

Identifying and Prioritising Wetlands for Ramsar Site Designation

IN THE INDO-BURMA REGION



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Summary for policymakers

- The identification, designation and management of Wetlands of International Importance (“Ramsar Sites”) is a key commitment under the Ramsar Convention on Wetlands, to which all five Indo-Burma countries (Cambodia, Lao PDR, Myanmar, Thailand, and Viet Nam) are signatories (Contracting Parties).
- Designation of Ramsar Sites is guided by the 2012 “Strategic Framework and Guidelines for the development of the List of Wetlands of International Importance”
- The Strategic Framework expects each Contracting Party to designate a “coherent and comprehensive network” of Ramsar Sites within its territory.
- The Strategic Framework expects Parties to establish a strategy and priorities for Ramsar Site designation, and to take a systematic approach to the identification of candidate wetlands for designation.
- There are nine Criteria for identifying wetlands for Ramsar Site designation. A wetland needs to qualify for designation under one or more of these Criteria.
- This Indo-Burma guide on Identifying and Prioritising Wetlands for Ramsar Site Designation in the Indo-Burma Region is derived from the guidance provided in the 2012 Ramsar Strategic Framework.
- The Indo-Burma guide provides a Strategy and Guiding Principles for Ramsar Site designation, and has been developed from guidance initially prepared under the Myanmar-Norway cooperation project “Conservation of biodiversity and improved management of protected areas in Myanmar.”
- The Indo-Burma Strategy recommends undertaking a two-phase approach, in recognition that the full application of the Ramsar Strategic Framework will require considerable capacity and resources.
- Phase 1 is to start with available information to identify and prioritise wetlands for Ramsar Site designation.
- The recommended approach for prioritisation of Ramsar Site designation is to give a High Priority to internationally important wetlands which are a) most important for contributing to the coherent and comprehensive national network of sites and b) are procedurally easy to designate.
- Phase 2 is to undertake a systematic approach to identifying all wetlands qualifying for Ramsar Site designation, for each of the nine designation Criteria, then to compile a consolidated list of all qualifying wetlands and the Criteria which apply to each of these wetlands.

Abbreviations and terminologies

AA	Administrative Authority: the body appointed by a national government to have the lead responsibility for all aspects of national implementation of the Ramsar Convention on Wetlands.
CEPA	Communication, Education, Participation & Awareness. The Convention has an ongoing CEPA Programme.
COP	The meetings of the Conference of the Contracting Parties to the Ramsar Convention, which take place approximately every three years. COP13 was in Dubai in 2018 and COP14 was in Geneva in 2023.
CP	Contracting Party: a sovereign state which has formally acceded to the Ramsar Convention on Wetlands.
EAAPF	East Asia-Australasia Flyway Partnership
FEOW	Freshwater Ecoregions of the World. The inland wetlands biogeographic regionalisation scheme recommended for use in the application of Ramsar site designation Criteria 1, 2 and 3. https://www.feow.org/
FNS	Flyway Network Sites
IOP	International Organisation Partner: the Convention has formally recognised six International Non-governmental Organisation (INGOs) with special IOP status in recognition of their long-term commitment to supporting Convention implementation. These are: IUCN, WWF, BirdLife International, Wetlands International, the International Water Management Institute (IWMI) and the Wildfowl & Wetlands Trust (WWT).
MEOW	Marine Ecoregions of the World. The coastal/marine wetlands biogeographic regionalisation scheme recommended for use in the application of Ramsar site designation Criteria 1, 2 and 3. https://www.conservationgateway.org/ConservationPractices/Marine/Documents/Spalding%20et%20al%20MEOW.pdf
NFP	National Focal Point. NFPs are identified/appointed by an Administrative Authority to act as the lead national contact points for different aspects of Convention implementation. These are: an AA NFP; an STRP NFP; and two CEPA NFPs (one from government, one from the NGO community).
NGO	Non-governmental Organisation
Ramsar Convention	The Ramsar Convention on Wetlands, agreed by governments on 2 February 1971. The Convention's full 1971 legal title is "The Convention on Wetlands of International Importance especially as waterfowl habitat."
Ramsar List	The official "List of Wetlands of International Importance", listing all Sites designated by Contracting Parties, and maintained by the Ramsar Secretariat.
Ramsar Secretariat	The Ramsar Secretariat (offices in Gland, Switzerland) is the executive body of the Convention, responsible for administering the Convention processes, organising its meetings and inter alia managing data and information on designated Ramsar Sites.
Ramsar Site	The commonly used short title for a "Wetland of International Importance," formally designated by a Contracting Party.
RIS	The "Information Sheet on Ramsar Wetlands" which must be completed by a Contracting Party when designating a Ramsar Site, or updating information on an existing Site.
RSIS	The Ramsar Sites Information Service. https://rsis.ramsar.org The online system which holds and provides up to date data and information on designated Ramsar Sites, and the mechanisms for Contracting Parties to designate new Ramsar Sites and update information on existing Sites.
SC	Standing Committee: the Ramsar Convention's intersessional governance body, composed of representative CPs.
SF	Strategic Framework. The "Strategic Framework and Guidelines for the development of the List of Wetlands of International Importance" – 2012 version (adopted by Resolution XI.8 Annex 2).
SP	Strategic Plan. The Convention's Strategic Plan provides the framework for national and international implementation and reporting. The 4th Strategic Plan (for 2016–2024) was adopted at COP12 in 2015.
STRP	The Convention's Scientific & Technical Review Panel, which provides advice and guidance on scientific and technical implementation matters to the SC and the COP.

Background and Introduction

1. Background and rationale

- 1.1 The identification, designation and wise use management of Wetlands of International Importance (Ramsar Sites) forms one of the three ‘pillars’ of implementation of the Ramsar Convention on Wetlands.
- 1.2 Ramsar Site designation is guided by Ramsar’s *Strategic Framework and Vision for the List of Wetlands of International Importance*, first adopted by Ramsar Contracting Parties in 1999. The current version is the “2012 revision” adopted at Ramsar COP11 in 2012 as Resolution XI.8 Annex 1.
- 1.3 The *Strategic Framework* calls on each Contracting Party to designate a “coherent and comprehensive [national] network” of Ramsar Sites. It also expects Parties to establish a strategy and priorities for Ramsar Site designation, and to take a systematic approach to the identification of candidate wetlands for designation.
- 1.4 The Indo-Burma Ramsar Regional Initiative (IBRRI) was endorsed by the Standing Committee of the Ramsar Convention in Decision SC52-20 in June 2016. The concept for IBRRI was developed jointly by the Ramsar National Focal Points (NFPs) of the five Contracting Parties: Cambodia, Lao People’s Democratic Republic (PDR), Myanmar, Thailand and Viet Nam as well as IUCN’s Asia Regional Office. The initiative was based on specific needs identified in these countries. The initial objective of IBRRI was to support the effective implementation of the Ramsar Convention among the five Contracting Parties (CPs) by coordinating implementation of the objectives of the 4th Strategic Plan 2016–2024.
- 1.5 This guidance on *Identifying and Prioritising Wetlands for Ramsar Site Designation* has been prepared to support the IBRRI CPs in their Ramsar Site designations. It provides a set of Guiding Principles for a step-wise and systematic approach to Ramsar Site identification and prioritisation for designation, derived from the very detailed approach and guidance in the adopted Strategic Framework. It has been developed from initial work on preparing a Ramsar Site Strategy for Myanmar under the Myanmar-Norway project for an Action Plan for the delivery of improved management and wise use of valuable wetlands.
- 1.6 All five IBRRI Ramsar Contracting Parties are also Partners in the East Asia-Australasia Flyway Partnership (EAAFP). The EAAFP expects its Partners to identify and designate Flyway Network Sites (FNS) for migratory waterbirds. The Criteria for designating FNSs are consistent with, and derived from, the relevant Ramsar Site designation Criteria, notably Ramsar Criteria 2, 5 and 6, but specifically for only migratory waterbirds. For the current Site Information Sheet for FNS designations, see <https://www.eaaflyway.net/become-a-site/>

This guidance on Identifying and Prioritising Wetlands for Ramsar Site Designation can, and should, be used also in the identification and designation of EAAFP Flyway Network Sites in the IBRRI region.

2. The basics of Ramsar Site designation

2.1 The Ramsar Strategic Plan and Site Designation

- 2.1.1 The designation of Wetlands of International Importance (“Ramsar Sites”), and their management to maintain their ecological character, has been one of the three main implementation approaches of the Ramsar Convention on Wetlands since the Convention’s adoption in 1971. The other two approaches are: the wise use of all wetlands; and international cooperation.
- 2.1.2 Strategic Goal 2 of the Ramsar Strategic Plan 2016-2024 is “Effectively Conserving and Managing the Ramsar Site Network”. Amongst its Targets, three are relevant for Ramsar Sites:
 - **Target 5.** The ecological character of Ramsar Sites is maintained or restored, through effective planning and integrated management.

- **Target 6.** There is a significant increase in area, numbers and ecological connectivity in the Ramsar Site network, in particular under-represented types of wetlands including in under-represented ecoregions and Transboundary Sites.
- **Target 7.** Ramsar Sites that are at risk of change of ecological character have threats addressed.

2.2 National responsibilities for the Convention and Ramsar Site designation

- 2.2.1 Identification and formal designation of Ramsar Sites within national jurisdictions is the sole responsibility of the Convention’s formally appointed national Administrative Authority (AA) for each CP.
- 2.2.2 However, for many wetlands the Convention’s International Organisation Partners (IOPs) and other NGOs hold relevant data and information and can, and do, help in compiling the Information Sheet on Ramsar Wetlands (RIS).
- 2.2.3 Box 1 provides an explanation of the overall roles and responsibilities of the Ramsar Administrative Authority, including in relation to Ramsar Site designation.

Box 1. The overall roles and responsibilities of a Contracting Party to the Ramsar Convention, and its Ramsar Administrative Authority

It is the national government of a sovereign state which joins (accedes to) the Ramsar Convention. The national government therefore commits to implementing all aspects of the commitments to the treaty throughout and across all its jurisdictions.

The AA, appointed by the national government, is the government agency responsible for the national application of the treaty and is the focal point for communications with the Ramsar Secretariat.

The AA, led by an identified Head of AA, consults and cooperates with as many other government ministries, agencies and non-governmental organisations as necessary to ensure the best possible results in implementing the Convention.

This means that the AA has the responsibility for ensuring Ramsar implementation by all national, regional and local administrations and jurisdictions, ministries and agencies.

In relation to Ramsar Site designation, the AA has responsibility for delivering designations to meet the expectations of the Strategic Framework and Vision for the List of Wetlands of International Importance, regardless of land ownership of, or jurisdiction over, any particular wetland that qualifies for such designation – not only those wetlands under the AA’s direct jurisdiction.

Whilst the AA has formal responsibility for Ramsar Site designations, other bodies outside government often hold relevant data and information and, at the invitation of the AA, can assist in preparation of the RIS.

The AA is expected to designate four NFPs whose roles are vital to the effective functioning of the Convention:

- The AA National Focal Point (AA NFP): a member of staff of the AA appointed to coordinate national implementation and act as the daily contact point for the Convention for people within the country and the Ramsar Secretariat;
- The STRP National Focal Point, for scientific and technical matters and advice; and
- Two CEPA National Focal Points, one from within the government and one from the NGO community.

For further information about the roles and responsibilities of Ramsar Convention bodies, see “Delivering the Ramsar Convention in your country: National Focal Points and their roles”, Available on: https://www.ramsar.org/sites/default/files/documents/library/about_nfp_2014_en.pdf

2.2.4 Once the AA designates a Ramsar Site by submitting the completed RIS and accompanying site boundary map to the Ramsar Secretariat, the Secretariat has responsibility for reviewing and verifying the RIS information submitted, and then formally placing the Site on the official “List of Wetlands of International Importance”.

