#### 4.14. Other factor(s)

##### 4.14.1 - Other factor(s)

#### 4.15. Factors Summary Table

##### 4.15.1 - Factors Summary Table

Name	Impact			Origin	Trend
4.1 Buildings and Development					
4.1.5 Interpretative and visitation facilities					
4.3 Services Infrastructures					
4.3.2 Renewable energy facilities					
4.4 Pollution					
4.4.1 Pollution of marine waters					
					
4.4.2 Ground water pollution					
					
4.4.3 Surface water pollution					
					
4.4.4 Air pollution					
					
4.4.5 Solid waste					
					
4.5 Biological resource use/modification					
4.5.1 Fishing/collecting aquatic resources					
					
4.5.2 Aquaculture					
4.5.10 Forestry/Wood production					
4.7 Local conditions affecting physical fabric					
4.7.1 Wind					
					
4.7.6 Water (rain/water table)					

4.7.8 Micro-organisms						
4.8 Social/Cultural uses of heritage						
4.8.1 Ritual/Spiritual/Religious and associative uses						
4.8.2 Society's valuing of heritage						
4.8.3 Indigenous hunting, gathering and collecting						
4.8.4 Changes in traditional ways of life and knowledge system						
4.8.5 Identity, social cohesion, changes in local population and community						
4.8.6 Impacts of tourism/Visitation/Recreation						
4.9 Other human activities						
4.9.1 Illegal activities						
4.10 Climate change and severe weather events						
4.10.1 Storms						
4.10.2 Flooding						
4.10.5 Changes to oceanic waters						
4.10.7 Other climate change impacts						
4.11 Sudden ecological or geological events						
4.11.3 Tsunami/Tidal wave						
4.11.5 Erosion and siltation/Deposition						
4.13 Management and institutional factors						
4.13.1 Management system/Management plan						
4.13.2 Legal framework						
4.13.3 Governance						
4.13.4 Management activities						
4.13.5 Financial resources						



4.13.7 Low impact research/monitoring activities					
<b>Legend</b>	Current	Potential	Negative	Positive	Inside
					Outside

## 4.16. Assessment of current and potential positive and negative factors

### 4.16.1 - Assessment of current and potential negative and positive factors

#### 4.1 Buildings and Development

Name	Impact			Origin	Trend
4.1.5 Interpretative and visitation facilities					

Spatial scale - Area affected by the factor	
	Restricted
<input checked="" type="checkbox"/>	Localised
	Extensive
	Widespread
Temporal scale - Occurrence of the impact	
	One off or rare
	Intermittent or sporadic
	Frequent
<input checked="" type="checkbox"/>	On-going
Impact - Impact on the attributes	
	Insignificant
	Minor
<input checked="" type="checkbox"/>	Significant
	Major
Management response - Capacity of management to respond	
<input checked="" type="checkbox"/>	High capacity
	Medium capacity
	Low capacity
	No capacity and / or resources
Trend - Development over the last 6 years	
	Decreasing
	Static
<input checked="" type="checkbox"/>	Increasing




## 4.3 Services Infrastructures

Name	Impact			Origin	Trend
4.3.2 Renewable energy facilities					

Spatial scale - Area affected by the factor
---






✕	Restricted
	Localised
	Extensive
	Widespread
<b>Temporal scale - Occurrence of the impact</b>	
	One off or rare
	Intermittent or sporadic
	Frequent
✕	On-going
<b>Impact - Impact on the attributes</b>	
	Insignificant
✕	Minor
	Significant
	Major
<b>Management response - Capacity of management to respond</b>	
✕	High capacity
	Medium capacity
	Low capacity
	No capacity and / or resources
<b>Trend - Development over the last 6 years</b>	
	Decreasing
✕	Static
	Increasing

## 4.4 Pollution

Name	Impact			Origin		Trend
4.4.1 Pollution of marine waters						
						

<b>Spatial scale - Area affected by the factor</b>	
	Restricted
✕	Localised
	Extensive
	Widespread
<b>Temporal scale - Occurrence of the impact</b>	
	One off or rare
✕	Intermittent or sporadic
	Frequent
	On-going
<b>Impact - Impact on the attributes</b>	
	Insignificant
✕	Minor
	Significant

	Major
<b>Management response - Capacity of management to respond</b>	
	High capacity
	Medium capacity
✕	Low capacity
	No capacity and / or resources
<b>Trend - Development over the last 6 years</b>	
	Decreasing
✕	Static
	Increasing

Name	Impact			Origin		Trend
4.4.2 Ground water pollution						
						






<b>Spatial scale - Area affected by the factor</b>	
	Restricted
✕	Localised
	Extensive
	Widespread

<b>Temporal scale - Occurrence of the impact</b>	
	One off or rare
✕	Intermittent or sporadic
	Frequent
	On-going





<b>Impact - Impact on the attributes</b>	
	Insignificant
✕	Minor
	Significant
	Major

<b>Management response - Capacity of management to respond</b>	
	High capacity
	Medium capacity
✕	Low capacity
	No capacity and / or resources

<b>Trend - Development over the last 6 years</b>	
	Decreasing
✕	Static
	Increasing





Name	Impact			Origin		Trend
4.4.3 Surface water pollution						
						

Spatial scale - Area affected by the factor	
	Restricted
✕	Localised
	Extensive
	Widespread
Temporal scale - Occurrence of the impact	
	One off or rare
✕	Intermittent or sporadic
	Frequent
	On-going
Impact - Impact on the attributes	
	Insignificant
✕	Minor
	Significant
	Major
Management response - Capacity of management to respond	
	High capacity
✕	Medium capacity
	Low capacity
	No capacity and / or resources
Trend - Development over the last 6 years	
	Decreasing
✕	Static
	Increasing

Name	Impact			Origin		Trend
4.4.4 Air pollution						
						

Spatial scale - Area affected by the factor	
	Restricted
✕	Localised
	Extensive
	Widespread
Temporal scale - Occurrence of the impact	
	One off or rare
✕	Intermittent or sporadic
	Frequent
	On-going
Impact - Impact on the attributes	
	Insignificant
✕	Minor
	Significant

	Major
<b>Management response - Capacity of management to respond</b>	
	High capacity
✕	Medium capacity
	Low capacity
	No capacity and / or resources
<b>Trend - Development over the last 6 years</b>	
	Decreasing
	Static
✕	Increasing






Name	Impact			Origin		Trend
4.4.5 Solid waste						
						

<b>Spatial scale - Area affected by the factor</b>						
	Restricted					
✕	Localised					
	Extensive					
	Widespread					
<b>Temporal scale - Occurrence of the impact</b>						
	One off or rare					
✕	Intermittent or sporadic					
	Frequent					
	On-going					
<b>Impact - Impact on the attributes</b>						
	Insignificant					
✕	Minor					
	Significant					
	Major					
<b>Management response - Capacity of management to respond</b>						
	High capacity					
✕	Medium capacity					
	Low capacity					
	No capacity and / or resources					
<b>Trend - Development over the last 6 years</b>						
	Decreasing					
	Static					
✕	Increasing					

## 4.5 Biological resource use/modification





Name	Impact			Origin		Trend
4.5.1 Fishing/collecting aquatic resources						

Spatial scale - Area affected by the factor	
<input checked="" type="checkbox"/>	Restricted
<input type="checkbox"/>	Localised
<input type="checkbox"/>	Extensive
<input type="checkbox"/>	Widespread
Temporal scale - Occurence of the impact	
<input type="checkbox"/>	One off or rare
<input type="checkbox"/>	Intermittent or sporadic
<input checked="" type="checkbox"/>	Frequent
<input type="checkbox"/>	On-going
Impact - Impact on the attributes	
<input type="checkbox"/>	Insignificant
<input type="checkbox"/>	Minor
<input checked="" type="checkbox"/>	Significant
<input type="checkbox"/>	Major
Management response - Capacity of management to respond	
<input type="checkbox"/>	High capacity
<input checked="" type="checkbox"/>	Medium capacity
<input type="checkbox"/>	Low capacity
<input type="checkbox"/>	No capacity and / or resources
Trend - Developement over the last 6 years	
<input type="checkbox"/>	Decreasing
<input type="checkbox"/>	Static
<input checked="" type="checkbox"/>	Increasing

