To: Mr. Eloundou Assomo, Director, UNESCO World Heritage Centre and Mr. Tim Badman, Director, IUCN World Heritage Programme

Re: Updated concerns regarding State of Conservation of the Sundarbans of Bangladesh

Date: April 17, 2023

Dear Mr. Eloundou Assomo and Mr. Badman,

As the 45th Session of the World Heritage Committee is approaching, we reiterate our deep concerns regarding the industrialization around the Sundarbans (Bangladesh) World Heritage property.

In early 2022 we shared with you a letter with multiple appendices, which explained our concerns regarding the Draft Strategic Environmental Assessment of South West Region of Bangladesh for Conserving the Outstanding Universal Value of the Sundarbans (Draft SEA) and developments around the Sundarbans. (Annex I: Letter and notes on the 2021 Decision)

As the Committee session did not happen in 2022, we want to draw your attention to further developments in 2022 through early 2023, and the publication of a "Final" SEA and Strategic Environmental Management Plan (SEMP).

We again urge the IUCN World Heritage Programme to undertake and publish a detailed review of the "Final" SEA and SEMP.

At the 45th session of the World Heritage Committee in 2023, we urge the draft decision to the Committee to:

1. Call for the Sundarbans of Bangladesh to be added to the List of World Heritage in Danger due to industrial developments proceeding around the property prior to completion of a credible SEA.
2. Call for the SEA and SEMP to be revised with robust public participation, scientific integrity, transparency of data, adequate assessment, and detailed recommendations to reduce air, water, soil and noise pollution from large industries, infrastructure, shipping and dredging that may impact attributes of OUV of the Sundarbans both directly and through secondary effects (e.g. displacement of local people). The SEA must proceed in compliance with the IUCN World Heritage Advice Note on Environmental Assessment (both 2013 and 2022) and

in line with Paragraph 118bis of the *Operational Guidelines*, which requires assessment of alternatives to proposed development projects and programs.

Below we provide a detailed update on our concerns with the Final SEA and SEMP, as well as the state of conservation of the Sundarbans over the last year.

A. Industrial development adjacent to the property proceeded throughout the Strategic Environmental Assessment.

The Committee at its 41st session requested the State Party to ensure that any large-scale industrial and/or infrastructure developments will not be allowed to proceed before the SEA has been completed, and to submit a copy of the SEA to the World Heritage Centre for review by IUCN. (Decision 41 COM 7B.25).

In **Annex II**, please see photographs and record of rapid progress in development of several large industrial facilities during the time of the SEA design and execution.

We remain extremely concerned that the most likely future for the OUV of the Sundarbans is what is described in the SEA as the "high growth scenario" with all the destructive impacts and little to no "timely and effectively implemented mitigation measures." (pp.147-149).

B. The SEA failed to fulfill its initial objectives and to respond to our critique.

The SEA officials made a flawed and cursory response to most of our recommendations listed in Appendix 4 of the submission, which we shared with you on 24 March 2022 (see Annex III).

The responses from the SEA officials confirm that the SEA did not assess key threats to the OUVs and failed to develop reliable safeguard measures; moreover, it was not designed to serve those objectives. It failed to assess key threats adequately and accurately for the following reasons:

1. The SEA failed to consider specific alternatives to development (which is one of its stated objectives) and instead became an instrument focused on increasing development by evaluating "low", "medium", "high" development scenarios. It emphasized various quantities of development rather than quality of development and did not differentiate between substantive development options.

2. The SEA failed to identify and conduct robust analysis of pressures from the key sectors. Rather than evaluating environmental impacts from these sectors, it attempts to "kick the can down the road" and avoid establishing enforceable standards by recommending new

SEAs for shipping, agriculture and key industrial sectors "in the next five years". These substantive omissions postpone crucial conclusions that were expected to come from this SEA (See paragraph 10.20 in the Final SEA Report - http://www.seasw-sundarbansbd.org/wp-content/uploads/2022/04/Final-SEA-Report_CEGIS-Integra.pdf).