2.3 The Strategic Framework and Guidelines for the development of the List of Wetlands of International Importance

2.3.1 To guide Contracting Parties in their identification and designation of Ramsar Sites, a “Strategic Framework and Guidelines for the development of the List of Wetlands of International Importance” was first adopted at COP7 in 1999. The “Strategic Framework” was fully revised and updated at COP11 in 2012 (Resolution XI.8 Annex 2), to accompany a redevelopment of the Information Sheet on Ramsar Wetlands (RIS) (Resolution XI.8 Annex 1).

2.3.2 The 129-page 2012 *Strategic Framework* provides a wealth of detailed guidance on identifying and designating Ramsar Sites and prioritising potential Site designations, prepared through the experience of CPs in designating Sites over the 50 years of the Convention. It:

- outlines the rationale for the selection of Ramsar Sites;
- presents the Convention’s vision for an international network (or List) of Ramsar Sites and presents targets for the development of that network;
- presents and explains the Convention’s criteria by which Ramsar Sites can be identified;
- describes the Convention’s official RIS through the use of which CPs describe sites at the time of their designation and subsequently;
 - provides detailed guidance on filling in each part of the RIS; and
 - provides guidance on the preparation of the official map of Ramsar Sites required to be produced at the time of designation.

2.3.3 Criteria for the identification and designation of Ramsar Sites were first adopted at Ramsar COP1 in 1980 and have been further developed and revised since then. Since 2005 (COP9) there are nine Criteria formally adopted by CPs (Table 1).

2.3.4 The Ramsar Criteria (Table 1) cover different aspects and levels of wetland biological diversity:

- Group A (one Criterion) concerns the ecosystem level of biodiversity, with the Criterion concerning representative, rare or unique examples of wetland types.
- Group B (eight Criteria) concerns primarily the species level of biodiversity, including species assemblages, but also includes ecological communities.



Fishing in the mangroves of Phuket, Thailand © Ana Grillo

Table 1. The nine Criteria for the identification and designation of wetlands as Ramsar Sites.

<p>Group A of the criteria Sites containing representative, rare or unique wetland types</p>		<p>Criterion 1 A wetland should be considered internationally important if it contains a representative, rare, or unique example of a natural or near-natural wetland type found within the appropriate biogeographic region.</p>
<p>Group B of the criteria Sites of international importance for conserving biodiversity</p>	<p>Criteria based on species and ecological communities</p>	<p>Criterion 2 A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities.</p>
		<p>Criterion 3 A wetland should be considered internationally important if it supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region.</p>
		<p>Criterion 4 A wetland should be considered internationally important if it supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions.</p>
	<p>Specific criteria based on waterbirds</p>	<p>Criterion 5 A wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds.</p>
		<p>Criterion 6 A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.</p>
	<p>Specific criteria based on fish</p>	<p>Criterion 7 A wetland should be considered internationally important if it supports a significant proportion of indigenous fish subspecies, species or families, life-history stages, species interactions and/or populations that are representative of wetland benefits and/or values and thereby contributes to global biological diversity.</p>
		<p>Criterion 8 A wetland should be considered internationally important if it is an important source of food for fishes, spawning ground, nursery and/or migration path on which fish stocks, either within the wetland or elsewhere, depend.</p>
	<p>Specific criteria based on other taxa</p>	<p>Criterion 9 A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of wetland-dependent non-avian animal species.</p>

2.3.5 The *Strategic Framework* Objectives for the Ramsar List include several ‘sub-objectives’ concerning which wetlands should be designated as Ramsar Sites under the different Criteria.

2.3.6 In addition to the wealth of information and guidance included in the Strategic Framework, staff in the Ramsar Secretariat are also available to guide and assist CPs with the designation process.

2.4 Management of designated Ramsar Sites

2.4.1 Article 3.1 of the Convention’s text indicates that “The Contracting Parties shall formulate and implement their planning so as to promote the conservation of the wetlands included in the List...”

2.4.2 Strategic Goal 2 of the Ramsar Strategic Plan 2016-2024 is “Effectively Conserving and Managing the Ramsar Site Network”. This includes Target 5: “The ecological character of Ramsar Sites is maintained or restored, through effective planning and integrated management.”

- 2.4.3 Contracting Parties are expected to develop and implement a management planning process for each of their designated Ramsar Sites.
- 2.4.4 The information compiled in the Ramsar Site’s RIS helps to inform the setting of appropriate management planning objectives.

3. Ramsar Site designation in Indo-Burma countries

- 3.1 To date (January 2024) there have been relatively few (37) Ramsar Sites designated by Indo-Burma CPs: Cambodia 5; Lao PDR 2; Myanmar 6; Thailand 15; Viet Nam 9. (Source: Ramsar Sites Information Service (RSIS): <https://rsis.ramsar.org>)
- 3.2 However, many other wetlands in Indo-Burma countries have been identified as potentially qualifying as internationally important for Ramsar Site designation. Four of the five Indo-Burma countries have developed lists of important wetland sites (Table 2). These sources suggest that at least 266 wetlands may qualify for Ramsar Site designation in the Indo-Burma region (Table 2).

Table 2. Summary of the number of wetlands identified as potentially qualifying for Ramsar Site designation in Indo-Burma countries. Note that the number of sites for some countries should be considered as a minimum. No information is available for Cambodia. (Source: IBRRI 2022. *Indo-Burma Wetland Outlook*).

Main wetlands category				
Country	Inland natural wetlands	Coastal natural wetlands	Human-made wetlands	TOTAL
Cambodia	-	-	-	N/A
Lao PDR	26	N/A	4	30
Myanmar	49	39	11	99
Thailand	29	28	4	61
Viet Nam	20	24	24	68
TOTAL	124	91	43	266

4. The “Guiding Principles” for the Indo-Burma strategy for Ramsar Site designation

- 4.1 The 28 “Guiding Principles” provided in this guidance are distilled from different relevant aspects of the detailed guidance adopted in the 2012 “Strategic Framework”.
- 4.2 They are designed to support and inform the governments of Indo-Burma Ramsar Regional Initiative Parties in the preparation of their strategies for future Ramsar Site designation, and in establishing national priorities for which candidate wetlands to select for designation.
- 4.3 The Guiding Principles help guide Indo-Burma national authorities in:
- establishing a Strategy for future Ramsar Site designation;
 - setting national objectives;
 - identifying all wetlands in Indo-Burma countries that qualify for Ramsar Site designation; and
 - agreeing on priorities for the future designation of these Sites.
- 4.4 Guiding Principles are provided for each of the Sections of guidance that follow. A full list of the Guiding Principles is provided in Annex 2.

5. Why are national Ramsar Site designation strategies and priorities needed?

- 5.1 The Ramsar *Strategic Framework* expects each CP to develop a strategy for Ramsar Site designation, through undertaking a systematic review to identify all wetlands suitable for Ramsar Site designation.
- 5.2 The *Strategic Framework* provides guidance on a range of issues to consider when undertaking such a systematic review (paras. 41-48), and on the prioritisation of wetlands for designation (para. 49).

Guiding Principle 1.

Under its Strategic Framework the Ramsar Convention expects all CPs to develop a strategy and priorities for Ramsar Site designation.

6. The “Vision” for the Ramsar List and how it should be achieved

- 6.1 The Vision (Strategic Framework para. 10) is:
- “To develop and maintain an international network of wetlands which are important for the conservation of global biological diversity and for sustaining human life through the maintenance of their ecosystem components, processes and benefits/services.”*
- 6.2 Note that the language of “ecosystem components, processes and benefits/services” covers the scope of the definition adopted by the Convention of the “ecological character” of a wetland.
- 6.3 The *Strategic Framework* (para. 11) recognises that this international network has to be built from the designation of coherent and comprehensive networks of Ramsar Sites within the territory of each CP.

Guiding Principle 2.

The aim of this guidance is to identify and, ultimately, designate all wetlands in the Indo-Burma region which qualify as internationally important, so as to achieve coherent and comprehensive national and regional networks of Ramsar Sites.

7. Why is a Ramsar Site designation strategy and priorities helpful?

- 7.1 The identification and recognition of all wetlands qualifying as internationally important is a key tool in supporting a CP in achieving the Convention's mission of the conservation and wise use of all wetlands.
- 7.2 A publicly available strategy and list of qualifying wetlands also encourages better recognition by, and engagement with, a wide audience of stakeholders of the importance of these sites and the need to maintain their ecological character as a contribution towards achieving sustainable development.
- 7.3 Prioritising wetlands for designation from this list (see Section 15) also provides a clearly stated agenda for action for future implementation of the Convention.

Guiding Principle 3.

The Strategy and list of potential Ramsar Sites can facilitate raising public awareness of where Indo-Burma's internationally important wetlands are, and what their importance is, in support of achieving their conservation and wise use.

8. Recognising the importance of Ramsar Site cultural, socio-economic and ecosystem values and services

- 8.1 The Ramsar Convention has not adopted any Ramsar Site Criteria for international importance specifically covering wetland ecosystem services or their values. Therefore, it is not possible to designate a wetland as a Ramsar Site solely for its importance for ecosystem services.
- 8.2 The issue of establishing such a Criterion or Criteria on ecosystem services and values has been the subject of lengthy debate in Convention processes but has not yet been resolved.
- 8.3 A major difficulty in establishing any such Criterion concerns how to identify when a particular ecosystem service delivered by a wetland is *internationally* important, in contrast to its *local* or *national* importance – especially since many ecosystem services are delivered at local scales.
- 8.4 However, the Convention and its Strategic Framework have recognised the cultural and socio-economic importance of many wetlands. Procedures have been established for fully documenting ecosystem services in the Ramsar Site designation process, through the provision of such information in the RIS.
- 8.5 Such information is very important for establishing appropriate management objectives in the Ramsar Site management planning process.
- 8.6 There are several ways that the importance of ecosystem services can be included in the RIS, as follows:
 - In Section 4.5 of the RIS fully document all wetland ecosystem services, and their importance, known to be provided by the site, and summarise this information in Section 1.1 (Summary description) of the RIS;
 - In Section 3.1 of the RIS, under Criterion 1, for any wetland being designated as representative, rare or unique, include information on the importance of the hydrological ecosystem services provided by the Site, and summarise other ecosystem services provided;
 - For cultural ecosystem services, where the wetland is considered important for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning, describe this in field 27 of the Ramsar Information Sheet.

Guiding Principle 4.

When preparing to designate a wetland as a Ramsar Site, fully document all ecosystem services, and their importance, in the RIS, including particularly hydrological services provided by sites qualifying under Criterion 1, and cultural services.

9. Is a national wetland inventory needed before developing a strategy and priorities for Ramsar Site designation?

- 9.1 The *Strategic Framework* (para. 44) recognises the importance of having a comprehensive national wetland inventory as the basis for full identification of all wetlands of qualifying as internationally important.
- 9.2 Information provided by Indo-Burma CPs in their National Reports to COP indicates that only two Indo-Burma countries (Myanmar and Viet Nam) have a mapped national wetland inventory. Lao PDR has recently updated their national wetland inventory, but it is yet to be published. Thailand has a list of internationally and national important wetlands. Cambodia has no such national inventory, nor a list of important wetlands.
- 9.3 However, the *Strategic Framework* (para. 44) also stresses that the lack of a comprehensive inventory should not be treated as an impediment to starting a systematic approach for Ramsar Site identification, as long as adequate data and information is available for at least some wetland sites.
- 9.4 The next step is to work from the initial lists of potential Ramsar Sites in each Indo-Burma country, and review and update the information on each wetland identified to:
1. Confirm that each wetland still qualifies as internationally important under the Ramsar Criteria;
 2. Assess if each of the Criteria currently identified still applies; and
 3. Assess if any additional Criteria may apply to the site. This review should follow the systematic approach steps for each of the nine designation Criteria set out in Part 3 below.
- 9.5 From this review, and consultations with other government ministries, NGOs and experts in universities and research institutes, an initial list of potential Ramsar Sites for future designation should be confirmed.
- 9.6 These lists of potential Ramsar Sites should be periodically reviewed and updated to include newly available data and information, for example from any national wetland inventory (*Strategic Framework* para. 45).

Guiding Principle 5.

Establish initial lists of potential Ramsar Sites now, for wetlands that have sufficient data and information currently available.

Guiding Principle 6.