Name	Impact			Origin	Trend
4.5.2 Aquaculture					

Spatial scale - Area affected by the factor	
<input type="checkbox"/>	Restricted
<input checked="" type="checkbox"/>	Localised
<input type="checkbox"/>	Extensive
<input type="checkbox"/>	Widespread
Temporal scale - Occurence of the impact	
<input type="checkbox"/>	One off or rare
<input checked="" type="checkbox"/>	Intermittent or sporadic
<input type="checkbox"/>	Frequent
<input type="checkbox"/>	On-going
Impact - Impact on the attributes	
<input type="checkbox"/>	Insignificant
<input type="checkbox"/>	Minor

✕	Significant
	Major
<b>Management response - Capacity of management to respond</b>	
	High capacity
✕	Medium capacity
	Low capacity
	No capacity and / or resources
<b>Trend - Development over the last 6 years</b>	
	Decreasing
	Static
✕	Increasing

Name	Impact	Origin	Trend
4.5.10 Forestry/Wood production	  		

<b>Spatial scale - Area affected by the factor</b>	
	Restricted
✕	Localised
	Extensive
	Widespread
<b>Temporal scale - Occurrence of the impact</b>	
	One off or rare
✕	Intermittent or sporadic
	Frequent
	On-going
<b>Impact - Impact on the attributes</b>	
	Insignificant
	Minor
✕	Significant
	Major
<b>Management response - Capacity of management to respond</b>	
✕	High capacity
	Medium capacity
	Low capacity
	No capacity and / or resources
<b>Trend - Development over the last 6 years</b>	
	Decreasing
	Static
✕	Increasing

#### 4.7 Local conditions affecting physical fabric

Name	Impact	Origin	Trend
------	--------	--------	-------

4.7.1 Wind						

#### Spatial scale - Area affected by the factor

	Restricted
	Localised
	Extensive
✕	Widespread

#### Temporal scale - Occurrence of the impact

	One off or rare
	Intermittent or sporadic
	Frequent
✕	On-going

#### Impact - Impact on the attributes

	Insignificant
	Minor
✕	Significant
	Major

#### Management response - Capacity of management to respond

	High capacity
	Medium capacity
	Low capacity
✕	No capacity and / or resources

#### Trend - Development over the last 6 years

	Decreasing
	Static
✕	Increasing

Name	Impact			Origin		Trend
4.7.6 Water (rain/water table)						

#### Spatial scale - Area affected by the factor

	Restricted
	Localised
	Extensive
✕	Widespread

#### Temporal scale - Occurrence of the impact

	One off or rare
	Intermittent or sporadic
	Frequent
✕	On-going

#### Impact - Impact on the attributes

	Insignificant
--	---------------



✕	Minor
	Significant
	Major
<b>Management response - Capacity of management to respond</b>	
	High capacity
	Medium capacity
✕	Low capacity
	No capacity and / or resources
<b>Trend - Development over the last 6 years</b>	
	Decreasing
✕	Static
	Increasing

Name	Impact			Origin	Trend
4.7.8 Micro-organisms					




<b>Spatial scale - Area affected by the factor</b>	
	Restricted
✕	Localised
	Extensive
	Widespread
<b>Temporal scale - Occurrence of the impact</b>	
	One off or rare
	Intermittent or sporadic
	Frequent
✕	On-going
<b>Impact - Impact on the attributes</b>	
	Insignificant
✕	Minor
	Significant
	Major
<b>Management response - Capacity of management to respond</b>	
	High capacity
	Medium capacity
	Low capacity
✕	No capacity and / or resources
<b>Trend - Development over the last 6 years</b>	
	Decreasing
✕	Static
	Increasing

## 4.8 Social/Cultural uses of heritage

Name		Impact			Origin		Trend
4.8.1 Ritual/Spiritual/Religious and associative uses							
<b>Spatial scale - Area affected by the factor</b>							
<input checked="" type="checkbox"/>	Restricted						
	Localised						
	Extensive						
	Widespread						
<b>Temporal scale - Occurrence of the impact</b>							
	One off or rare						
<input checked="" type="checkbox"/>	Intermittent or sporadic						
	Frequent						
	On-going						
<b>Impact - Impact on the attributes</b>							
	Insignificant						
<input checked="" type="checkbox"/>	Minor						
	Significant						
	Major						
<b>Management response - Capacity of management to respond</b>							
	High capacity						
<input checked="" type="checkbox"/>	Medium capacity						
	Low capacity						
	No capacity and / or resources						
<b>Trend - Development over the last 6 years</b>							
	Decreasing						
<input checked="" type="checkbox"/>	Static						
	Increasing						

Name		Impact			Origin		Trend
4.8.2 Society's valuing of heritage							
<b>Spatial scale - Area affected by the factor</b>							
	Restricted						
	Localised						
	Extensive						
<input checked="" type="checkbox"/>	Widespread						
<b>Temporal scale - Occurrence of the impact</b>							
	One off or rare						
	Intermittent or sporadic						
	Frequent						
<input checked="" type="checkbox"/>	On-going						
<b>Impact - Impact on the attributes</b>							

	Insignificant
✕	Minor
	Significant
	Major
Management response - Capacity of management to respond	
	High capacity
✕	Medium capacity
	Low capacity
	No capacity and / or resources
Trend - Development over the last 6 years	
	Decreasing
✕	Static
	Increasing

Name	Impact			Origin		Trend
4.8.3 Indigenous hunting, gathering and collecting						
						

Spatial scale - Area affected by the factor	
✕	Restricted
	Localised
	Extensive
	Widespread
Temporal scale - Occurrence of the impact	
	One off or rare
✕	Intermittent or sporadic
	Frequent
	On-going
Impact - Impact on the attributes	
	Insignificant
✕	Minor
	Significant
	Major
Management response - Capacity of management to respond	
✕	High capacity
	Medium capacity
	Low capacity
	No capacity and / or resources
Trend - Development over the last 6 years	
	Decreasing
✕	Static
	Increasing

Name	Impact	Origin	Trend
------	--------	--------	-------

4.8.4 Changes in traditional ways of life and knowledge system						

#### Spatial scale - Area affected by the factor

	Restricted
✕	Localised
	Extensive
	Widespread

#### Temporal scale - Occurrence of the impact

	One off or rare
✕	Intermittent or sporadic
	Frequent
	On-going

#### Impact - Impact on the attributes

	Insignificant
✕	Minor
	Significant
	Major

#### Management response - Capacity of management to respond

	High capacity
✕	Medium capacity
	Low capacity
	No capacity and / or resources

#### Trend - Development over the last 6 years

	Decreasing
✕	Static
	Increasing

Name	Impact			Origin	Trend
4.8.5 Identity, social cohesion, changes in local population and community					

#### Spatial scale - Area affected by the factor

	Restricted
	Localised
✕	Extensive
	Widespread

#### Temporal scale - Occurrence of the impact

	One off or rare
	Intermittent or sporadic
	Frequent
✕	On-going

#### Impact - Impact on the attributes

	Insignificant
--	---------------

✕	Minor
	Significant
	Major
<b>Management response - Capacity of management to respond</b>	
	High capacity
	Medium capacity
✕	Low capacity
	No capacity and / or resources
<b>Trend - Development over the last 6 years</b>	
	Decreasing
✕	Static
	Increasing