3. The SEA failed to create a useful, systematized knowledge base about the pressures and impacts on Sundarbans, with insufficient references to original data. Most data used in the study are vague and imprecise; recommendations for future action are generic and\or not supported by credible information sources or option analysis. The SEA does not make it possible to rank various pressure factors in terms of severity of their impacts for specific process and features in Sundarbans ecosystem. Nor it is possible to say how likely specific impacts will be within the next 20 years.

4. The SEA substituted assessment of cumulative impacts from key sectors by developing trivial schemes of causal relationships between generic impacts from each sector (see Chapter 9).

5. The SEA disregarded and downplayed many impacts from industrial development, including toxic ash pollution from coal power plants, and water pollution from industrial facilities being developed at Rampal, Mongla, Barisal and Patuakhali. While it admits ash and water pollution are problematic, it failed to specify realistic and effective mitigation measures.

6. The SEA failed to incorporate timely and meaningful consultations and produce useful information in local languages.

7. The SEA leapfrogged assessment of development and mitigation options and instead adopted an overoptimistic and improbable wish list in the SEMP. The SEA fails the most fundamental credibility test by claiming that the more destructive development is implemented in the area, the higher are the chances that all negative impacts can be fully mitigated. This methodology is so fundamentally flawed, it simply cannot be allowed to stand. It must not be used as a basis for any future SEAs. The reality is that most of SEMP looks like a collection of arbitrarily chosen measures to let industrialization proceed without strict environmental standards or requirements for best available technologies.

In response to NCSS critiques, the SEA officials wrote that this assessment covered 89 policies, plans and programs (PPPs) and, thus, was unable to usefully determine which of them can safely proceed and which should be curtailed. Responding to the NCSS's letter, they claimed that several new energy megaprojects have been taken into consideration in air quality

analysis, while those are not listed among facilities subject to such analysis in Chapter 4 of the Final SEA Report.

The authors confirmed that the SEA design did not take into consideration the IUCN World Heritage Advice Note: Environmental Assessment (2013), because "Projects should be subjected to EIAs. It is not the function of SEA to do this." (Page 395 of the Final SEA Report).

We argue that the World Heritage Committee called for this SEA since 2014 in order to assess the *cumulative impacts of specific projects (including coal plants and associated shipping and dredging),* not just policies, plans and programs. Decision 38 COM 7B.64 states (emphasis added):

> Notes with concern that the **indirect impacts on the property of the construction of a coal fired power plant at Khulna do not appear to have been assessed**, considers that **increased navigation on the Pashur River and the required dredging are likely to have a significant adverse impact on the property's Outstanding Universal Value (OUV)**, and requests the State Party to ensure that the Environmental Impact Assessment (EIA) for the dredging activities include a specific assessment of potential impacts on OUV, in conformity with IUCN's World Heritage Advice Note on Environmental Assessment, and to submit it to the World Heritage Centre prior to making any decisions that would be difficult to reverse in accordance with Paragraph 172 of the *Operational Guidelines* ;
>
> Also notes with concern the reports of **further infrastructure and industrial development downstream of the power plant, and of plans for the construction of an additional coal fired power plant** in the same location, and **also requests the State Party to undertake a comprehensive Strategic Environmental Assessment (SEA) to ensure that cumulative impacts of developments in the Sundarbans are adequately assessed**, including in relation to the OUV of the property.

C. The SEA and SEMP, which claim to focus on World Heritage issues, failed to do so.

There is no credible assessment of impacts on the OUV of the Sundarbans. Regarding pollution, the SEA states "it is not possible to give any weighting or scale to these impacts, nor to judge at this point just how they might affect the OUV of the WHS." (p.197). This is also true for other major impacts from freshwater flows, shipping impacts, and fishing pressure: the SEA does not contain robust assessment of those impacts on the OUV.