Review and update the initial lists of potential Ramsar Sites when new data and information becomes available, including from national wetland inventories.

10. The Ramsar Strategic Framework's 5-step approach to Ramsar Site designation

10.1 Figure 1 summarises the 5-step approach for a strategic and systematic approach to Ramsar Site designation set out in Ramsar's *Strategic Framework* and *Vision for the List of Wetlands of International Importance*.

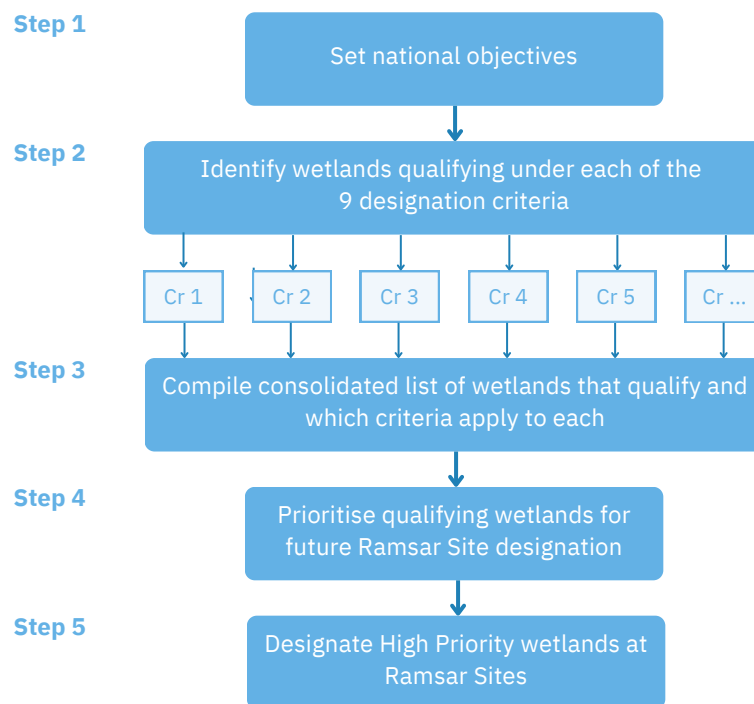


Figure 1. The 5-step approach to Ramsar Site designation established by the *Strategic Framework*

10.2 However, the full implementation of these five steps requires considerable resources, capacity and additional data and information gathering, particularly when implementing Step 2: the systematic approach to identifying all wetlands which qualify for designation under each of the nine designation Criteria.

10.3 Therefore, for Indo-Burma Parties to develop their strategies and priorities for future Ramsar Site designation, a two-phase approach is recommended, starting with currently available data and information.

Guiding Principle 7.

Apply a two-phase approach to identifying and prioritising wetlands for Ramsar Site designation, starting with currently available data and information.

11. The recommended two-phase approach for a strategy and priorities for Ramsar Site designation

11.1 The recommended two-phase approach is:

- **Phase 1:** Start with available information to identify and prioritise wetlands for Ramsar Site designation (Part 1 below); and
- **Phase 2:** Apply the systematic approach to identifying all wetlands qualifying for Ramsar Site designation (Part 2 below)

11.2 This recommended approach is fully in line with the guidance in the *Strategic Framework*:

- To get started with currently available data and information to establish an initial list of wetlands qualifying for designation; then
- To fully implement the systematic approach to the identification of all wetlands qualifying for designation.

11.3 The recommended two-phase approach is proposed in recognition of the fact that there are substantial capacity and resource implications to fully implement the systematic approach under Phase 2.



Shorebirds feeding in the mudflats of Mon State, Myanmar © TS Whitty

Phase 1: Starting with available information to identify and prioritise wetlands for Ramsar Site designation

12. Phase 1 steps in identifying and prioritising wetlands for designation

12.1 Figure 2 summarises the four steps recommended for implementing the Phase 1 approach. Guidance on applying each of these steps is provided below.

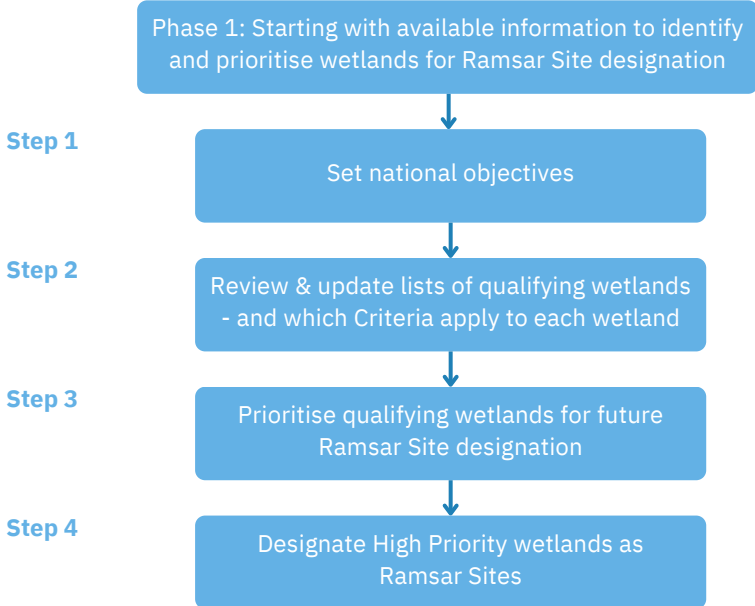


Figure 2. The four steps recommended for Phase 1 of Indo-Burma strategies for Ramsar Site designation

Guiding Principle 8.
Establish an initial list of wetlands qualifying for Ramsar Site designation and agree priorities for their designation, using currently available data and information.



U Minh Thuong Ramsar Site, Viet Nam © IUCN Asia

13. Establishing National Objectives for the “Ramsar List”

- 13.1 Before identifying future Ramsar Sites, the *Strategic Framework* (para. 42) recommends considering, in the national context, its five generic “National Objectives for the Ramsar List”.
- 13.2 These are:
- **Objective 1:** To establish national networks of Ramsar Sites in each CP which fully represent the diversity of wetlands and their key ecological and hydrological functions
 - **Objective 2:** To contribute to maintaining global biological diversity through the designation and management of appropriate wetland sites
 - **Objective 3:** To foster cooperation among CPs, the Convention’s International Organization Partners, and local stakeholders in the selection, designation, and management of Ramsar Sites
 - **Objective 4:** To use the [national] Ramsar Site network as a tool to promote national, regional, and international cooperation in relation to complementary environmental treaties.
 - **Objective 5:** To use national Ramsar Site networks to provide essential ecosystem services, especially related to water, that contribute to human health, livelihoods and well-being.
- 13.3 In June 2018, Myanmar’s National Wetland Committee adopted these five Objectives for the Ramsar List, adapted for the national Myanmar context (Box 2), as a first step in the development and implementation of the national strategy for future Ramsar Site designation.

Box 2. Myanmar’s National Objectives for the Ramsar List

Objective 1: To establish a national network of Ramsar Sites in Myanmar which fully represent the diversity of wetlands and their key ecological and hydrological functions.

Objective 2: To contribute to maintaining global biological diversity through the designation and management of appropriate wetland sites in Myanmar.

Objective 3: To foster cooperation among Contracting Parties, the Convention’s IOPs, and local stakeholders in the selection, designation, and management of Ramsar Sites in Myanmar.

Objective 4: To use the Myanmar Ramsar Site network as a tool to promote national, supranational/regional, and international cooperation in relation to complementary environment treaties.

Objective 5: To use the Myanmar Ramsar Site network to provide essential ecosystem services/benefits, especially related to water, that contribute to human health, livelihoods and well-being.

- 13.4 Other Indo-Burma countries, if they have not done so already, should review and adopt national Objectives for the Ramsar List, in their national contexts.

Guiding Principle 9.

Review the *Strategic Framework’s* five National Objectives for the Ramsar List and affirm these Objectives, amended for the national context as appropriate, for national strategies for Ramsar Site designation.

14. Using lists of important wetlands potentially qualifying as internationally important

- 14.1 The inventories of important wetlands prepared by Lao PDR, Myanmar, Thailand and Viet Nam provide a starting point for identifying the expected coherent and comprehensive national network of Ramsar Sites.

- 14.2 Cambodia should be encouraged to prepare a similar list of its important wetlands.
- 14.3 These lists should be reviewed, updated with any new available information, and for each wetland on the list, the IBRRI countries should confirm that the wetland qualifies as internationally important, under which designation Criteria it qualifies, and for what reasons (see also Section 9).
- 14.4 These refined lists can then be used to undertake a geospatial gap analysis of its coverage and a gap analysis against each designation Criteria.
- 14.5 It is recommended that the work of reviewing and gap analysis of the lists of important wetlands should start as a next step in implementation of the Strategy for future Ramsar Site designation.
- 14.6 This is in line with the *Strategic Framework's* advice to start its full application with information available now and to subsequently update any list of qualifying wetlands when new information (e.g. from a comprehensive national wetland inventory) becomes available.

15. Prioritising wetlands for future Ramsar Site designation

- 15.1 The *Strategic Framework* encourages Parties, having applied the Criteria to develop the list of wetlands that qualify for designation, to identify priority candidate sites for designation. The *Strategic Framework* (para. 49) provides some general guidance that priority should be given to designating sites that:
- include wetland types, or wetland species, that are either unique/endemic to the CP (i.e. found nowhere else in the world); or
 - hold a significant proportion of the total global extent of a wetland type or a population of a wetland species.
- 15.2 Additional prioritisation guidance, in terms of characteristics of the sites, is provided below for the application of each of the Criteria.
- 15.3 However, consideration should also be given to identifying prioritisation criteria for designation of each identified wetland. These could be in relation to:
- the relative importance of the wetland for contributing to the coherent and comprehensive national network of sites and achieving the Vision and Objectives for the Ramsar List (and conversely the risks to this of the loss of the wetland); and
 - the relative ease or difficulty in practically progressing and completing the Ramsar Site designation process.
- 15.4 Criteria for designating a wetland as of high importance could include:
- a relatively high number of Criteria under which the site qualifies for designation;
 - a relatively high number of wetland types for which the site qualifies under Criterion 1;
 - presence of a wetland type or types not covered in Ramsar Sites designated so far;
 - a large percentage of the population(s) of one or more globally threatened species, with particular priority for sites supporting such percentages of Critically Endangered (CR) species;
 - a relatively high number of waterbird populations for which the site supports >1% of their biogeographic populations;
 - a relatively high level of threat to the ecological character of the site, such that recognition of the site as internationally important may help manage such threats.

15.5 Criteria concerning the relative ease of achieving the designation of a wetland could include:

- there is sufficient data and information already available to fill in the RIS;
- the site is already a protected area under national legislation (or other international mechanisms) – such that the means to ensure the wise use and maintenance of the ecological character of the site already exist;
- there is regional/local government support for designating the site;
- there is local community/other stakeholder engagement and support for designating the site;
- a site management body/authority is in place or has been identified.

15.6 From such an approach, “prioritisation scores” can be established for each site. Wetlands with a high score for both site importance and for ease of designation would then be recognised as a high priority for designation (Figure 3).

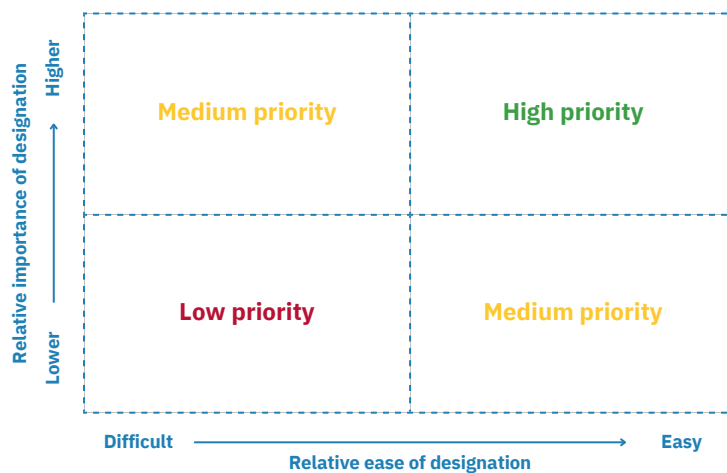


Figure 3. Suggested approach to establishing priorities for future Ramsar Site designation

15.7 Such “prioritisation scores” could, for example, be on a scale of 1-3 for each category of these criteria:

- For importance of designation, for each criterion score 1 = low importance, 2 = medium importance, 3 = high importance.
- For ease of designation, for each criterion score 1 = difficult, 2 = fairly difficult, 3 = easy

15.8 The suggested prioritisation approach is then, for each site under consideration, to:

- allocate a prioritisation score for each criterion;
- add up the scores in each category and express this as a percentage of the maximum possible score in that category. The maximum score is 3 x No. of criteria;
- a site with a total score of >50% in each of the two criteria categories could be designated as High Priority. Conversely a site with a total score of <50% in each of the two categories could be allocated a Low Priority (Figure 3).