Name	Impact			Origin	Trend
4.8.6 Impacts of tourism/Visitation/Recreation	+	👎	👎	🔄	↗

<b>Spatial scale - Area affected by the factor</b>	
✕	Restricted
	Localised
	Extensive
	Widespread
<b>Temporal scale - Occurrence of the impact</b>	
	One off or rare
	Intermittent or sporadic
	Frequent
✕	On-going
<b>Impact - Impact on the attributes</b>	
	Insignificant
	Minor
✕	Significant
	Major
<b>Management response - Capacity of management to respond</b>	
✕	High capacity
	Medium capacity
	Low capacity
	No capacity and / or resources
<b>Trend - Development over the last 6 years</b>	
	Decreasing
	Static
✕	Increasing







## 4.9 Other human activities

Name		Impact			Origin		Trend
4.9.1 Illegal activities							
<b>Spatial scale - Area affected by the factor</b>							
<input checked="" type="checkbox"/>	Restricted						
<input type="checkbox"/>	Localised						
<input type="checkbox"/>	Extensive						
<input type="checkbox"/>	Widespread						
<b>Temporal scale - Occurrence of the impact</b>							
<input checked="" type="checkbox"/>	One off or rare						
<input type="checkbox"/>	Intermittent or sporadic						
<input type="checkbox"/>	Frequent						
<input type="checkbox"/>	On-going						
<b>Impact - Impact on the attributes</b>							
<input checked="" type="checkbox"/>	Insignificant						
<input type="checkbox"/>	Minor						
<input type="checkbox"/>	Significant						
<input type="checkbox"/>	Major						
<b>Management response - Capacity of management to respond</b>							
<input checked="" type="checkbox"/>	High capacity						
<input type="checkbox"/>	Medium capacity						
<input type="checkbox"/>	Low capacity						
<input type="checkbox"/>	No capacity and / or resources						
<b>Trend - Development over the last 6 years</b>							
<input checked="" type="checkbox"/>	Decreasing						
<input type="checkbox"/>	Static						
<input type="checkbox"/>	Increasing						




#### 4.10 Climate change and severe weather events

Name		Impact			Origin		Trend
4.10.1 Storms							
<b>Spatial scale - Area affected by the factor</b>							
<input type="checkbox"/>	Restricted						
<input type="checkbox"/>	Localised						
<input checked="" type="checkbox"/>	Extensive						
<input type="checkbox"/>	Widespread						
<b>Temporal scale - Occurrence of the impact</b>							
<input type="checkbox"/>	One off or rare						
<input checked="" type="checkbox"/>	Intermittent or sporadic						
<input type="checkbox"/>	Frequent						
<input type="checkbox"/>	On-going						


Impact - Impact on the attributes	
	Insignificant
	Minor
	Significant
✕	Major
Management response - Capacity of management to respond	
	High capacity
	Medium capacity
	Low capacity
✕	No capacity and / or resources
Trend - Development over the last 6 years	
	Decreasing
	Static
✕	Increasing

Name	Impact	Origin	Trend
4.10.2 Flooding			
			
			

Spatial scale - Area affected by the factor	
	Restricted
	Localised
✕	Extensive
	Widespread
Temporal scale - Occurrence of the impact	
	One off or rare
	Intermittent or sporadic
✕	Frequent
	On-going
Impact - Impact on the attributes	
	Insignificant
	Minor
✕	Significant
	Major
Management response - Capacity of management to respond	
	High capacity
	Medium capacity
	Low capacity
✕	No capacity and / or resources
Trend - Development over the last 6 years	
	Decreasing
	Static
✕	Increasing

Name	Impact	Origin	Trend
4.10.5 Changes to oceanic waters			
			

Spatial scale - Area affected by the factor	
<input checked="" type="checkbox"/>	Restricted
<input type="checkbox"/>	Localised
<input type="checkbox"/>	Extensive
<input type="checkbox"/>	Widespread
Temporal scale - Occurrence of the impact	
<input type="checkbox"/>	One off or rare
<input checked="" type="checkbox"/>	Intermittent or sporadic
<input type="checkbox"/>	Frequent
<input type="checkbox"/>	On-going
Impact - Impact on the attributes	
<input type="checkbox"/>	Insignificant
<input checked="" type="checkbox"/>	Minor
<input type="checkbox"/>	Significant
<input type="checkbox"/>	Major
Management response - Capacity of management to respond	
<input type="checkbox"/>	High capacity
<input type="checkbox"/>	Medium capacity
<input type="checkbox"/>	Low capacity
<input checked="" type="checkbox"/>	No capacity and / or resources
Trend - Development over the last 6 years	
<input type="checkbox"/>	Decreasing
<input checked="" type="checkbox"/>	Static
<input type="checkbox"/>	Increasing






Name	Impact	Origin	Trend
4.10.7 Other climate change impacts			
			

Spatial scale - Area affected by the factor	
<input checked="" type="checkbox"/>	Restricted
<input type="checkbox"/>	Localised
<input type="checkbox"/>	Extensive
<input type="checkbox"/>	Widespread
Temporal scale - Occurrence of the impact	
<input type="checkbox"/>	One off or rare
<input type="checkbox"/>	Intermittent or sporadic
<input type="checkbox"/>	Frequent
<input checked="" type="checkbox"/>	On-going



Impact - Impact on the attributes	
	Insignificant
✕	Minor
	Significant
	Major
Management response - Capacity of management to respond	
	High capacity
✕	Medium capacity
	Low capacity
	No capacity and / or resources
Trend - Development over the last 6 years	
	Decreasing
✕	Static
	Increasing

#### 4.11 Sudden ecological or geological events

Name	Impact			Origin		Trend
4.11.3 Tsunami/Tidal wave						
						

Spatial scale - Area affected by the factor	
	Restricted
✕	Localised
	Extensive
	Widespread
Temporal scale - Occurrence of the impact	
	One off or rare
✕	Intermittent or sporadic
	Frequent
	On-going
Impact - Impact on the attributes	
	Insignificant
	Minor
✕	Significant
	Major
Management response - Capacity of management to respond	
	High capacity
	Medium capacity
	Low capacity
✕	No capacity and / or resources
Trend - Development over the last 6 years	
	Decreasing
✕	Static

	Increasing
--	------------

Name	Impact	Origin	Trend
4.11.5 Erosion and siltation/Deposition			

Spatial scale - Area affected by the factor	
	Restricted
✕	Localised
	Extensive
	Widespread

Temporal scale - Occurrence of the impact	
	One off or rare
✕	Intermittent or sporadic
	Frequent
	On-going

Impact - Impact on the attributes	
	Insignificant
✕	Minor
	Significant
	Major

Management response - Capacity of management to respond	
	High capacity
✕	Medium capacity
	Low capacity
	No capacity and / or resources

Trend - Development over the last 6 years	
	Decreasing
✕	Static
	Increasing

### 4.13 Management and institutional factors

Name	Impact	Origin	Trend
4.13.1 Management system/Management plan			






  

Spatial scale - Area affected by the factor	
	Restricted
	Localised
✕	Extensive
	Widespread

Temporal scale - Occurrence of the impact	
	One off or rare
	Intermittent or sporadic

	Frequent
✕	On-going
<b>Impact - Impact on the attributes</b>	
	Insignificant
	Minor
✕	Significant
	Major
<b>Management response - Capacity of management to respond</b>	
✕	High capacity
	Medium capacity
	Low capacity
	No capacity and / or resources
<b>Trend - Development over the last 6 years</b>	
	Decreasing
	Static
✕	Increasing