An attempt to summarize results of assessment on OUV at a qualitative level is made only once in the **Table 10.1: Status of OUV of World Heritage Sites:**

Criterion	Factors affecting the criterion	Current status	Future status (by 2041)	
			Mitigated situation (SEMP fully and effectively implemented)	**Risk situation (SEMP not fully and effectively implemented)**
(ix) Represents process of delta formation and the subsequent colonization of the newly formed deltaic islands and associated mangrove communities	Sedimentation *(affects delta formation)*	Sedimentation process is active but limited	Negligible risk of reduced delta formation.	Moderate risk of reduced delta formation *(if more upstream dams/barrages are constructed in neighbouring countries - trapping sediment)*
	Salinity *(affects colonization)*	Increased dry season salinity due to reduced freshwater flow in rivers.	Negligible risk of increased salinity *(due to increased dry season flow following dredging and intervention structures)*	Moderate risk of increased salinity *(as result of no dredging or intervention structures)*
(x) One of the largest remaining areas of mangroves in the world, with exceptional level of biodiversity in both the terrestrial and marine environments	Loss of biodiversity	Increasing (for mega fauna)	Negligible risk	Low to moderate risk of loss
	Exploitation and degradation of habitats	Negligible	Negligible risk	Low risk
	Loss of ecosystem integrity and services	Negligible	Negligible risk	Low risk
	Pollution by liquid and solid wastes	Negligible	Negligible risk	Low to moderate risk
	Air pollution	Negligible	Negligible risk	Low risk
	Noise	Negligible	Negligible risk	Low to moderate risk
Conclusion			No change in OUV of WHS property	Low to moderate potential for degradation of OUV (scale unknown – requires research)

This small table, not supported by robust analysis in the text, looks like falsification of the analysis results, or at best as private judgement of a consultant not supported by facts and reasoning. Some of its wording directly contradicts the contents of the SEA report. For example, “noise” (both in the air and underwater) is described in several chapters as an important increasing disturbance factor for tigers, dolphins, and other wildlife due to increased shipping and poorly regulated tourism. Nevertheless, its impact is characterized in the table as “negligible”. The same may be said about most other entries in the table, which all include the magic option of “SEMP fully implemented”. To categorize noise, air or water pollution risks to the OUV of the property (which includes dolphins and tigers as attributes of OUV) as “low to moderate risk”, especially when the SEMP is “not fully and effectively implemented”, is certainly magical thinking.

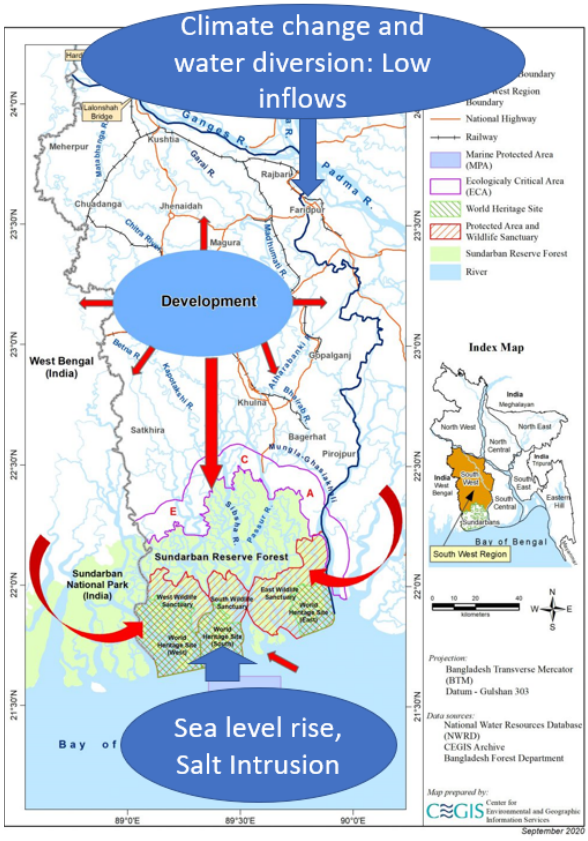
Lack of specific chapter on World Heritage matters. Except for these three pages (197-199) with unverifiable data, the SEA does not include chapters dedicated to analysis\synthesis of the environmental assessment findings regarding possible impacts on the OUV and ways to avoid\mitigate those.

The SEA process failed to define paths/limits for development necessary to protect the OUV. The SEA Report does not contain discussion of development options and limits in relation to World Heritage protection needs. Some meek attempts to propose meaningful development limits like “Limit the growth of Mongla Port Authority beyond 2031” are stated, but not in relation to OUV protection.