15.9 A further advantage of such a prioritisation scoring approach is that it can be used to demonstrate a clear, systematic and transparent approach to Ramsar Site designation prioritisation to all those concerned with the implementation of the Ramsar Convention.

Guiding Principle 10.

Establish a set of Ramsar designation prioritisation criteria for a) the importance of designating the wetland; and b) the ease of designation of the wetland.

Guiding Principle 11.

Assess each wetland on the list of sites potentially qualifying for designation against the established prioritisation criteria and allocate a High, Medium or Low Priority for future designation.



Indawgyi Ramsar Site, Myanmar © NWCD Myanmar

Phase 2: Applying a systematic approach to identifying all wetlands qualifying for Ramsar Site designation

16. The Phase 2 steps in identifying and prioritising wetlands for designation

16.1 Figure 4 summarises the four steps for applying the systematic approach to identifying all wetlands qualifying for Ramsar Site designation.

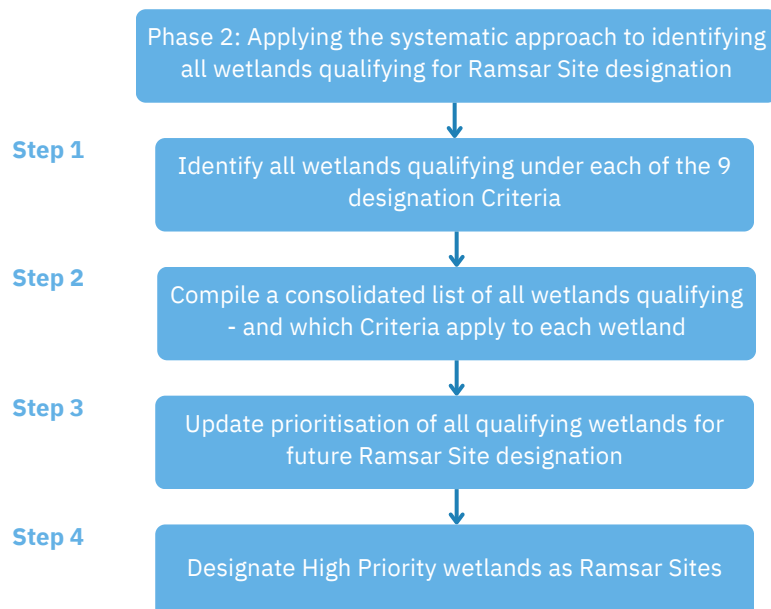


Figure 4. The four steps recommended for undertaking Phase 2 of the Indo-Burma strategy for Ramsar Site designation

Guiding Principle 12.

Apply a systematic approach to identifying all wetlands qualifying for Ramsar Site designation under each designation Criterion, and compile a consolidated list of qualifying wetlands and the Criteria which apply to each of these wetlands.

17. Using National Wetland Inventories and national lists of important wetlands to identify all wetlands qualifying for Ramsar Site designation

17.1 The ideal starting point is that a country has both a geospatial national wetland inventory and a working list of identified important wetlands.

17.2 However, not all Indo-Burma countries have these resources (see Table 3).

Table 3. Summary of the status and availability of national wetland inventories and lists of important wetlands in Indo-Burma countries. Information is from Ramsar COP13 and COP14 National Reports (COP13 National Report only for Lao PDR – COP14 National Report not available), and other referenced sources. Source: Indo-Burma Wetland Outlook (IBBRI 2022).

Country	Type and status of inventory	Wetland type coverage	Availability of inventory
Cambodia	No national wetland inventory	N/A	No national wetland inventory
Myanmar	Geospatial, comprehensive (2019-2020)	All wetland classes: inland natural, coastal natural, human-made	Geospatial wetland class data layers provided to Myanmar NWCD and reported as available on OneMap Myanmar. Vol 1 (NWCD 2019a); Vol 2 (NWCD 2020). Vol 3 (NWCD 2019b). Reports not yet available online
Lao PDR	1996 inventory of 30 important sites. Updated national wetland inventory completed in 2022. Final inventory publication is expected in 2024.	Inland natural wetlands, some human-made wetlands	1996 inventory published (Claridge 1996); available online
Thailand	Internationally (69) and nationally (47) important wetlands only (2009). Update underway 2020 reported as due 2021.	Most wetland classes, but not yet main rivers, lower central floodplain, and some types of marine and coastal wetlands. Extent of coverage of human-made wetlands unclear but may be limited	2002 inventory published in printed form in English (Office of Environmental Policy and Planning 2002). All data now available online on: http://wetlands.onep.go.th (Thai language only)
Viet Nam	2016 inventory comprehensive. 2016 inventory also identifies (with maps) 74 nationally important wetlands. Earlier (Viet Nam Environmental Protection Agency 2005) summary identified up to 42 important sites.	26 types of inland natural (eight types), coastal natural (nine types) and human-made (nine types) wetlands, together covering most of the Ramsar scope of wetlands	Earlier summary (Viet Nam Environmental Protection Agency 2005) available online. 2016 summary report published (UNDP/GEF 2016). Not clear if available online

- 17.3 A geospatial inventory (such as that for Myanmar) does not identify and name individual wetlands. However, it can be used to help identify localities of wetlands of different wetland types, for further investigation of areas potentially qualifying for designation, particularly under Ramsar Criterion 1 (representative, rare or unique examples of each wetland type).
- 17.4 Working Lists of important wetlands, such as the 2019 “*Working list of Myanmar wetlands potentially qualifying as internationally important under the Ramsar Convention on Wetlands*” and Thailand’s list of important wetlands provide a starting point for informing the systematic approach to identifying all wetlands in Indo-Burma qualifying for Ramsar Site designation.
- 17.5 To provide this starting point, it is recommended that Working Lists of important wetlands are reorganised to provide separate lists of potentially qualifying wetlands for each of the nine Ramsar Criteria.

Guiding Principle 13.

Use any available national wetland inventories and lists of important wetlands to identify main areas of each wetland type for further assessment for qualification for designation under Ramsar Criterion 1.

Guiding Principle 14.

Reorganise working lists of important wetlands into separate lists for each Ramsar designation Criterion of wetlands potentially qualifying for Ramsar designation, as a starting point to inform the systematic approach.

18. Identifying all wetlands qualifying for Ramsar Site designation: applying a systematic approach to the Ramsar Criteria

18.1 General guidance for applying the Ramsar Criteria

- 18.1.1 There are nine Criteria for the identification of a wetland as internationally important for Ramsar designation (Table 1, Section 2 above).
- 18.1.2 It is important to be aware that to qualify for designation as a Ramsar Site a wetland needs to meet only one of the nine Criteria – although in practice many wetlands qualify under several, or even all, of the Criteria. All of the Criteria are of equal importance.
- 18.1.3 When identifying a wetland as qualifying for Ramsar Site designation (and subsequently designating the Site), all Criteria that apply should be listed.
- 18.1.4 Section 6 of the *Strategic Framework* provides more detailed guidelines for the application of each Criterion, designed to assist CPs in taking a systematic approach to identifying their priority sites that qualify for designation. These guidelines cover, for each Criterion:
- *What the Criterion is seeking to achieve?*
 - *How to interpret the Criterion*
 - *What data and information are needed to apply the Criterion?*
 - *Potential ambiguities and pitfalls, and*
 - *Where to go for further help or information*
- 18.1.5 For each of the nine Criteria, a systematic approach is provided below for identifying wetlands qualifying as internationally important for placing on the list for future designation of Indo-Burma Ramsar Sites.
- 18.1.6 Given available capacity and resources, it may be most effective to start applying the systematic approaches set out below one Criterion at a time, perhaps starting with the Criteria that is easiest to apply, such as Criteria 5 and 6 for waterbirds.

Guiding Principle 15.

Apply a systematic approach to the detailed *Strategic Framework* guidance, review available data and information to identify all qualifying wetlands, and prepare a separate list of wetland sites qualifying for Ramsar Site designation under each Criterion.

18.2 Using biogeographic regionalisation in applying the Ramsar Criteria

- 18.2.1 For the application of Criteria 1, 3 and 7 and the ecological community aspect of Criterion 2, sites need to be selected in relation to their occurrence in a biogeographic region (not within a national boundary).
- 18.2.2 The *Strategic Framework* advises that for coastal/marine natural wetlands the regionalisation scheme to apply is the ecoregion level of the *Marine Ecoregions of the World (MEOW)*.
<https://geospatial.tnc.org/datasets/903c3ae05b264c00a3b5e58a4561b7e6/about>
- 18.2.3 For inland natural wetlands there are several biogeographic regionalisation schemes which have been used in different parts of the world and the SF does not advise any specific scheme to apply. However, the most appropriate to use for Indo-Burma is the *Freshwater Ecoregions of the World (FEOW)*, issued subsequent to the adoption of the Strategic Framework and which is based largely on river basins.
<https://www.feow.org/ecoregions/interactive-map>
- 18.2.4 The *Strategic Framework* advises that in applying biogeographic regionalisation to Criteria 1, 2, 3 and 7, this should be “within that part of the biogeographic region that is within the relevant Contracting Party”.
- 18.2.5 A site list and a biogeographic region list of plant and animal species (or of some taxa) is needed for the application of Criteria 3, 4, 7 and 8.
- 18.2.6 A site list and a biogeographic region list of wetland habitat types is needed for the application of Criteria 1 and 3.

Guiding Principle 16.

Use the ecoregion level of the MEOW for marine/coastal wetlands and the FEOW for inland wetlands, when applying Criteria 1, 3 and 7 and the ecological community aspect of Criterion 2.

18.3 Types of data and information needed to apply a systematic approach under each designation Criterion

- 18.3.1 A summary of all the types of data and information needed to fully apply a systematic approach to Ramsar Site identification and designation, and for which Criteria they are needed, is provided below in Table 4.