Name	Impact	Origin	Trend
4.13.2 Legal framework	  	 	

<b>Spatial scale - Area affected by the factor</b>	
	Restricted
	Localised
	Extensive
✕	Widespread
<b>Temporal scale - Occurrence of the impact</b>	
	One off or rare
	Intermittent or sporadic
	Frequent
✕	On-going
<b>Impact - Impact on the attributes</b>	
	Insignificant
	Minor
	Significant
✕	Major
<b>Management response - Capacity of management to respond</b>	
✕	High capacity
	Medium capacity
	Low capacity
	No capacity and / or resources
<b>Trend - Development over the last 6 years</b>	
	Decreasing
	Static

	Increasing
--	------------

Name	Impact	Origin	Trend
4.13.3 Governance			

Spatial scale - Area affected by the factor	
	Restricted
	Localised
	Extensive
	Widespread

Temporal scale - Occurrence of the impact	
	One off or rare
	Intermittent or sporadic
	Frequent
	On-going

Impact - Impact on the attributes	
	Insignificant
	Minor
	Significant
	Major

Management response - Capacity of management to respond	
	High capacity
	Medium capacity
	Low capacity
	No capacity and / or resources

Trend - Development over the last 6 years	
	Decreasing
	Static
	Increasing

Name	Impact	Origin	Trend
4.13.4 Management activities			




  

Spatial scale - Area affected by the factor	
	Restricted
	Localised
	Extensive
	Widespread

Temporal scale - Occurrence of the impact	
	One off or rare
	Intermittent or sporadic
	Frequent

✕	On-going
<b>Impact - Impact on the attributes</b>	
	Insignificant
	Minor
✕	Significant
	Major
<b>Management response - Capacity of management to respond</b>	
✕	High capacity
	Medium capacity
	Low capacity
	No capacity and / or resources
<b>Trend - Development over the last 6 years</b>	
	Decreasing
	Static
✕	Increasing

Name	Impact			Origin	Trend
4.13.5 Financial resources					

<b>Spatial scale - Area affected by the factor</b>	
	Restricted
	Localised
	Extensive
✕	Widespread
<b>Temporal scale - Occurrence of the impact</b>	
	One off or rare
	Intermittent or sporadic
	Frequent
✕	On-going
<b>Impact - Impact on the attributes</b>	
	Insignificant
	Minor
✕	Significant
	Major
<b>Management response - Capacity of management to respond</b>	
✕	High capacity
	Medium capacity
	Low capacity
	No capacity and / or resources
<b>Trend - Development over the last 6 years</b>	
	Decreasing
	Static

	Increasing
--	------------

Name	Impact	Origin	Trend
4.13.7 Low impact research/monitoring activities			

Spatial scale - Area affected by the factor	
	Restricted
	Localised
	Extensive
	Widespread

Temporal scale - Occurrence of the impact	
	One off or rare
	Intermittent or sporadic
	Frequent
	On-going

Impact - Impact on the attributes	
	Insignificant
	Minor
	Significant
	Major

Management response - Capacity of management to respond	
	High capacity
	Medium capacity
	Low capacity
	No capacity and / or resources

Trend - Development over the last 6 years	
	Decreasing
	Static
	Increasing

#### 4.17. Serial inscriptions (national or transnational)

**4.17.1 - If your property is a serial inscription (national or transnational) please identify which components of the property are impacted by each factor**

#### 4.18. Prediction of the state of conservation at next cycle of Periodic Reporting.

**4.18.1 - Please predict what the state of conservation of each attribute will be approximately 6 years from now (at the time of the next cycle of Periodic Reporting)**

	Attribute	Preserved	Compromised	Seriously compromised	Lost
4.18.1.1	Rich mangrove forest				
4.18.1.2	Islands are of great economic importance				
4.18.1.3	The land area is actively influenced by the tides				
4.18.1.4	Sundarbans supports rich animal diversity, including land and aquatic mammals, reptiles, birds, etc.				
4.18.1.5	Human-tiger conflict with local people				

## 5. Protection and Management of the Property

### 5.1. Boundaries and Buffer Zones

#### 5.1.1 - Are the boundaries of the World Heritage property adequate to maintain the property's Outstanding Universal Value?

The boundaries **do not limit the ability to maintain** the property's Outstanding Universal Value but they **could be improved**

#### 5.1.2 - Are the boundaries of the World Heritage property known and recognised?

The boundaries **are known by both** the management authority and local communities/landowners

#### 5.1.3 - Are the buffer zone(s) of the World Heritage property adequate to maintain the property's Outstanding Universal Value?

The buffer zones **do not limit** the ability to maintain the property's Outstanding Universal Value but they could be improved

#### 5.1.4 - Are the boundaries of the buffer zones known and recognised?

The buffer zones of the World Heritage property **are known and recognised by both** the management authority and local communities/landowners

#### 5.1.5 - Comments, conclusions and/or recommendations related to boundaries and buffer zones of the World Heritage property

### 5.2. Protective Measures

#### 5.2.1 - Protective designation (legal, regulatory, contractual, planning, institutional and/or traditional).

The World Heritage property is protected under the following legislations:

- Indian Forest Act,
- Wildlife Protection Act (1972)
- Environmental Protection Act etc

History of protection in the area dates back to 1878. The core area was made a Wildlife Sanctuary in 1977 and a National Park in 1984.

Source: Periodic Reporting Cycle 2

#### 5.2.2 - Please list any legislation and other measures (regulatory -including spatial planning- contractual, institutional or traditional) not included in 5.2.1 and indicate the category

#### 5.2.3 - Is the legal framework (i.e. legislation and/or regulation including spatial planning) adequate for maintaining the Outstanding Universal Value including conditions of Integrity and/or Authenticity of the property?

The **legal framework** for maintaining of the Outstanding Universal Value including conditions of Authenticity and/or Integrity of the World Heritage property provides an **adequate basis for effective management and protection**

#### 5.2.4 - Is the legal framework (i.e. legislation and/or regulation) adequate in the buffer zone for maintaining the Outstanding Universal Value including conditions of Integrity and/or Authenticity of the property?

An **adequate legal framework** in the buffer zone for maintaining the Outstanding Universal Value including conditions of Authenticity and/or Integrity of the World Heritage property exists **but there are some deficiencies in implementation**

#### 5.2.5 - Is the legal framework (i.e. legislation and/or regulation) in the broader setting of the World Heritage property adequate for maintaining the Outstanding Universal Value including conditions of Integrity and/or Authenticity of the property?

An **adequate legal framework** exists for the broader setting of the World Heritage property, **but there are some deficiencies in implementation** which undermine the maintenance of the Outstanding Universal Value including conditions of Authenticity and/or Integrity of the property

#### 5.2.6 - Can the legal framework (i.e. legislation and/or regulation) be enforced?

There is **adequate capacity/resources** to enforce legislation and/or regulation in the World Heritage property

#### 5.2.7 - Please provide a short summary of how the legislation, including spatial planning and other regulation, works in practice

World Heritage property of Sundarbans National Park constitutes core area of the Sundarbans Tiger Reserve which is part of the larger Sundarbans Biosphere Reserve. The latter designations provide a buffer for the property.

#### 5.2.8 - Comments, conclusions and/or recommendations about the information related to the measures taken to protect the World Heritage property

Protection mechanism is in practice as per the Sundarbans Tiger Conservation Plan.

### 5.3. Management System/Management Plan

#### 5.3.1 - Please check the box which most closely match the character of the governance and management system of the property

Public management system at provincial/regional level

If 'Other', please specify

#### 5.3.2 - Management System: Please indicate which of the various management tools listed below are used to help protect the property.

A statutory Management Plan or zoning plan for the property.

Agreed 'Memorandums of Understanding' between different managing institutions, groups or others, including documents agreed with local communities for management

Mechanisms to promote equal participation among and within groups, including different levels of authority, local communities, indigenous people, women and men, and other specific groups

A framework for inclusive economic development, including equal access and distribution of resources and opportunities arising from the protection of the property

An integrated management plan combining World Heritage and any other designations
A management plan
An annual work plan or business plan
A disaster, climate or conflict risk management plan
A visitor/visitation management plan

### 5.3.3 - Please give a brief description of the management system currently in place at your property

Management system of the property is governed as a core zone under the Sundarbans Tiger Conservation Plan.