The SEA failed to suggest useful indicators of impacts on OUV and credible ways to monitor them. For example, rapidly deteriorating dolphin habitat is characterized as being in a “Very good” condition in 2019 (See Annex 7 to the SEA Report- also table reproduced below).

The requirements of the IUCN World Heritage Advice Note on Environmental Assessment (2013) have not been followed when designing and conducting this SEA. In our opinion at least 6 out of 8 assessment principles put forth in the Advice Note have been neglected. Most glaring is the lack of consideration for impacts and solutions coming outside of the SW Region (e.g., water cooperation with India), absence of genuine assessment of reasonable alternatives, lack of attention to impacts on the OUV, absence of dedicated World Heritage chapter, grossly insufficient public consultations, and lack of access to information for local stakeholders.

D. **Climate change, water management and shipping are inadequately addressed in the SEA and SEMP.**



We share concerns reflected in the 2019 Reactive monitoring mission report that matters of water and sedimentation regime, shipping and dredging will impact the Sundarbans WH property that faces the dual challenge of climate change and unsustainable industrial development.

Climate impacts, strongest in the south, such as saltwater intrusion, necessitate that protection of OUV be strengthened in all remaining natural areas of the Sundarbans.

Old-fashioned industrial development and disrupted inflows are two major local factors affecting the WH property, which could and should be effectively managed.

The current expansion of the Sundarbans reserve core areas towards the north must be complemented by effective management of those key negative impacts also coming from the north.

The water management part of SEA does not contain credible assessment of impacts and downplays the importance of transboundary cooperation with India to sustain ecosystem processes. It is largely confined to encouraging river dredging and river diversion as two primary and sufficient tools for ecosystem conservation. The term “dredging” is often used without specifying if its purpose is for enabling industrial shipping or increasing freshwater flows.

In 2017, the Committee reiterated its request to the State Party to undertake the EIA for any future dredging of the Pashur River to include an assessment of impacts of the property’s OUV (Decision 41 COM 7B.25).

The SEA Report says that the government is pursuing a programme of dredging to increase river depth and water availability as well as navigability, which makes clear that economic interests are the primary driver in developing and sustaining extensive dredging capabilities and programs in the SW Bangladesh and Sundarbans themselves.

The SEMP goes even further and suggests the following exhaustive list of measures to manage water regime (page 20):

- Dredging of rivers to enhance dry season flow through the Sundarbans
- Dredging of the Sundarbans silted-up channels to ensure regular inundation of the forest floor
- Construction of diversion structures to augment dry season flow and control flooding
- Improvements to drainage network/system infrastructure and management

In heavily industrialized countries like China, massive water engineering measures have been employed as a matter of last resort to sustain some residual eco-hydrological process in severely altered wetland ecosystems. Outcomes of many of those measures have been less than satisfactory and rarely led to retaining original ecosystem values. In some cases, limited engineering restoration efforts elsewhere led to partial revival of selected ecosystem functions, like inundation of old mines in peatlands, but usually those works as part of more comprehensive ecosystem restoration plan, which to the extent possible relies on restoration of self-sustaining natural processes. Here the SEA and SEMP uncritically recommends the most intrusive and unsustainable management measures, before performing at least preliminary analysis on relative effectiveness of available alternatives. It is uncertain whether suggested measures may result in any benefits for the ecosystem, while the great ecosystem disturbance they will bring is indisputable (and not considered in the SEA).

While the objective to increase dry season flow is somewhat justified by human-driven decrease in freshwater availability), the proposal of seasonal redistribution of flows to “control floods” neglects natural flooding regime as one of the OUV attributes and evokes doubt both on its scientific validity as well as its realistic effectiveness. However, in the SEA both proposed objectives severely lack scientific justification. We argue that recommendations for construction of specific water-diversion infrastructure and implementation of wide-scale dredging are not based on sufficient research.