Table 4. Summary list of types of data and information needed to fully apply a systematic approach to Ramsar Site identification and designation in the Indo-Burma region

Types of data/information	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5	Criterion 6	Criterion 7	Criterion 8	Criterion 9
Biogeographic regions									
Biogeographic regions (MEOW & FEOW)									
Wetlands habitats and types									
Wetlands habitat categories and Ramsar Wetland Types occurring in each biogeographical region			incl. endemic spp.						
Which wetland types are representative, rare or unique within a biogeographic region									
Wetland ecological communities									
Wetland ecological communities in Indo-Burma considered to be threatened									
Ecosystem Red List assessments of threat status of wetland ecological communities in Indo-Burma									
Wetland-dependent species									
Plant and animal species present at each wetland							Fish species & subspecies only	Fish species only	
Wetland-dependent globally threatened (vulnerable, endangered, critically endangered) species occurring									
Wetlands known to support each globally threatened wetland-dependent species, and which of these species they regularly support									
Wetlands which are centres of endemism and biodiversity 'hot-spots'							Endemic fish species only		
Regular counts of animals occurring at each wetland (total No. and No. of each species)					Waterbirds only	Waterbirds only			Non-avian animal species only
Waterbird biogeographic populations occurring in Indo-Burma for which there is an established 1% population threshold									
Non-avian animal biogeographic populations occurring in Indo-Burma for which there is an established 1% population threshold									
Life-history stages of fish species present in each wetland									
Interactions between fish species present in each wetland									
Fish species (and subspecies) and families present in each biogeographic region									
Fish species in each wetland: whether the site functions as an adult feeding area; and/or a spawning area; and/or a nursery area; and/or a migratory pathway									
For each wetland: a) how many fish species are supported; b) what geographical range of occurrence of the fish species supported by the site; and c) whether this occurrence extends across national borders									
Ecosystem functions/services									
Hydrological functions, and their importance to the river basin or coastal zone, provided by each wetland									
Ecological function(s) known to be provided by each wetland to each species present									

18.4 A systematic approach to applying Criterion 1

- 18.4.1 Criterion 1 identifies wetlands that are of international importance as important examples of wetland types or habitats.
- 18.4.2 Specifically, the Criterion identifies wetlands which contain one or more natural or near-natural wetland types which are either a) representative examples; b) rare examples or c) unique.
- 18.4.3 Criterion 1 applies only to natural or near-natural inland and coastal wetlands. It cannot be applied to types of human-made wetlands.
- 18.4.4 For the application of Criterion 1, sites must be selected in relation to their occurrence in a biogeographic region (not within a national boundary): MEOW for coastal/marine wetlands; FEOW for inland wetlands.
- 18.4.5 The *Strategic Framework* also indicates that in applying Criterion 1 consideration should also be given to the importance of the hydrological functions provided by a wetland, with a priority given to those wetlands whose ecological character plays a substantial role in the natural functioning of a major river basin or coastal system.
- 18.4.6 In applying Criterion 1, the *Strategic Framework* stresses that the boundary of the site should, where possible, be drawn widely so as to contain a whole hydrological unit, rather than defining the Ramsar Site as only a small element of a larger wetland, and such that the site contains the wetland type(s) identified as representative, rare or unique.
- 18.4.7 The *Strategic Framework's* advice on Criterion 1 application speaks of both “wetland habitats” and “wetland types” (and specifically the Ramsar Classification System for Wetland Type) being identified as representative, rare or unique.
- 18.4.8 Although ultimately in designating the site the specific Ramsar wetland types selected as representative, rare or unique must be identified, it may be a helpful approach to start the assessment and selection process for Criterion 1 sites against a simpler, broader wetland class categorisation (such as that used for the Myanmar *National Wetland Inventory*), before then identifying within each wetland class which more specific Ramsar wetland types apply.
- 18.4.9 A suggested broad wetland class categorisation (for natural inland and coastal wetlands only), with identification of which Ramsar Wetland Types relate to each broad wetland class, is provided in Annex 1.
- 18.4.10 The *Strategic Framework* stresses that a comprehensive national wetland inventory is an essential tool for informing site selection under Criterion 1. However, it is recommended to undertake an initial identification of sites qualifying under Criterion 1 using available Working lists of important wetlands potentially qualifying for Ramsar designation, and to subsequently review and refine the list of Criterion 1 qualifying sites).
- 18.4.11 Key data and information needed for applying Criterion 1 are:
- a list of which wetland habitat categories and Ramsar Wetland Types occur in each biogeographic region, and which are considered rare or unique (a list of wetland habitat types is also required for the application of Criterion 3);
 - a list of which wetland classes and Ramsar Wetland Types occur in each wetland within the biogeographic region, and whether each is representative, rare or unique; and
 - an assessment of which hydrological functions, and their importance to the river basin or coastal zone, are provided by each wetland.

18.4.12 The resulting suite of wetlands identified under Criterion 1 should include, for each biogeographic region:

- at least one site containing the best representative example of each wetland habitat type occurring within the biogeographic region;
- all sites containing one or more wetland types considered rare within the biogeographic region;
- all sites with one or more wetland type considered unique within the biogeographic region;
- all sites providing important hydrological functions to the river basin or coastal zone within which it occurs.

18.4.13 Selecting large and habitat-diverse sites may prove most effective for the inclusion of the range of representative wetland types in each biogeographic region.

18.4.14 The *Strategic Framework* provides additional guidance for the identification of representative examples of wetland types for the following:

- peatlands
- wet grasslands
- mangroves
- coral reefs
- karst and other subterranean wetland types
- temporary pools
- bivalve (shellfish) reefs.

Application steps – representative, rare and unique wetland types

- i. for each biogeographic region, compile a list of which wetland categories and Ramsar Wetland Types occur and which are considered rare or unique;
- ii. for each wetland in a biogeographic region, compile a list of which wetland categories and Ramsar Wetland Types occur, and whether each is representative, rare or unique;
- iii. for each wetland in a biogeographic region, assess which hydrological functions it provides, and assess their importance to the river basin or coastal zone within which the wetland lies;
- iv. for each biogeographic region, compile a consolidated list of wetlands to include: a) all sites which include a rare or unique wetland type; b) a site or sites with the best example(s) of each representative wetland type; and c) sites which are most important for supporting hydrological functions;
- v. All wetlands qualifying under Criterion 1 (iv. above) should be included in the list of potential Ramsar Sites.

Guiding Principle 17. Applying Criterion 1

For each biogeographic region, identify all wetlands that include rare, unique and the best representative examples of each occurring wetland type, and those wetlands providing the most important hydrological functions, and include all these qualifying sites in the list of potential Ramsar Sites.

18.5 A systematic approach to applying Criterion 2

18.5.1 Criterion 2 covers two aspects of wetland biodiversity:

- a) globally threatened species; and
- b) threatened ecological communities.

A systematic approach to applying this Criterion is provided separately for each of these aspects.

Globally threatened species

Application steps – globally threatened species

- i. Identify and list which wetland-dependent globally threatened species (Vulnerable, Endangered, Critically Endangered) occur in each Indo-Burma country. Relevant species are particularly those on the IUCN Red List of Threatened Species™, but also Appendix I of CITES (Convention on International Trade in Endangered Species) and the Appendix I of CMS (Convention on Migratory Species). Note that if nationally endangered species have been identified (e.g. through a National Red List) these can also be included under Criterion 2.
- ii. Prepare a list of which wetlands are known to support each of these globally threatened wetland-dependent species, and which of these species they regularly support.
- iii. It would be helpful also to prepare a list, by globally threatened species, of which wetlands support each species. This may help in terms of subsequent consideration and identification of priority wetlands for designation.
- iv. all wetlands qualifying under Criterion 2 for globally threatened species should be included in the list of potential Ramsar Sites for designation.

Guiding Principle 18. Applying Criterion 2 - globally threatened species

Identify all wetlands that support globally threatened wetland-dependent species and include all these qualifying wetlands in the list of potential Ramsar Sites.

Threatened ecological communities

18.5.2 This is a particularly challenging aspect of Criterion 2 to apply.

18.5.3 The *Strategic Framework* guidance (para. 145) defines a “threatened ecological community” as a “community subject to current and continuing threats likely to lead to [its] extinction”, and lists five phenomena which can demonstrate such threat. Assessing whether a wetland ecological community is threatened requires substantial ecological knowledge of:

- a) what can be considered a distinct ecological community, and
- b) the trajectory of change in that community over time.

18.5.4 The most readily applicable examples may be:

- *A marked decrease in geographic distribution*: the distribution of the ecological community has contracted to less than 10% [an indicative figure] of its former range, or the total area of the ecological community is less than 10% of its former area, or where less than 10% of the area of the ecological community is in patches of a size sufficiently large for them to be likely to persist for more than 25 years.
- *Restricted geographic distribution* such that the community could be lost rapidly by the action of a threatening process.

18.5.5 These phenomena listed as indicating threat to a wetland ecological community are similar to the more recently developed IUCN Red List of Ecosystems (RLE) approach, which assesses risk of ecosystem collapse, with threat levels being assessed in the same categories as the IUCN Red List of Species (Critically Endangered, Endangered, Vulnerable, Near-Threatened, Least Concern, Data Deficient). Guidelines for the application of IUCN Red List of Ecosystems Categories and Criteria, version 1.1 (2017), are available on: <https://portals.iucn.org/library/sites/library/files/documents/2016-010-v1.1.pdf>

18.5.6 In the IBRRI region, the 2020 IUCN publication “*Threatened ecosystems of Myanmar*” [1] has assessed some, but not all, wetland communities and found the following wetland communities as globally threatened:

- Ayeyarwady floodplain wetlands – Endangered
- Central Ayeyarwady floodplain grasslands – Critically Endangered
- Ayeyarwady kanazo swamp forest – Critically Endangered
- Ayeyarwady delta mangrove forest – Endangered
- Rakhine mangrove forest on mud – Critically Endangered
- Dwarf mangrove (shrubland) on shingle – Critically Endangered

18.5.7 The 2020 IUCN Red List publication assessed the following Myanmar wetland communities as not being globally threatened (Least Concern or Data Deficient):

- Aerobic karst caves
- Mixed delta scrub
- Glacial lakes
- Coastal mudflat
- Sandy shoreline
- Tanintharyi mangrove forest
- Grassy saltmarsh

18.5.8 No such RLE assessments have yet been undertaken for other Indo-Burma countries but they should be encouraged so as to better inform the application of this Criterion in the region.

Application steps – threatened ecological communities

The most appropriate systematic approach to the application of this aspect of Criterion 2 could be to:

- for each wetland community identified as globally threatened by the 2020 IUCN Red List of Ecosystems and other sources, identify wetlands supporting this community
- seek the expert views of the wetland ecological research community as to whether any other such wetland ecological communities in the Indo-Burma region might be considered threatened (against the five phenomena listed in the Strategic Framework);
 - if any are identified, to apply the IUCN Ecosystem Red List methodology to assess their threat levels; and
 - if any such communities are assessed as globally threatened, add all wetlands in which they occur to the list of potential Ramsar Sites.

Guiding Principle 19. Applying Criterion 2 - threatened ecological communities

Identify, from the IUCN 2020 Myanmar Red List of Ecosystems and from expert opinion for other Indo-Burma countries, which wetland ecological communities are, or may be, globally threatened; assess the level of threat using the IUCN Ecosystem Red List methods; and include wetlands with any such communities assessed as globally threatened in the list of potential Ramsar Sites under Criterion 2.

[1] Murray, N.J., Keith, D.A., Tizard, R., Duncan, A., Htut, W.T., Hlaing, N., Oo, A.H., Ya, K.Z., Grantham, H. (2020) Threatened Ecosystems of Myanmar. An IUCN Red List of Ecosystems Assessment. Version 1.0. Wildlife Conservation Society. ISBN: 978-0-9903852-5-7

18.6 A systematic approach to applying Criterion 3

- 18.6.1 Criterion 3 identifies wetlands that are important for maintaining the characteristic biological diversity of a particular biogeographic region, through support of regionally typical species or habitats which may not occur more widely.
- 18.6.2 The *Strategic Framework* recognises that the greatest conservation value under Criterion 3 will be achieved through the selection of a suite of sites that have one or more of the following five characteristics:
- “hotspots” of biological diversity and are evidently species-rich (even though the number of species present may not be accurately known), for example the Indo-Burma Hotspot;
 - centres of endemism or contain significant numbers of endemic species;
 - contain the range of biological diversity (including habitat types) occurring in a biogeographic region;
 - contain a significant proportion of wetland dependent species adapted to special environmental conditions (such as temporary wetlands in semi-arid or arid areas);
 - support elements of biological diversity that are rare or particularly characteristic of the biogeographic region.
- 18.6.3 The *Strategic Framework* stresses that in assessing Criterion 3 for application to a wetland, the biological diversity (species and habitats) supported by the wetland must be considered in relation to that of the biogeographic region in which the wetland lies.
- 18.6.4 The *Strategic Framework* is not clear as to whether the wetland should be considered relative to all the biological diversity of a region (both wetland-dependent and non-wetland-dependent) or just the wetland-dependent component of the region’s biological diversity.
- 18.6.5 However, since the biogeographic regionalisation schemes (MEOW and FEOW) recommended for Ramsar application are designed for wetland application, it is logical to consider a wetland’s biodiversity in the context of the wetland species and habitat diversity of the relevant MEOW or FEOW.
- 18.6.6 It can be expected that many of the wetlands identified as meeting Criterion 3 will be large-scale wetlands extending across landscapes (or of broad coastal/inshore waters) and which contain a range of different wetland types.
- 18.6.7 The Key Biodiversity Areas (KBAs) approach and assessments provide a particularly valuable source of identification of wetlands potentially meeting Criterion 3, since KBA criteria address several of the five characteristics listed in paragraph 18.6.2 above. For more information on KBAs and their assessment methods see <https://www.keybiodiversityareas.org/about-kbas>
- 18.6.8 Two published IUCN Red List reports cover different parts of the Indo-Burma region and provide maps of potential inland wetland KBAs at the river basin sub-catchment level. These are:
- The status and distribution of freshwater biodiversity in Indo-Burma. Allen et al. 2008. Download from: <https://www.researchgate.net/publication/271204447> *The Status and Distribution of Freshwater Biodiversity in Indo-Burma*;
 - The status and distribution of freshwater biodiversity in the Eastern Himalaya. Allen et al. 2010. Download from: <https://www.iucn.org/resources/publication/status-and-distribution-freshwater-biodiversity-eastern-himalaya>
- 18.6.9 Other useful data and information sources for applying Criterion 3 include:
- BirdLife International’s Endemic Bird Areas of the World (Stattersfield et al. 1998 – not available online) and other data available at <https://datazone.birdlife.org/eba>;
 - Alliance for Zero Extinction (AZE) sites (www.zeroextinction.org);
 - Biodiversity Hotspots species database (www.biodiversityhotspots.org); and
 - Global Amphibian Assessment (www.globalamphibians.org);
 - PlantLife’s Important Plant Areas (IPAs) (<http://www.plantlifeipa.org/reports.asp>) but note that IPAs have not yet been identified for some Indo-Burma countries.