### 5.3.4 - Management Documents

### 5.3.5 - Has any use been made of the 2011 Recommendation on the Historic Urban Landscape in developing policies and best practices for the protection of this property?

The 2011 Recommendation on the Historic Urban Landscape is **not relevant** to this property

### 5.3.6 - If the Historic Urban Landscape Recommendation has been used at this property, please describe briefly what has been done.

### 5.3.7 - Has any use been made of the Policy Document on the Impacts of Climate Change on World Heritage Properties at the property?

**No use** has been made of the World Heritage Policy for Climate Change

### 5.3.8 - If the Climate Change policy has been used, please briefly describe what has been done along with any research on the impacts of Climate Change on the property:

### 5.3.9 - Has any use been made of the Strategy for Reducing Risks from Disasters at World Heritage Properties at the property ?

**No use** has been made of the Strategy for Reducing Risks from Disasters at World Heritage Properties

### 5.3.10 - If the Strategy for Reducing Risks from Disasters at World Heritage Properties has been used, please briefly describe what has been done

### 5.3.11 - Rate the coordination between the various levels of administration (i.e. national/federal; regional/provincial/state; local/municipal etc.) involved in the management of the World Heritage property

There is **adequate coordination** between all bodies/levels involved in the management of the property

### 5.3.12 - Is the management system/plan adequate to maintain the property's Outstanding Universal Value?

The management system/plan is **fully adequate** to maintain the property's Outstanding Universal Value

### 5.3.13 - Is the management system being implemented?

The management system is being **fully implemented and monitored**

### 5.3.14 - Is there an annual work/action plan and is it being implemented?

An annual work/action plan **exists** and all of its activities are being implemented and monitored

### 5.3.15 - Does the management system include formal mechanisms and procedures that ensure participation and contribution of the following groups, living within or near the World Heritage property and/or buffer zone in management decisions that maintain the Outstanding Universal Value of the property?

		Not applicable	No mechanisms for participation	Some participation	Direct participation	Transformative participation in all relevant decision processes
5.3.15.1	Local communities				✗	
5.3.15.2	Local authorities				✗	
5.3.15.3	Landowners in the property and the buffer zone	✗				
5.3.15.4	Indigenous peoples			✗		
5.3.15.5	Women				✗	
5.3.15.6	Other specific groups	✗				
	If you selected, 'Other specific groups' please specify					

### 5.3.16 - Please rate the cooperation/relationship between the World Heritage property managers/coordinators/staff and the following groups

		Not applicable	Non-existent	Poor	Fair	Good
5.3.16.1	Local communities					✗



5.3.16.2	Local/Municipal authorities					×
5.3.16.3	Indigenous peoples					×
5.3.16.4	Landowners				×	
5.3.16.5	Women					×
5.3.16.6	Youth/Children				×	
5.3.16.7	Researchers					×
5.3.16.8	Local Visitors/Tourists					×
5.3.16.9	National/International tourists					×
5.3.16.10	Tourism Industry					×
5.3.16.11	Local businesses and industries				×	
5.3.16.12	NGOs					×
5.3.16.13	Other specific groups	×				
	If you selected 'Other specific groups', please specify					

**5.3.17 - Please rate the extent to which the management system of your property contributes towards achieving the objectives of the World Heritage Committee's Policy for the Integration of a Sustainable Development Perspective into the Processes of the *World Heritage Convention***

		Not applicable	No contribution	Limited	Significant	Full achievement
5.3.17.1	The management system of the property contributes to gender equality				×	
5.3.17.2	The management system of the property provides ecosystem services/benefits to the local community (e.g. fresh air, water, food, medicinal plants)				×	
5.3.17.3	The management system of the property contributes to social inclusion and equity, improving opportunities for all, irrespective of age, sex, disability, ethnicity, origin, religion or economic or other status				×	
5.3.17.4	The management system of the property integrates a human rights-based approach				×	
5.3.17.5	The management system of the property contributes to fostering inclusive local economic development, and to enhancing livelihood				×	
5.3.17.6	The management system of the property contributes to conflict prevention, including respect for cultural diversity within and around the World Heritage property				×	

**5.3.18 - Please provide further details on the ratings of the management system given in the table above**

People's Participation

**5.3.19 - Comments, conclusions and/or recommendations related to the management system/plan**

**6. Financial and Human Resources**

**6.1. Funding**

**6.1.1 - If your funding sources do not exactly fit those shown, put the relevant amounts against the funding type that most closely represents your situation, and use the comment box below to provide more details.**

		Project costs	Running costs
6.1.1.1	Multilateral funding (GEF, World Bank, etc.)	0 %	0 %
6.1.1.2	Bilateral international funding	0 %	0 %
6.1.1.3	World Heritage Fund (International Assistance)	0 %	0 %
6.1.1.4	Contribution from other conventions and programmes	0 %	0 %
6.1.1.5	International donations (NGOs, foundations, etc.)	0 %	0 %
6.1.1.6	Governmental (national/federal)	30 %	20 %
6.1.1.7	Governmental (regional/provincial/state)	70 %	70 %
6.1.1.8	Governmental (local/municipal)	0 %	0 %
6.1.1.9	In-country donations (NGOs, foundations, etc.)	0 %	0 %
6.1.1.10	Individual visitor charges (e.g. entry, toilets, parking, camping fees, etc.)	0 %	10 %
6.1.1.11	Commercial activities (e.g. merchandising and catering, filming permit, concessions, etc.)	0 %	0 %

6.1.1.12	Other	0 %	0 %
		Total 100 %	Total 100 %

#### 6.1.2 - Please comment here on any other aspects of funding sources not covered in the table above

Sundarban Tiger Conservation Fund Trust (STCFT)

#### 6.1.3 - Is the current budget sufficient to manage the World Heritage property effectively?

The available **budget is acceptable** but **could be further improved** to fully meet the management needs

#### 6.1.4 - Are the existing sources of funding secure and likely to remain so?

The existing sources of funding are **secure over the medium-term** and **planning is underway to secure funding over the long-term**

#### 6.1.5 - Comments, conclusion, and/or recommendations related to finance and infrastructure

Funding levels need to be augmented.

#### 6.1.6 - Estimate the distribution of men and women involved in the management, conservation, interpretation of the World Heritage properties and the extent to which they are drawn from local communities.

		From local communities %	From elsewhere %
6.1.6.1	Men	50 %	0 %
6.1.6.2	Women	50 %	0 %
		Total 100 %	Total 0 %

#### 6.1.7 - Are available human resources adequate to manage the World Heritage property?

Human resources **partly meet** the management needs of the World Heritage property

#### 6.1.8 - Considering the management needs of the World Heritage property, please rate the availability of professionals in the following disciplines

Conservation	Good
Environmental sustainability	Fair
Community participation and inclusion	Good
Risk preparedness	Fair
Capacity development and education	Fair
Administration	Good
Research and monitoring	Fair
Awareness raising and public information/communication	Good
Marketing and promotion	Fair
Interpretation	Fair
Visitor management/tourism	Good
Enforcement (custodians, police)	Good

#### 6.1.9 - Please rate the availability of training opportunities for the management of the World Heritage property in the following disciplines

Conservation	Fair
Environmental sustainability	Fair
Community participation and inclusion	Good
Risk preparedness	Fair
Capacity development and education	Good
Administration	Fair
Research and monitoring	Fair
Awareness raising and public information/communication	Good
Marketing and promotion	Fair
Interpretation	Fair
Visitor management/tourism	Good

Enforcement (custodians, police)	Good
----------------------------------	------

#### 6.1.10 - Has any use been made of the World Heritage Strategy for Capacity Building at the property?

**No use** has been made of the World Heritage Strategy for Capacity Building

#### 6.1.11 - If the World Heritage Strategy for Capacity Building has been used, please briefly describe what has been done.