Negative effects of dredging, particularly in Pashur River, have been well documented in recent years. In April 2022, Abdullah Harun Chowdhury, researcher of Environmental Science Discipline at Khulna University, released research results of the assessment of impact of dredging in the Pashur river on agricultural land and ecosystem (see **Annex IV).** The study, which focuses on disposal of dredging material, concluded that the present condition of dredging dykes of the Pashur river and its surrounding areas present a threat to the environment:

- The existing dredging dykes are responsible for the depletion of fish and other natural resources, increasing sedimentation in and around the agricultural lands and houses.

- These dykes are creating different health hazards for humans and increasing area of barren unproductive lands.

- Continuously discharge of the dredging materials/ sediments will create ecological imbalance and livelihoods problems.

- Local communities (local govt. representatives, local political leaders, journalists, fishermen, farmers, businessmen, religious leaders, general people, etc.) in interviews suggested that the people in the settlements surrounding dredging dykes are already facing different hazards created by the dredging materials/ sediments.

In spring 2022, the experts and activists of the BAPA successfully challenged the attempts to dump dredging material on fertile agricultural land and in important habitats due to its harmful impacts. The successful vocal opposition to dredge spoil dumping functions as a profound critique of the EIA which supported those dredging operations and suggested a wide rage of short and long-term strategic alternatives for use of dredged material. See all findings in the BAPA Report "Sand mining along the Pashur River" in **Annex V.**

Studies by engineers suggested that repeated large-scale dredging alone will not be a sufficient solution for sustaining operations of Mongla Port, but more intrusive interventions, such as changing course of certain deltaic channels will be needed to ensure navigability of Pashur and other rivers in the Sundarbans and vicinity. See "Morphological response of the Pussur River, Bangladesh to modern-day dredging: Implications for navigability" (https://doi.org/10.1016/j.jaesx.2022.100088). This research also shows that continuous wreckage of ships along the Pashur river leads to greater accumulation of sediments and increased dredging efforts.

The SEA mentions that negative impacts from increased shipping are not limited to effects of dredging, but include pollution, severe bank erosion, increased accidents, continuous disturbance from noise (including underwater noise) and other factors. However, this evidence is scattered in different parts of the report and systemic analysis is avoided by attempting to address them in proposed future "sectoral SEAs".

In Sept 2021, the Mongla Port Authority announced plans to construct six more jetties. In 2020 the port had the capacity of handling 100,000 TEU, but with the recent addition of

modern equipment, the port's capacity has doubled. The six new jetties will add 800,000 TEU to the port capacity for a total of 1 million TEU. (https://www.fleetmon.com/maritime-news/2021/35481/mongla-port-announces-plan-construct-six-more-jett/.)

We are not aware of any credible assessment of (or monitoring system of) shipping-induced pollution, disturbance to aquatic and terrestrial biota of Sundarbans, risk of industrial accidents or comprehensive plans to prevent accidents that may affect the World Heritage Site. Investment in port expansion and other forms of support to shipping should be discouraged until those impacts are clarified, monitored, limited to allowable levels, and effective management system are in place. Current plans for Mongla Port expansion are most likely incompatible with preservation of OUV.

While the SEA has mentioned in passing "limiting development of Mongla port", albeit without any detail, the SEMP does not include any decisive measures to limit navigation-related environmental impacts. Rather it prescribes generic mitigation measures, like "All boat operators should adhere to the code of conduct (to avoid noise pollution)" or "Apply or install best available technology (bearing in mind affordability) to minimize pollution (from shipping)." We have reasonable doubt on both likelihood of implementation of those "good conduct" instructions under the current governance system and on the SEA stance that such cosmetic measures are sufficient to solve the problem under the "high growth scenario".

Both water resources management and increase**d** shipping will be largely determined by cooperation between Bangladesh and India. Unfortunately, the progress and possible specific objectives of Bangladesh-India cooperation in sustaining freshwater flow to the Sundarbans and pollution control on shared rivers has not been addressed in the SEA Report in sufficient detail. Meanwhile, long-term protection of the Sundarbans in both countries is highly unlikely without comprehensive cooperation, despite being prescribed by a series of bilateral agreements signed in 2011 (including the India-Bangladesh Joint Rivers Commission and Joint Working Group on Conservation of the Sundarbans). Implementation of these agreements has been slow and uneven.