18.6.10 To apply Criterion 3 the data and information needed is:

- an inventory/list of wetland-dependent plant and animal species (including which species are endemic) and wetland habitat types present at the site (a suggested list of habitat types is provided in Annex 1);
- an inventory/list of wetland dependent plant and animal species (including which species are endemic) and wetland habitat types occurring in the relevant biogeographic region; and
- identification of centres of endemism and biodiversity ‘hotspots’ from other sources (see above).

Application steps – wetlands important for supporting the range of biodiversity characteristic of the biogeographic region

- i. for each biogeographic region, compile a list of wetland-dependent plant and animal species (including which species are endemic) and wetland habitat types which occur;
- ii. for each site, compile a list of wetland-dependent plant and animal species (including which species are endemic) and wetland habitat types present [note that for species this list is the same as that compiled for applying Criterion 4];
- iii. from i. and ii., assess which sites support the largest proportions of wetland-dependent species and habitat types occurring in the biogeographic region and
- iv. cross-check the resulting site list with additional information such as on endemism, hotspots and KBAs, to identify any further qualifying sites.
- v. include wetlands identified as qualifying under Criterion 3 from steps iii. and iv. in the list of potential Ramsar Sites.

Guiding Principle 20. Applying Criterion 3

For each biogeographic region, identify wetlands supporting important and large proportions of the wetland biodiversity, and high levels of endemism, in the relevant eco-region, and include these qualifying sites in the list of potential Ramsar Sites.

18.7 A systematic approach to applying Criterion 4

- 18.7.1 Criterion 4 identifies those wetlands that are critically important in enabling plant and/or animal species to fulfil their life cycles by providing necessary ecological support (e.g. essential food resources) on a basis that is either regular and annual or is more infrequent though nonetheless predictable.
- 18.7.2 Criterion 4 concerns wetlands which are at a critical stage in a species’ life cycles, or provides refuge to species during adverse conditions (such as droughts or floods).
- 18.7.3 Since all aspects of the environment provide support or refuge to those plants and animals that live within it, a test of “international importance” needs to be applied in the application of this Criterion. This can be that the loss of the wetland would threaten the survival of a species.
- 18.7.4 Criterion 4 is often applied in conjunction with one or more other Criteria, such that the life-cycle support, or refuge function, is recognised as internationally important in the application of this Criterion through the presence of internationally important (or nearly internationally important) numbers of a species (Criteria 5, 6, 7 or 9) and/or to species or plant/animal communities that are important by virtue of their presence or rarity (Criteria 2, 3 or 8).
- 18.7.5 Criterion 4 can be a useful, more qualitative, Criterion to apply when, for example, the site is known to support large numbers and/or diversity of wetland-dependent species, but sufficient quantitative data are not available to apply Criteria 5, 6 or 9.

18.7.6 Examples of critical sites for the application of Criterion 4 are:

- For mobile or migratory species, those which contain a particularly high population gathered in relatively small areas at particular stages of life cycles, such as key staging areas for migratory waterbirds and moulting sites for Anatidae (ducks, geese and swans).
- For non-migratory wetland species unable to move away when climatic or other conditions become unfavourable, key sites featuring the special ecological characteristics to sustain the species' populations in the medium or long term, for example sites where in dry periods, crocodile and fish species can retreat to deeper permanent areas or pools within wetland complexes.

To apply Criterion 4, the minimum data and information needed is:

- An inventory of plant and/or animal species present at the site;
- Knowledge of the ecological functions (either seasonally or periodically) provided by the site for the species present (e.g., food resources, physical shelter, etc.); and
- A broad understanding of the significance of the ecological support functions of the site in the context of the overall life-cycle of the species concerned (for example, that the site is an important staging area for specified migratory species).

Application steps – critical wetlands supporting species' life-cycles

- i. compile a list of plant and/or animal species present at the site;
- ii. for each species, list the ecological function(s) known to be provided by the site, paying particular attention to the role(s) played by the site for species identified as internationally important under other Criteria; and
- iii. assess if the loss of the site would threaten the survival of any of these species.
- iv. only wetlands assessed as critical for species' life-cycle support and/or acting as severe weather refugia should be included in the list of potential Ramsar Sites under Criterion 4.
- v. prepare a list of which wetlands qualify under Criterion 4 including, for each wetland, for which species the site is critical, and for which part(s) of their life-cycle the site is critical.

Guiding Principle 21. Applying Criterion 4

Identify all wetlands assessed as critically important for species' life-cycle support or as severe weather refugia, and include these qualifying sites in the list of potential Ramsar Sites.



Koh Kapik Ramsar Site, Cambodia © IUCN Cambodia

18.8 A systematic approach to applying Criterion 5

- 18.8.1 Criterion 5 identifies sites which regularly support more than 20,000 waterbirds during a particular period in the year.
- 18.8.2 One data source is needed to apply Criterion 5: regular counts of the total number of waterbirds occurring at a site.
- 18.8.3 For full application of Criterion 5, the *Strategic Framework* guides that the *average* peak waterbird count should exceed 20,000 waterbirds over five recent years. If only three or four recent years of counts are available, a provisional assessment for Criterion 5 can be made.

Application steps – >20,000 waterbirds

- i. From the International Waterbird Census and/or other sources of waterbird count data, identify which wetlands regularly support >20,000 waterbird individuals at the same time of year. Count data should be for the most recent five-year period, but if fewer years of data are available these can be used for a provisional assessment.
- ii. Prepare a list of which wetlands qualify under Criterion 5, including the average total number of waterbirds occurring in each of these wetlands.
- iii. All wetlands qualifying under Criterion 5 should be included in the list of potential Ramsar Site.

Guiding Principle 22. Applying Criterion 5

Identify all wetlands which regularly support >20,000 waterbirds, and include all these qualifying sites in the list of potential Ramsar Sites.

18.9 A systematic approach to applying Criterion 6

- 18.9.1 Criterion 6 identifies sites which regularly support more than 1% of the biogeographic population of one or more waterbird species at one or other time of year.
- 18.9.2 Two data and information sources are needed to be able to apply Criterion 6:
- an established 1% population threshold for the relevant biogeographic population, and
 - recent counts of waterbirds from the wetland to assess if the population size of any of these waterbirds exceeds the relevant 1% threshold.
- 18.9.3 As for Criterion 5, for the full application of Criterion 6, the average peak count of a waterbird species should, on average, exceed 1% of its biogeographic population threshold over five most recent years. If only three or four recent years of counts are available, a provisional assessment for Criterion 6 can be made.
- 18.9.4 To support the application of Criterion 6, a list of waterbird species occurring in Indo-Burma, and their current (as of January 2024) 1% biogeographic population thresholds is provided in Annex 3. But those applying Criterion 6 are urged to check the Wetlands International Waterbird Populations Portal (<http://wpe.wetlands.org>) for recently updated information.

Application steps – >1% of a waterbird biogeographical population

- i. Identify, from Wetlands International’s Waterbird Populations Portal (available online at: <https://wpp.wetlands.org>), for which waterbird biogeographic populations occurring in Indo-Burma there is an established 1% population threshold.
- ii. For each population of which there is a 1% threshold, assess waterbird count data (from the International Waterbird Census and/or other sources), for each species of waterbird occurring in Indo-Burma, to identify which wetlands regularly support >1% of individuals of the relevant biogeographic population. Count data should preferably be for a recent five-year period, but if fewer years of data are available these can be used.
- iii. Prepare a list of which wetlands qualify under Criterion 6, including the average percentage occurring of each waterbird population for which the wetland qualifies under the Criterion.
- iv. All wetlands qualifying under Criterion 6 should be included in the list of potential Ramsar Sites.

Guiding Principle 23. Applying Criterion 6

Identify all wetlands which support >1% of one or more waterbird biogeographic populations, and include all these qualifying sites in the list of potential Ramsar Sites.

18.10 A systematic approach to applying Criterion 7

- 18.10.1 Criterion 7 concerns wetlands which are internationally important for fish (including shellfish), specifically for a range of different aspects of their status and life-cycle characteristics.
- 18.10.2 This Criterion has a very complex formulation and is particularly difficult and challenging to apply fully. The Ramsar STRP, in its 2012-2015 workplan, was requested to review and advise on the formulations and application of this Criterion and of Criterion 8, but this work has not yet been undertaken.
- 18.10.3 The *Strategic Framework* suggests that Criterion 7 can be best interpreted as that a wetland should be considered internationally important if it supports a significant proportion of:
 - indigenous [endemic] fish subspecies, species or families; and/or
 - life-history stages [of fish]; and/or
 - fish species’ interactions; and
 - a range of fish species which are characteristic of a biogeographical region.
- 18.10.4 It is important to be aware that just providing a fish species list is not sufficient justification for the application of this Criterion. Additional information on other measures of diversity, including life-history stages, species interactions, and level of endemism is required.
- 18.10.5 The following information is needed ideally to apply this Criterion. However, it may be applied even with partial information, since all such information exists for very few wetlands globally:
 - a list of the fish species (and ideally subspecies) present in the wetland (and from which can be derived a list of the fish families present);
 - knowledge of the extent to which fish subspecies, species or families are indigenous [endemic] to the wetland;
 - an understanding of the life history stages of fish present at the site;
 - an understanding of the interactions between fish present at the site; and
 - a list of the fish species (and ideally subspecies) and families present in the relevant biogeographic region (MEOW or FEOW).

- 18.10.6 Concerning levels of endemism, the Strategic Framework recommends that if at least 10% of fish are endemic to the wetland or to wetlands in a natural grouping, that site should be recognised as internationally important under Criterion 7.
- 18.10.7 As for the application of Criterion 3, the two published IUCN Red List reports covering different parts of the Indo-Burma region provide assessments of fish species richness, and endemic fish richness, at the river basin sub-catchment level, and provide a helpful starting point for identifying wetlands potentially qualifying under Criterion 7:

- The status and distribution of freshwater biodiversity in Indo-Burma. Allen et al. 2008. Download from: https://www.researchgate.net/publication/271204447_The_Status_and_Distribution_of_Freshwater_Biodiversity_in_Indo-Burma
- The status and distribution of freshwater biodiversity in the Eastern Himalaya. Allen et al. 2010. Download from: <https://www.iucn.org/resources/publication/status-and-distribution-freshwater-biodiversity-eastern-himalaya>

Application steps – fish diversity, endemism, life history stages and species interactions

- i. for each biogeographic region, compile a list of fish families, species and subspecies occurring;
- ii. for each site, compile a list of fish families, species and subspecies occurring, including which are endemic, what their life-history stages are and any information on fish species' interactions; [note that for fish species this list is the same as that needing to be compiled for applying Criteria 3, 4 and 8];
- iii. from i. and ii., assess which sites support the largest proportions of fish families, species and subspecies, which sites hold 10% or more fish which are endemic, and which sites support the widest range of life-history stages and species' interactions, occurring in the biogeographic region; and
- iv. include wetlands identified as qualifying under Criterion 7 from step iii. in the list of potential Ramsar Sites.