#### 6.1.12 - Are there site-specific capacity building plans or programmes that develop local expertise and that contribute to the transfer of skills for the conservation and management of the World Heritage property?

A **site-based** capacity building plan or programme is in place and partially implemented; some technical skills are being transferred to those managing the property locally, **but most technical work is carried out by external staff**

#### 6.1.13 - Comments, conclusions and/or recommendations related to human resources, expertise and training

A proposal is in place for the creation of a Special Tiger Protection Force (STPF).

### 7. Scientific Studies and Research Projects

#### 7.1 - Is there adequate knowledge (scientific or traditional) about the values and attributes of the World Heritage property to support planning, management and decision-making to ensure that Outstanding Universal Value is maintained?

Knowledge about the values and attributes of the World Heritage property is **acceptable** for most key areas but there are gaps

#### 7.2 - Is there a planned programme of research at the property which is directed towards management needs and/or improving understanding of Outstanding Universal Value?

There is **considerable research** but it is **not directed towards management needs and/or improving understanding of Outstanding Universal Value**

#### 7.3 - Are results from research programmes publicly available and disseminated?

Research results **are shared with local communities and some national agencies**

#### 7.4 - Comments, conclusions and/or recommendations related to scientific studies and research projects

The tiger population is monitored on an annual process through camera trapping, as part of the "Phase-IV" programme. Other research is also conducted from time to time.

### 8. Education, Information and Awareness Building

#### 8.1 - Please rate the awareness and understanding of the existence and justification for inscription of the World Heritage property amongst the following groups

Local communities	Good
Local/municipal authorities	Good
Indigenous peoples	Good
Landowners	Fair
Women	Fair
Youth/children	Fair
Researchers	Good
Local visitors	Fair
National/international tourists	Good
Tourism industry	Fair
Local businesses and industries	Fair
NGOs	Fair
Other specific groups	Not applicable
If you selected 'Other specific groups', please describe	

#### 8.2 - Does the property have a heritage education programme(s) for children and/or youth, that can contribute to a better understanding of heritage, promote diversity and foster intercultural dialogue?

There is a planned education and awareness programme for children and/or youth **but it only partly meets the needs**

#### 8.3 - Who are the target audiences for education and awareness programmes at your property?

Local communities
Local/municipal authorities
Indigenous peoples
Women

Youth/children
Local Visitors
National/international tourists
Tourism industry
Local businesses and industries

**8.4 - Please rate the adequacy of the following visitor facilities and services at the World Heritage property for education, information, interpretation and awareness building**

Visitor centre	Good
Site museum	Fair
Information booths	Fair
Guided tours	Fair
Trails/routes	Good
Printed information materials	Good
Online (website, social media, etc.)	Fair
Transportation facilities	Fair
Other	Not needed
If 'Other' is selected, please specify	

**8.5 - Comments, conclusions and/or recommendations related to education, information and awareness building**

Awareness building should be improved.

**9. Visitor Management**

**9.1 - Please provide estimated annual visitor numbers (including national and international visitors) since the last Periodic Report**

212782 / 205581 / 223012 / 203442 / 185892 /

**9.2 - What information sources are used to collect visitor statistics?**

Entry tickets and registries

**9.3 - What is the average length stay of a visitor to the World Heritage property?**

Overnight stay

**9.4 - Please provide the source of information**

Entry pass.

**9.5 - What is the approximate average daily visitor expenditure? (Please provide an estimated monetary figure in USD)**

15 / 10 / 20 / 3 /

**9.6 - Please provide the source of information**

Rate chart and local survey.

**9.7 - Does the management system/plan for the World Heritage property include a strategy with an action plan to manage visitors, tourism activity and its derived economic, socio-cultural and environmental impacts?**

There is a planned and **effective strategy** to manage visitors, tourism activity and its derived impacts on the World Heritage property

**9.8 - Please provide any comments relating to the answer provided above in question 9.7**

As per Sundarbans Tiger Conservation Plan

**9.9 - Is visitor use effectively managed to maintain the Outstanding Universal Value of the property?**

Visitor use of the World Heritage property is managed but **improvements could be made**

**9.10 - Is the effectiveness of tourism management regularly monitored?**

Yes, using a different system

If a different system, please specify

As per Sundarbans Tiger Conservation Plan.

**9.11 - How does the tourism industry cooperate with the site management to improve visitor experiences and maintain the Outstanding Universal Value of the World Heritage property?**

There is **good cooperation** between those responsible for the World Heritage property and the tourism industry **to present the Outstanding Universal Value and increase appreciation**

**9.12 - How well is the information on the Outstanding Universal Value of the property presented and interpreted?**

The presentation and interpretation of the Outstanding Universal Value of the property is **acceptable but improvements could be made**

**9.13 - At how many locations is the World Heritage emblem displayed at the property?**

In **many locations** and **easily visible** to visitors

**9.14 - How does visitor/tourism revenue (e.g. entry charges, permits) contribute to the management of the World Heritage property?**

**Fees are collected** and make a **substantial contribution** to the management of the World Heritage property

**9.15 - Are there locally driven sustainable tourism initiatives?**

Yes

If 'Yes', please specify

Local boats including watercrafts, guides etc.

**9.16 - Are the benefits of tourism shared with local communities?**

Yes

If 'Yes', please specify

40% of the total income derived from ecotourism is shared with the local community.

**9.17 - Comments, conclusions and/or recommendations related to visitation/tourism/public use of the World Heritage property**

1) Tourism facilities to be developed. 2) Online tourism initiator.

**10. Monitoring****10.1 - Is there a monitoring programme at the property directed towards management needs and/or towards improving the understanding of the Outstanding Universal Value?**

There is a **comprehensive, integrated programme of monitoring**, which is relevant to management needs and/or improving understanding of the Outstanding Universal Value

**10.2 - Is necessary information available in order to define key indicators for measuring the state of conservation and are they used in monitoring how the Outstanding Universal Value of the property is being maintained?**

Information on the values of the World Heritage property is **adequate and key indicators have been defined but monitoring of the status of indicators could be improved**

**10.3 - Are key indicators defined and in place for the following principal aspects of the property?**

	Extend of indicators	Not applicable	No indicators	Indicators have been defined but are not yet in use	Indicators are in place and in use since the last Periodic Reporting cycle
10.3.1	State of conservation				×
10.3.2	Effectiveness of the management system				×
10.3.3	Character of governance				×
10.3.4	Appropriate synergy with other conservation designations		×		
10.3.5	Contribution to sustainable development			×	
10.3.6	Capacity development			×	

**10.4 - Please provide information on relevant key indicators adopted at the property**

All India Tiger Estimation; Management Effectiveness Evaluation; Animal monitoring; Security audit.

**10.5 - Please rate the level of involvement in monitoring of the following groups:**

World Heritage managers/coordinators and staff	Good
Local/municipal authorities	Not applicable
Local communities	Fair
Indigenous peoples	Fair
Landowners	Not applicable
Women	Fair
Researchers	Fair
Tourism industry	Not applicable
Local businesses and industry	Not applicable
NGOs	Fair

Other specific groups	Not applicable
If you selected 'Other specific groups', please specify	

#### 10.6 - Has the State Party implemented relevant recommendations arising from the World Heritage Committee?

No relevant Committee recommendations to implement

#### 10.7 - Please provide comments relevant to the implementation of recommendations from the World Heritage Committee.

There is no recent recommendation by the World Heritage Committee. Following Cyclone Amphan in 2020, a State of Conservation report was invited by the World Heritage Centre.