The SEA failed to discuss what are specific objectives and parameters of water management are crucial for Sundarbans conservation that should be considered in upcoming renegotiation of the 30-year Ganges Water Treaty on sharing of the Ganges water (1996-2026). The fact the SEA Report dedicates a half-page of general lamentations about "Transboundary problems" (See 10.11), while the SEMP does not mention India as partner in implementing any of activities, demonstrates that the whole assessment neglected the transboundary nature of Sundarbans conservation and management. It also failed to refer to the World Bank-led "Bangladesh-India Sundarbans Region Cooperation Initiative" as one of policy tools under the "PPPs" (BISRI) See:

https://documents.worldbank.org/en/publication/documents-reports/documentdetail/854711587108371012/bangladesh-india-sundarban-region-cooperation-initiative-background-note

Finally, technocratic bias in the SEA report leads to inaccurate and irresponsible recommendations for OUV protection, which can be illustrated by data on dolphin conservation under the "high growth scenario":

Annex 7: Indicators and Projections for Scenarios

Notes:
Baseline year is 2018-19 wherever possible.
Some baseline data is projected from an earlier year indicate the year.
Sources for all baseline data are indicated.

Themes	Objective		Indicator		Unit	Baseline figure	Year of baseline data	Source	Low growth		Medium growth		High growth	
									2031	2041	2031	2041	2031	2041
Environmental														
Forest, Protected areas and biodiversity	1	Reduce over-exploitation/ degradation of habitats, loss of biodiversity and ecosystem(s)	1	Status of suitable habitat for Tiger (in wildlife sanctuaries)	Poor Good Very Good [91]	Good	2017	BFD, 2017	Poor	Poor	Good	Good	Very good	Very good
			2	Status of suitable habitat for dolphin (in sanctuaries & hotspots)	Poor Good Very good [92]	Very good	2018-19	BFD, 2020	Good	Good	Very good	Very good	Very good	Very good

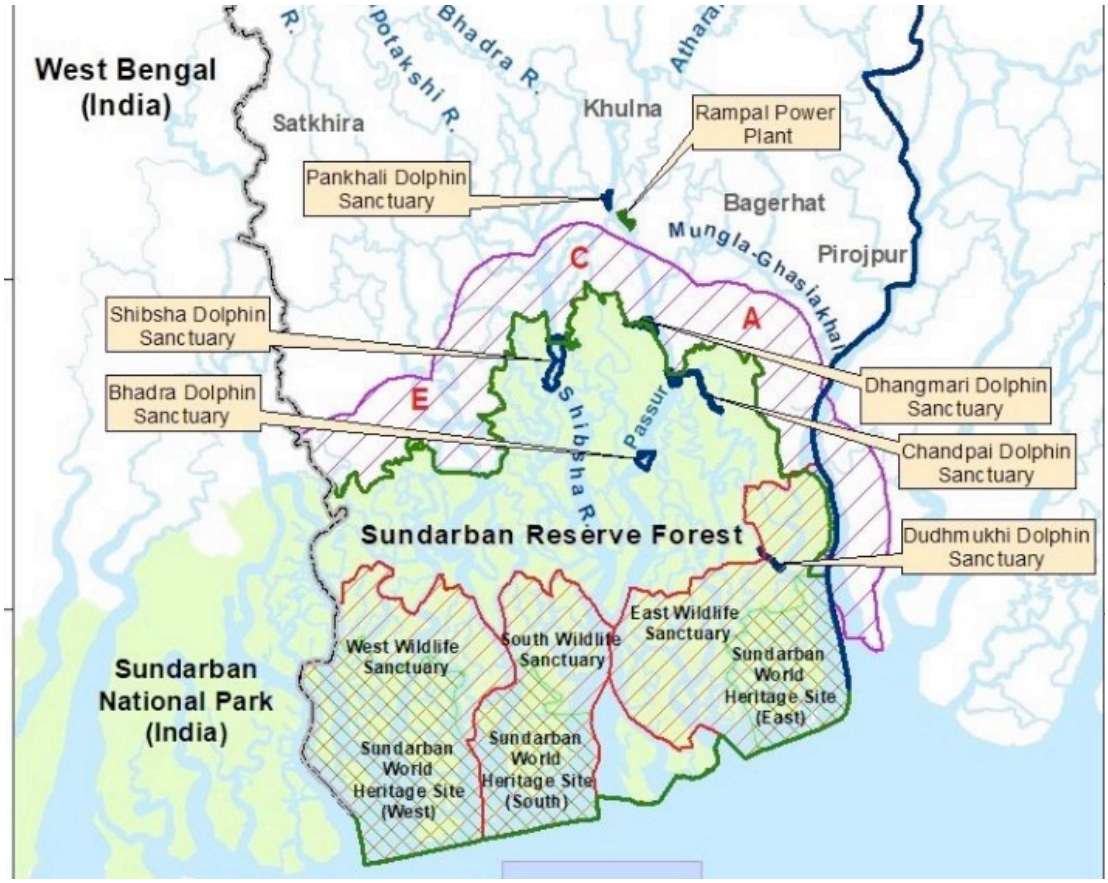
According to the SEA Report, the *"Dolphin population and habitat extent will both increase due to: (a) higher level of fresh water supply (dolphins are sensitive to salinity) as a result of river flow augmentation interventions, diversion facilities, dredging etc within Bangladesh…"*;