Guiding Principle 24. Applying Criterion 7

For each biogeographic region, identify wetlands with the largest proportions of fish families, species and subspecies, which site holds 10% or more fish which are endemic, and which site supports the widest range of fish life-history stages, occurring in the biogeographic region, and include these qualifying sites in the list of potential Ramsar Sites.

18.11 A systematic approach to applying Criterion 8

- 18.11.1 Criterion 8 identifies those wetlands which support internationally important fish (including bivalves/shellfish) stocks through aspects of their ecological functioning. This includes through the role of the wetland in providing food for fish, and/or as a spawning ground, and/or a nursery area, and/or as a pathway for migratory fish.
- 18.11.2 It is important to be aware that providing just a fish species list for a wetland is not sufficient justification for the application of this Criterion. Understanding of the roles/functions the wetland plays in supporting each fish species is also needed.
- 18.11.3 The emphasis of this Criterion is not on the fish themselves (the subject of Criterion 7) but rather is on the ecological functions provided by a wetland, notably as a source of food, or as a spawning ground or nursery, or as a migration path.

- 18.11.4 The Criterion notes that the importance of these functions need not just be for fish within the wetland itself but may also be for fish stocks further afield. For example, many coastal wetlands such as estuaries or mangroves are crucially important as spawning and/or nursery areas for fish stocks living as adults in deeper waters offshore.
- 18.11.5 The *Strategic Framework* advises that many wetlands support functions for fish stocks, but that an assessment of overall significance is relevant in determining whether or not these functions are of international importance.
- 18.11.6 The *Strategic Framework* also advises that the following attributes can be associated with a wetland that may be recognised as internationally important under Criterion 8. These include functions that support fish stocks:
- across extensive areas or multiple wetlands;
 - of multiple species (including, but not restricted to, those that are of high conservation status and/or are endemic within a biogeographic region); and/or
 - across national borders;
 - which further support significant ecosystem services related to fish.
- 18.11.7 The data and information ideally needed to apply this Criterion is:
- Site-related data on the role of the site in supporting fish populations either through provision of food or in providing supporting functions such as a spawning, nursery areas and migration paths; and
 - The context and significance of functions of the site for fish populations at wider scales (nationally or internationally).

Application steps – functions of wetlands in supporting fish populations

- i. for each site, compile a list of fish species occurring;
- ii. for each fish species occurring in the site identify whether the site functions as one or more of the following: adult feeding area, a spawning area, a nursery area and/or a migratory pathway;
- iii. for each site, assess a) how many fish species are supported; b) what geographical range of occurrence of the fish species supported by the site; and c) whether this occurrence extends across national borders;
- iv. identify which sites support the largest numbers of fish species, the widest range of functions for fish species, provide support to fish species from the largest geographical areas, and provide support to fish species across national borders;
- iv. include wetlands identified as qualifying under Criterion 8 from step iv. above in the list of potential Ramsar Sites.

Guiding Principle 25. Applying Criterion 8

Identify wetlands which support the largest numbers of fish species, the widest range of support functions to fish, provide support to fish from the largest geographical areas and provide support across national borders, and include these qualifying sites in the list of potential Ramsar Sites.

18.12 A systematic approach to applying Criterion 9

- 18.12.1 Criterion 9 takes the same approach, for non-avian wetland-dependent species, as does Criterion 6 for waterbirds. It is most readily applied to wetland-dependent mammals and reptiles and less easy to apply to amphibians, fish and invertebrates, for which population size estimates seldom exist.

18.12.2 Criterion 9 should only be applied to species considered wetland-dependent and cannot be applied to other non-avian species which happen to occur within the area being considered for Ramsar designation (e.g. forest-dependent species occurring in forests surrounding the wetland itself).

18.12.3 Two data and information sources are needed to be able to apply Criterion 9:

- a population size for the relevant biogeographic population of the species from which a 1% population threshold has, or can be, derived, and
- recent counts of the species from the wetland to assess if the population size exceeds the relevant 1% threshold.

18.12.4 Unlike for waterbirds for the application of Criterion 6, there is no standard up-to-date source for population sizes and 1% thresholds available for non-avian wetland-dependent species. However, “Population estimates and 1% thresholds for wetland-dependent non-avian animal species, for the application of Criterion 9” was made available in 2006 as a starting point (available on: https://www.ramsar.org/sites/default/files/documents/pdf/ris/key_ris_criterion9_2006.pdf) and provides an initial list of wetland-dependent non-avian species, population sizes and 1% thresholds. But this initial list needs to be updated.

Application steps – >1% of non-avian biogeographic populations

- Identify, from “Population estimates and 1% thresholds for wetland-dependent non-avian animal species, for the application of Criterion 9” and IUCN Red List information for which non-avian wetland-dependent animal populations occurring in Indo-Burma there is an established 1% population threshold.
- For those populations for which there is a 1% threshold, review population count data for each non-avian wetland dependent animal species occurring in Indo-Burma, to identify which wetlands hold >1% of individuals of the relevant biogeographic population. Count data should preferably be for a recent five-year period, but if fewer years of data are available these can be used.
- Prepare a list of which wetlands qualify under Criterion 9, including the average percentage occurring of each non-avian population for which the wetland qualifies under the Criterion.
- All wetlands qualifying under Criterion 9 should be included in the list of potential Ramsar Sites.

Guiding Principle 26. Applying Criterion 9

Identify all wetlands which support >1% of one or more ‘non-avian wetland-dependent species’ biogeographic populations, and include all these qualifying sites in the list of potential Ramsar Sites.

19. Compiling a consolidated list of all wetlands qualifying for Ramsar Site designation

- 19.1 Once the systematic approach set out in Section 18 above has been achieved separately for each of the nine Criteria, compile a consolidated list of all wetlands in each Indo-Burma country identified as qualifying for Ramsar Site designation.
- 19.2 The consolidated list should list the wetland name, its location and size, wetland types occurring and all the Criteria that apply to the wetland, and why.
- 19.3 A starting point for developing this consolidated list would be to update and refine existing national lists of important wetlands.
- 19.4 If the systematic approach is done for different Criteria sequentially, update the existing national list of important wetlands each time a Criterion assessment has been completed.

Guiding Principle 27

Compile the lists of wetlands qualifying under each Criterion to form a consolidated list of all qualifying wetlands, and for each, list which Criteria apply.

20 Revising and updating priorities for future Ramsar Site designations

- 20.1 When the systematic approach is completed for a Criterion, it will be appropriate to revisit and update the prioritisation for future Ramsar Sites designation assessment (Section 15 above) for each of the sites identified, in the light of any new data and information available for the “relative importance of designation” aspect of the prioritisation.

Guiding Principle 28

After completion of the systematic approach under Phase 2 for Ramsar Site identification for a Criterion, revisit and update the prioritisation scores for all sites identified under this Criterion.



Fishing in Beung Kiat Ngong Ramsar Site, Lao PDR © IUCN Lao PDR

Annexes

1. Wetland classes and Ramsar Wetland Types, for use in the application of Criteria 1, 2 and 3

Wetland classes[2]	Ramsar wetland type(s)
1. Inland natural wetlands	
i. Rivers & streams	M Permanent rivers/streams/creeks; includes waterfalls. N Seasonal/intermittent/irregular rivers/streams/creeks. L Permanent inland deltas.
ii. Natural lakes & pools	
a. Natural lakes (>8 ha)	O Permanent freshwater lakes (over 8 ha); includes large oxbow lakes. P Seasonal/intermittent freshwater lakes (over 8 ha); includes floodplain lakes. Q Permanent saline/brackish/alkaline lakes. R Seasonal/intermittent saline/brackish/alkaline lakes and flats.
b. Natural pools (<8 ha)	Sp Permanent saline/brackish/alkaline marshes/pools. Ss Seasonal/intermittent saline/brackish/alkaline marshes/pools. Tp Permanent freshwater marshes/pools; ponds (below 8 ha), marshes and swamps on inorganic soils; with emergent vegetation water-logged for at least most of the growing season. Ts Seasonal/intermittent freshwater marshes/pools on inorganic soils; includes sloughs, potholes, seasonally flooded meadows, sedge marshes.
iii. Peatlands	
a. Non-forested peatlands (bogs, mires & fens)	U Non-forested peatlands; includes shrub or open bogs, swamps, fens.
b. Forested peatlands	Xp Forested peatlands; peat swamp forests.
iv. Marshes and swamps (on alluvial soils), including floodplains	W Shrub-dominated wetlands; shrub swamps, shrub-dominated freshwater marshes, shrub carr, alder thicket on inorganic soils. Va Alpine wetlands; includes alpine meadows, temporary waters from snowmelt.
v. Forested wetlands (on alluvial soils)	
vi. Groundwater-dependent wetlands	Xf Freshwater, tree-dominated wetlands; includes freshwater swamp forests, seasonally flooded forests, wooded swamps on inorganic soils.
a. Karst & Cave systems	Zk(b) Karst and other subterranean hydrological systems, inland
b. Springs & oases	Y Freshwater springs, oases.
c. Groundwater-dependent wetlands	Zg Geothermal wetlands

[2] From Davidson & Finlayson (2018), prepared for use in the 2018 Ramsar Global Wetland Outlook <https://www.global-wetland-outlook.ramsar.org/gwo-2018>

2. Coastal natural wetlands	
i. Estuaries (including coastal deltas)	F Estuarine waters ; permanent water of estuaries and estuarine systems of deltas.
a. Tidal flats	G Intertidal mud, sand or salt flats.
b. Saltmarshes	H Intertidal marshes ; includes salt marshes, salt meadows, saltings, raised salt marshes; includes tidal brackish and freshwater marshes.
ii. Mangroves	I Intertidal forested wetlands ; includes mangrove swamps, nipah swamps and tidal freshwater swamp forests.
iii. Seagrass beds	B Marine subtidal aquatic beds ; includes kelp beds, sea-grass beds, tropical marine meadows.
iv. Coral reefs (warm water systems)	C Coral reefs.
v. Shellfish reefs	Ga Bivalve (shellfish) reefs F Estuarine waters ; permanent water of estuaries and estuarine systems of deltas (oyster & mussel beds).
vi. Coastal lagoons	J Coastal brackish/saline lagoons ; brackish to saline lagoons with at least one relatively narrow connection to the sea. K Coastal freshwater lagoons ; includes freshwater delta lagoons.
vii. Kelp forests	B Marine subtidal aquatic beds ; includes kelp beds, sea-grass beds, tropical marine meadows.
viii. Shallow subtidal systems	A Permanent shallow marine waters in most cases less than six metres deep at low tide; includes sea bays and straits F Estuarine waters ; permanent water of estuaries and estuarine systems of deltas.
ix. Sand dunes/beaches/rocky shores	D Rocky marine shores ; includes rocky offshore islands, sea cliffs. E Sand, shingle or pebble shores ; includes sand bars, spits and sandy islets; includes dune systems and humid dune slacks.
x. Coastal karst & caves	Zk(a) – Karst and other subterranean hydrological systems , marine/coastal

Note. Ramsar wetland type “Vt Tundra wetlands; includes tundra pools, temporary waters from snowmelt” is probably not relevant to the Indo-Burma region.

2. The 28 Guiding Principles for Ramsar Site designation in the Indo-Burma region

A strategic approach to Ramsar Site designation

Guiding Principle 1. Under its *Strategic Framework* the Ramsar Convention expects all CPs to develop a strategy and priorities for Ramsar Site designation.

Guiding Principle 2. The aim of the Strategy is to identify and, ultimately, designate all wetlands in the Indo-Burma region which qualify as internationally important, so as to achieve coherent and comprehensive national networks of Ramsar Sites.