#### 10.8 - Comments, conclusions and/or recommendations related to Monitoring

Monitoring is being carried out in the National Park/World Heritage property with intensive effort through various provincial and national level mechanisms.

### 11. Identification of Priority Management Needs

#### 11.1 - Identification of Priority Management Needs

5.2	Protective Measures	
5.2.4	An <b>adequate legal framework</b> in the buffer zone for maintaining the Outstanding Universal Value including conditions of Authenticity and/or Integrity of the World Heritage property exists <b>but there are some deficiencies in implementation</b>	✕
5.2.5	An <b>adequate legal framework</b> exists for the broader setting of the World Heritage property and the buffer zone, <b>but there are some deficiencies in implementation</b> which undermine the maintenance of the Outstanding Universal Value including conditions of Authenticity and/or Integrity of the property	
5.3	Management System/Management Plan	
5.3.7	<b>No use</b> has been made of the Policy Document on the Impacts of Climate Change on World Heritage Properties at the property	✕
5.3.9	<b>No use</b> has been made of the Strategy for Reducing Risks from Disasters at World Heritage Properties at the property	✕
6.1	Funding	
6.1.3	The available <b>budget is acceptable</b> but <b>could be further improved</b> to fully meet the management needs of the World Heritage property	✕
6.1.7	Human resources <b>partly meet</b> the management needs of the World Heritage property	✕
6.1.10	<b>No use</b> has been made of the World Heritage Strategy for Capacity Development at the World Heritage property	✕
6.1.12	<b>A site-based</b> capacity building plan or programme is in place and partially implemented; some technical skills are being transferred to those managing the property locally, <b>but most technical work is carried out by external staff</b>	
7	Scientific Studies and Research Projects	
7.2	There is <b>considerable research</b> in the World Heritage property but it is <b>not directed towards management needs and/or improving understanding of Outstanding Universal Value</b>	✕
8	Education, Information and Awareness Building	
8.2	There is a planned education and awareness programme for children and/or youth <b>but it only partly meets the needs</b>	✕
9	Visitor Management	
9.9	Visitor use of the World Heritage property is managed but <b>improvements could be made</b>	
9.12	The presentation and interpretation of the Outstanding Universal Value of the property <b>is acceptable but improvements could be made</b>	✕
10	Monitoring	
10.2	Information on the values of the World Heritage <b>property is adequate and key indicators have been defined but monitoring of the status of indicators could be improved</b>	✕

Please select 0 more issues.

☒ Please save this question to reflect changes

### 12. Summary and Conclusions

#### 12.1. Summary - Factors affecting the Property

##### 12.1.1 - Summary - Factors affecting the Property

4.4	Pollution							
4.4.1	Pollution of marine waters							

4.4.2	Ground water pollution						
4.4.4	Air pollution						
4.5	<b>Biological resource use/modification</b>						
4.5.1	Fishing/collecting aquatic resources	(x)	Fishing in National Park is restricted and this activity is allowed in buffer area only. Awareness programmes are regularly conducted with the stakeholders (fishermen).	Regular e-monitoring is done through Protection Monitoring Protocol (PMP).	Ongoing continuous process.	Forest Department; Local NGOs	N.A.
4.7	<b>Local conditions affecting physical fabric</b>						
4.7.1	Wind	(ix)	Implementing Management Plan activities	Temperature, humidity, rainfall monitoring	Continuous	Forest Department	NA
4.10	<b>Climate change and severe weather events</b>						
4.10.1	Storms	(ix), (x)	Preparedness and Mitigation measures are taken.	Early-warning systems and post-event monitoring.	Continuous	Forest Department	NA
4.10.2	Flooding	(ix), (x)	Rescue and rehabilitation through river transport	Rainfall and water-level indicators	Continuous	Forest Department	NA
4.10.5	Changes to oceanic waters	(ix), (x)	Maritime policy intervention required.	Water flow and qualitative monitoring	Continuous	Forest Department; State and National Government	NA
4.10.7			Other climate change impacts				
4.11	<b>Sudden ecological or geological events</b>						
4.11.3	Tsunami/Tidal wave	(ix), (x)	Post-event mitigating measures	Unpredictable event	As per event occurrence	Forest Department	NA

Question not completed

## 12.2. Summary - Management Needs

### 12.2.1 - Summary - Management Needs

5.2	Protective Measures				
		Actions	Timeframe	Lead agency (and others involved)	More info / comment
5.2.4	An <b>adequate legal framework</b> in the buffer zone for maintaining the Outstanding Universal Value including conditions of Authenticity and/or Integrity of the World Heritage property exists <b>but there are some deficiencies in implementation</b>	The buffer zone consists of Reserved Forests, which are protected under the Indian Forests Act, 1927 which requires enhanced enforcement. The Sajnekhali Wildlife Sanctuary receives legal protection through the Wildlife Protection Act, 1972.	5 years	Forest Department	NA
5.3	Management System/Management Plan				
5.3.7	<b>No use</b> has been made of the Policy Document on the Impacts of Climate Change on World Heritage Properties at the property	1) More research on the potential impacts of climate change needs to be carried out. 2) Multidisciplinary ecological monitoring is being carried out in coordination with WWF India. 3) Capacity for climate resilient livelihoods is being developed,	5 years	Forest Department; Scientific agency; NGOs	NA

5.3.9	No use has been made of the Strategy for Reducing Risks from Disasters at World Heritage Properties at the property	1) Rapid response to disasters like Cyclone Amphan to repair damaged protection infrastructure like nylon net fencing. 2) Relief provided to local communities in coordination with NGOs.	5 years	Forest Department	NA
6.1	Funding				
6.1.3	The available <b>budget is acceptable</b> but <b>could be further improved</b> to fully meet the management needs of the World Heritage property	1) As property is in the core area of Tiger Reserve, funds are received under Project Tiger. 2) Resources from the Sundarban Tiger Conservation Fund Trust are also being used for management of the property	Ongoing	Forest Department	NA
6.1.7	Human resources <b>partly meet</b> the management needs of the World Heritage property	1) Proposal has been made for the creation of a Tiger Protection Force, which will assist the management in the conservation of the heritage site.	5 years	Forest Department	NA
6.1.10	No use has been made of the World Heritage Strategy for Capacity Development at the World Heritage property	1) Current capacity development needs covered by coordination with other government agencies and NGOs. Initiative will be taken for applying relevant provisions the World Heritage strategy in the property.	5 years	Forest Department; Expert agencies	NA
7	Scientific Studies and Research Projects				
7.2	There is <b>considerable research</b> in the World Heritage property but it is <b>not directed towards management needs and/or improving understanding of Outstanding Universal Value</b>	1) Research is being conducted principally on tiger and prey monitoring. Conservation breeding and research on the Northern River Terrapin is also being carried out. 2) Research priorities will be further oriented towards OUV monitoring.	5 years	Forest Department	NA
8	Education, Information and Awareness Building				
8.2	There is a planned education and awareness programme for children and/or youth <b>but it only partly meets the needs</b>	1) More targeted education/awareness programmes will be undertaken, specifically with an OUV orientation	Continuous	Forest Department; NGOs; Local schools	NA
9	Visitor Management				



9.12	The presentation and interpretation of the Outstanding Universal Value of the property <b>is acceptable but improvements could be made</b>	1) Refurbishment of the Mangrove Interpretation Centre (MIC) at Sajnekhali is being carried out. 2) There is a need to include interpretation through the audio-visual medium.	3 years	Forest Department; NGOs	NA
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10	<b>Monitoring</b>				
10.2	Information on the values of the World Heritage <b>property is adequate and key indicators have been defined but monitoring of the status of indicators could be improved</b>	1) Focused training of staff is envisaged for undertaking regular monitoring and feedback from the field.	3 years	Forest Department; NGOs	NA

Summary - Management Needs completed

### 12.3. Conclusions on the State of Conservation of the Property

#### 12.3.1 - Following the analysis undertaken for this report, what is the current state of Authenticity of the World Heritage property?