The "Bangladesh Dolphin Action Plan 2020-2030" commissioned by the GoB notes the following negative impacts on dolphins:

- Dredging and removal of riverbed sands. Degradation of dolphin habitats might be caused by widespread dredging across the country's major rivers.
- The growing vessel traffic and tourism in the Sundarbans are directly contributing to chemical and sound pollution, of which the most dangerous is accidental sink of cargo vessels with harmful chemicals…
- It was reported that vessel traffic was extremely high during the winter in dolphin hotspot segments of the Sundarbans of Bangladesh (77 vessels/day)

It is reasonable to assume that continuous dredging will increase all those negative factors, while construction of "water diversion facilities" and other water infrastructure may limit and degrade dolphin habitat in the region.

Both the "Bangladesh Dolphin Action Plan 2020-2030" and the SEA do not present any analysis whether "dolphin sanctuaries", recently enlarged by the GoB, cover sufficient area or provide sufficient protection to ensure the well-being of these wide-ranging species. Therefore, the indicator of "good status of habitat" limited to "sanctuaries and hotspots" is likely misleading as an indicator of habitat quality (and likely is based on dolphin counts in only three relatively small sanctuaries https://thefinancialexpress.com.bd/national/nine-sanctuaries-to-conserve-endangered-dolphins-1666611828.)



Map: "Expanded" dolphin sanctuaries are still hardly discernible on the map and cover a small fraction of the species habitat. (Figure 3.4: page 28 of the SEA report)

We hope that our observations presented to you in 2022 and additional considerations presented now will be considered and duly incorporated in a careful review of the Final SEA carried out by the IUCN.

We expect that the IUCN and World Heritage Centre will recommend in the 2023 draft decision that the World Heritage Committee recognizes that the SEA conducted so far is not adequate for ensuring protection of the Sundarbans and asks the GoB to revise the assessment and provide additional strategic assessment(s) focused on key factors threatening the OUV of Sundarbans World Heritage property.

Given that so far the SEA process has failed to provide an adequate planning instrument to ensure the protection of Sundarbans, while industrial development and expansion in shipping proceed around the property with growing negative impacts, we urge the IUCN and World Heritage Centre, in line with Paragraph 180 of the *Operational Guidelines for the Implementation of the World Heritage Convention* to recommend in the draft decision to add the Sundarbans of Bangladesh to the List of World Heritage in Danger.

Sincerely,

Sultana Kamal, Convener

LIST OF ANNEXES:

I. NCSS Letter to the WHC from 24 March 2022 and Notes on the 2021 WHC Decision
II. 2023 photos and notes on advance in industrial development
III. 2021 NCCS critique on the Draft SEA
IV. 2022 Study on disposal of dredging material
V. 2022 BAPA Report on flaws in the EIA on Pashur river dredging and concerns of local communities

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