**Not applicable** (sites inscribed exclusively under criteria vii to x (natural World Heritage properties))

#### 12.3.2 - Following the analysis undertaken for this report, what is the current state of Integrity of the World Heritage property?

The Integrity of the World Heritage property is **intact**

#### 12.3.3 - Following the analysis undertaken for this report, what is the current state of the World Heritage property's Outstanding Universal Value?

The World Heritage property's Outstanding Universal Value **has been impacted by factors described in this report, but this situation is being addressed through effective management actions.**

#### 12.3.4 - What is the current state of the property's other values?

Other important cultural and/or natural values and the state of conservation of the World Heritage property are **intact**

#### 12.3.5 - Comments, conclusions and/or recommendations related to the state of conservation of the property.

1) The conservation of the property is linked to the wider programme of tiger conservation in India, under the aegis of the NTCA (National Tiger Conservation Authority). 2) The implementation of the property's protocols on protection, budgeting, conflict mitigation etc. are consistently monitored holistically. 3) There is a need for more manpower and resources for patrolling and protection-related activities in this challenging landscape.

### 13. Impact of World Heritage Status

#### 13.1 - Please rate the impacts of World Heritage status of the property in relation to the following areas

Conservation	Very positive
Research and monitoring	Positive
Management effectiveness	Very positive
Quality of life for local communities and indigenous peoples	Positive
Recognition	Very positive
Education	Positive
Infrastructure development	Negative
Funding for the property	Positive
International cooperation	Positive
Political support for conservation	Positive
Legal/Policy framework	Positive
Advocacy	Positive

Institutional coordination	Positive
Security	Positive
Gender equality	Positive
Provision of ecosystem services/ benefits to local communities	Positive
Social inclusion and equity, and improvement of opportunities for all, irrespective of age, sex, disability, ethnicity, origin, religion, or economic or other status	Positive
Fostering inclusive local economic development and enhancing livelihood	Positive
Contributing to conflict prevention, including respect for cultural diversity within and around heritage properties	Positive
Other	Not applicable
If 'Other', please specify	

### 13.2 - Comments, conclusions and/or recommendations related to World Heritage status and its impacts

## 14. Good Practice in the Implementation of the World Heritage Convention

### 14.1 - Example of good practice in World Heritage protection, identification, conservation or management at the property level

The National Park has a dedicated Protection Strategy. Patrols are carried out on a daily basis through boats. Data pertaining to every single patrol, such as the number of staff involved, their equipment, any wildlife or offences observed etc. is noted down in a format known as the Protection Monitoring Protocol (PMP). Meetings pertaining to PMPs and protection efforts are reviewed on a monthly basis, through meetings conducted by the senior officials. Recently, android phones containing the e-patrolling application "Hejje" have been provided to all the beats. This allows patrolling data to be entered and checked on a real-time basis, through databases maintained at the range level. In spite of the various challenges posed by the difficult and remote terrain and the presence of a porous international border, the efficacy of the protection regime in the National Park is demonstrated by the fact that no incidents of poaching of tigers or their prey have occurred in the past several years.

### 14.2 - Define which topics are covered by this example of best practice at the property level

State of Conservation
Management
Governance

## 15. Assessment of the Periodic Reporting Exercise

### 15.1. Relevance of Periodic Reporting

#### 15.1.1 - Has the Periodic Reporting process improved the understanding of the following?

The <i>World Heritage Convention</i>
The concept of Outstanding Universal Value
The property's Outstanding Universal Value
The concept of Integrity and/or Authenticity
The property's Integrity and/or Authenticity
Management effectiveness to maintain the Outstanding Universal Value
Monitoring and reporting

#### 15.1.2 - Please rate the follow-up to conclusions and recommendations from previous Periodic Reporting exercise by the following entities

State Party	Good
Site Managers	Good
UNESCO World Heritage Centre	Fair
Advisory Bodies (ICOMOS, IUCN, ICCROM)	Fair

### 15.2. Use of Data

#### 15.2.1 - How do the authorities in charge of the property plan to use the data recorded from this cycle of Periodic Reporting?

Revision of priorities/strategies/policies for the protection, management and conservation of heritage
Fundraising
Awareness raising

### 15.2.2 - Comments on use of data from the Cycle of Periodic Reporting

It will be used for fundraising and for the implementation of conservation activities in accordance with the Tiger Conservation Plan. It will also help in awareness raising among the local communities and visitors.

### 15.3. Timing and resources

#### 15.3.1 - Entities involved in the filling out of this online questionnaire (tick as many boxes as applicable)

Governmental institutions responsible for cultural and natural heritage

Site Manager/Coordinator World Heritage property staff

#### 15.3.2 - Has a gender balanced contribution and participation been considered in the filling out of this questionnaire?

Gender balance has **not been explicitly** considered or implemented in the process.

#### 15.3.3 - Were you given adequate time (i.e. roughly ten months) to gather necessary information and to fill in this questionnaire?

Yes

#### 15.3.4 - Please estimate the time (working hours) needed to complete this questionnaire

120 / 15 / 25 /

#### 15.3.5 - Did you mobilise any additional resources to fill out this questionnaire?

	Additional resources	No	Yes
15.3.5.1	Human resources	✗	
15.3.5.2	Financial resources for organizing consultation meetings/ training	✗	

### 15.4. Format and content of the Periodic Report

#### 15.4.1 - How accessible was the information required to complete this questionnaire?

All required information was accessible.

#### 15.4.2 - Was the questionnaire easy to use and clear to understand?

		Very Difficult	Difficult	Easy	Very easy
15.4.2.1	Ease of use of questionnaire			✗	
15.4.2.2	Clarity of questions			✗	

#### 15.4.3 - Please provide suggestions for improvement of the Periodic Reporting questionnaire

Need for greater coordination with UNESCO institutions.

### 15.5. Training and Guidance

#### 15.5.1 - Please rate the level of support in terms of training and guidance from the following entities in completing this questionnaire

UNESCO World Heritage Centre	Fair
UNESCO (other sectors/field offices)	Fair
UNESCO National Commission	Not applicable
ICOMOS International	Not applicable
IUCN International	Not applicable
ICCROM international/regional	Not applicable
ICOMOS national/regional	Not applicable
IUCN national/regional	Not applicable

#### 15.5.2 - Please rate the level of support for completing the Periodic Reporting questionnaire from the following entities

UNESCO World Heritage Centre	Good
State Party Representative (national Focal Point)	Good
UNESCO other sectors (e.g. field office)	Not applicable
National Commission for UNESCO	Not applicable
ICOMOS International	Not applicable
ICCROM International/regional	Not applicable
ICOMOS national/regional	Not applicable

IUCN national/regional	Not applicable
IUCN International	Not applicable

**15.5.3 - Were the online training resources prepared by the World Heritage Centre regarding Periodic Reporting adequate for you to complete this questionnaire?**

Not applicable (i.e. I did not use these resources)

**15.5.4 - If you found that the online training resources were not adequate, what changes would you like to see implemented?**

The online training was supplemented by National-level virtual and in-person capacity-building for filling-up the Questionnaire..

**15.6. Actions that will require formal consideration by the World Heritage Committee**

**15.6.1 - Summary of actions that will require formal consideration by the World Heritage Committee**

No item were proposed for update

**15.7. Comments, conclusions and/or recommendations related to the Assessment of the Periodic Reporting Exercise**

**15.7.1 - Comments, conclusions and/or recommendations related to the Assessment of the Periodic Reporting Exercise**

The periodic reporting exercise was accorded a high level of priority.

**15.7.2 - Thank you for having filled in all the questions. Please contact your National Focal Point for validation.**