Guiding Principle 3. The Strategy and list of potential Ramsar Sites can facilitate raising public awareness of where Indo-Burma's internationally important wetlands are, and what their importance is, in support of achieving their conservation and wise use.

Guiding Principle 4. When preparing to designate a wetland as a Ramsar Site, fully document all ecosystem services, and their importance, in the Information Sheet on Ramsar Wetlands (RIS), including particularly hydrological services provided by sites qualifying under Criterion 1, and cultural services.

Guiding Principle 5. Establish initial lists of potential Ramsar Sites now, for wetlands that have sufficient data and information currently available.

Guiding Principle 6. Review and update the initial lists of potential Ramsar Sites when new data and information becomes available, including from national wetland inventory.

Guiding Principle 7. Apply a 2-phase approach to the identifying and prioritising wetlands for Ramsar Site designation, starting with currently available data and information.

Phase 1: Starting with available information to identify and prioritise wetlands for Ramsar Site designation

Guiding Principle 8. Establish an initial list of wetlands qualifying for Ramsar Site designation and agree priorities for their designation, using currently available data and information.

Guiding Principle 9. Review the Strategic Framework's five National Objectives for the Ramsar List and affirm these Objectives, amended for the national context as appropriate, for national strategies for Ramsar Site designation.

Guiding Principle 10. Establish a set of Ramsar designation prioritisation criteria for a) the importance of designating the wetland; and b) the ease of designation of the wetland.

Guiding Principle 11. Assess each wetland on the list of sites potentially qualifying for designation against the established prioritisation criteria and allocate a High, Medium or Low Priority for future designation.

Phase 2: Applying the systematic approach to identifying all wetlands qualifying for Ramsar Site designation

General

Guiding Principle 12. Apply a systematic approach to identifying all wetlands qualifying for Ramsar Site designation under each designation Criterion, and compile a consolidated list of qualifying wetlands and the Criteria which apply to each of these wetlands.

Guiding Principle 13. Use any available national wetland inventories and lists of important wetlands to identify main areas of each wetland type for further assessment for qualification for designation under Ramsar Criterion 1.

Guiding Principle 14. Reorganise working lists of important wetlands into separate lists for each Ramsar designation Criterion of wetlands potentially qualifying for Ramsar designation, as a starting point to inform the systematic approach.

Guiding Principle 15. Apply a systematic approach to the detailed Strategic Framework guidance, review available data and information to identify all qualifying wetlands, and prepare a separate list of wetland sites qualifying for Ramsar Site designation under each Criterion.

Guiding Principle 16. Use the ecoregion level of the *Marine Ecoregions of the World (MEOW)* for marine/coastal wetlands and the *Freshwater Ecoregions of the World (FEOW)* for inland wetlands when applying Criteria 1, 3 and 7 and the ecological community aspect of Criterion 2.

Criterion-specific

Guiding Principle 17. Applying Criterion 1. For each biogeographic region, identify all wetlands that include rare, unique and the best representative examples of each occurring wetland type, and those wetlands providing the most important hydrological functions, and include all these qualifying sites in the list of potential Ramsar Sites.

Guiding Principle 18. Applying Criterion 2 – globally threatened species. Identify all wetlands that support globally threatened wetland-dependent species and include all these qualifying wetlands in the list of potential Ramsar Sites.

Guiding Principle 19. Applying Criterion 2 – threatened ecological communities. Identify, from the IUCN 2020 Myanmar Red List of Ecosystems and from expert opinion for other Indo-Burma countries, which wetland ecological communities are, or may be, globally threatened; assess the level of threat using the IUCN Ecosystem Red List methods; and include wetlands with any such communities assessed as globally threatened in the list of potential Ramsar Sites under Criterion 2.

Guiding Principle 20. Applying Criterion 3 – For each biogeographic region, identify wetlands supporting important and large proportions of the wetland biodiversity, and high levels of endemism, in the relevant eco-region, and include these qualifying sites in the list of potential Ramsar Sites.
Guiding Principle 21. Applying Criterion 4: Identify all wetlands assessed as critically important for species' life-cycle support or as severe weather refugia, and include these qualifying sites in the list of potential Ramsar Sites.

Guiding Principle 21. Applying Criterion 4 – Identify all wetlands assessed as critically important for species' life-cycle support or as severe weather refugia, and include these qualifying sites in the list of potential Ramsar Sites.

Guiding Principle 22. Applying Criterion 5 – Identify all wetlands which regularly support >20,000 waterbirds, and include all these qualifying sites in the list of potential Ramsar Sites.

Guiding Principle 23. Applying Criterion 6 – Identify all wetlands which support >1% of one or more waterbird biogeographic populations, and include all these qualifying sites in the list of potential Ramsar Sites.

Guiding Principle 24. Applying Criterion 7 – For each biogeographic region, identify wetlands with the largest proportions of fish families, species and subspecies, which sites hold 10% or more fish which are endemic, and which sites support the widest range of fish life-history stages, occurring in the biogeographic region, and include these qualifying sites in the list of potential Ramsar Sites.

Guiding Principle 25. Applying Criterion 8 – Identify wetlands which support the largest numbers of fish species, the widest range of support functions to fish, provide support to fish from the largest geographical areas and provide support across national borders, and include these qualifying sites in the list of potential Ramsar Sites.

Guiding Principle 26. Applying Criterion 9 – Identify all wetlands which support >1% of one or more non-avian wetland-dependent species' biogeographic populations, and include all these qualifying sites in the list of potential Ramsar Sites.

Guiding Principle 27. Compile the lists of wetlands qualifying under each Criterion to form a consolidated list of all qualifying wetlands, and for each, list which Criteria apply.

Prioritising wetlands for future Ramsar Site designation

Guiding Principle 10. During Phase 1, establish a set of designation prioritisation criteria for a) the importance of designating the wetland; and b) the ease of Ramsar designation of the wetland.

Guiding Principle 11. Assess each wetland on the list of sites potentially qualifying for designation against the established prioritisation criteria and allocate a High, Medium or Low Priority for future designation.

Guiding Principle 28. After completion of the systematic approach under Phase 2 for Ramsar Site identification for a Criterion, revisit and update the prioritisation scores for all sites identified under this Criterion.

3. Waterbird species occurring in the Indo-Burma region, their global threat status, and 1% biogeographic population thresholds for the application of Criterion 6

Species list sources are: Mundkur, T., Langendoen, T. & Watkins, D. (eds.) 2017. The Asian Waterbird Census 2008-2015 - results of coordinated counts in Asia and Australasia. Wetlands International, Ede; with waterbird species additions from the AviBase bird species list for Indo-Burma (<https://avibase.bsc-eoc.org/checklist.jsp?region=MM&list=howardmoore>)

Global threat status (IUCN Red List) for application of Ramsar Criterion 2: DD Data Deficient; LC Least Concern; NT Near-Threatened; VU Vulnerable; EN Endangered; CR Critically Endangered. Only species listed as either VU, EN or CR qualify for designation under Ramsar Criterion 2.

1% geographic population thresholds (for application of Ramsar Criterion 6) are for East Asia-Australasia Flyway (EAAF) populations, from Wetlands International's Waterbird Population Portal database, on <https://wpp.wetlands.org> and Annex 6 of the EAAFP 1st Conservation Status Review (<https://www.wetlands.org/eaaf-conservation-status-review/>).

Note that 1% thresholds for many resident (non-migratory) populations in the Indo-Burma region are recognised as now being out-of-date and in urgent need of updating, especially given that many waterbird populations on the EAAF are known to be in decline.

Important note. *The global threat status and 1% population thresholds listed below are as at January 2024. It is very strongly recommended that those assessing Ramsar Site qualification under Criterion 6 check for any updated information on the Waterbird Population Portal, on <https://wpp.wetlands.org>*

Waterbird Family	Scientific Name	Common Name	Global threat status	1% population threshold
Anatidae	<i>Dendrocygna javanica</i>	Lesser Whistling-duck	LC	10,000
Anatidae	<i>Dendrocygna bicolor</i>	Fulvous Whistling-duck	LC	500
Anatidae	<i>Anser indicus</i>	Bar-headed Goose	LC	1100
Anatidae	<i>Anser anser</i>	Greylag Goose	LC	150
Anatidae	<i>Anser fabalis</i>	Bean Goose	LC	810
Anatidae	<i>Anser albifrons</i>	Greater White-fronted Goose	LC	480
Anatidae	<i>Mergus merganser</i>	Goosander	LC	710
Anatidae	<i>Tadorna tadorna</i>	Common Shelduck	LC	1200
Anatidae	<i>Tadorna ferruginea</i>	Ruddy Shelduck	LC	710
Anatidae	<i>Sarkidiornis melanotos</i>	African Comb Duck	LC	250
Anatidae	<i>Nettapus coromandelianus</i>	Cotton Pygmy-goose	LC	10,000
Anatidae	<i>Asarcornis scutulata</i>	White-winged Duck	EN	5
Anatidae	<i>Netta rufina</i>	Red-crested Pochard	LC	1000
Anatidae	<i>Aythya ferina</i>	Common Pochard	VU	3000
Anatidae	<i>Aythya baeri</i>	Baer's Pochard	CR	15
Anatidae	<i>Aythya nyroca</i>	Ferruginous Duck	NT	1000
Anatidae	<i>Aythya fuligula</i>	Tufted Duck	LC	2400
Anatidae	<i>Aythya marila</i>	Greater Scaup	LC	2400
Anatidae	<i>Spatula querquedula</i>	Garganey	LC	1400
Anatidae	<i>Spatula clypeata</i>	Northern Shoveler	LC	5000
Anatidae	<i>Sibioronetta formosa</i>	Baikal Teal	LC	5900
Anatidae	<i>Mareca falcata</i>	Falcated Duck	NT	1300
Anatidae	<i>Mareca strepera</i>	Gadwall	LC	7100
Anatidae	<i>Mareca penelope</i>	Eurasian Wigeon	LC	7100
Anatidae	<i>Anas poecilorhyncha</i>	Indian Spot-billed Duck	LC	1000
Anatidae	<i>Anas platyrhynchos</i>	Mallard	LC	15,000
Anatidae	<i>Anas acuta</i>	Northern Pintail	LC	2400
Anatidae	<i>Anas crecca</i>	Common Teal	LC	7700
Anatidae	<i>Bucephala clangula</i>	Goldeneye	LC	10,000
Anatidae	<i>Mergellus albellus</i>	Smew	LC	300
Anatidae	<i>Aix galericulata</i>	Mandarin Duck	LC	200
Anatidae	<i>Mergus merganser</i>	Common Merganser	LC	710
Anatidae	<i>Mergus serrator</i>	Red-breasted Merganser	LC	1000
Anhingidae	<i>Anhinga melanogaster</i>	Oriental Darter	NT	100
Ardeidae	<i>Botaurus stellaris</i>	Eurasian Bittern	LC	1000
Ardeidae	<i>Ixobrychus sinensis</i>	Yellow Bittern	LC	10,000
Ardeidae	<i>Ixobrychus eurhythmus</i>	Schrenk's Bittern	LC	-
Ardeidae	<i>Ixobrychus cinnamomeus</i>	Cinnamon Bittern	LC	10,000
Ardeidae	<i>Ixobrychus flavicollis</i>	Black Bittern	LC	1000
Ardeidae	<i>Gorsachius melanolophus</i>	Malay Night-heron	LC	-
Ardeidae	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron	LC	10,000

Ardeidae	<i>Butorides striata</i>	Green-backed Heron	LC	-
Ardeidae	<i>Bubulcus ibis</i>	Cattle Egret	LC	10,000
Ardeidae	<i>Ardea cinerea</i>	Grey Heron	LC	10,000
Ardeidae	<i>Ardea insignis</i>	White-bellied Heron	CR	5
Ardeidae	<i>Ardea sumatrana</i>	Great-billed Heron Purple	LC	1000
Ardeidae	<i>Ardea purpurea</i>	Heron	LC	1000
Ardeidae	<i>Ardea alba</i>	Great White Egret	LC	1000
Ardeidae	<i>Ardea intermedia</i>	Intermediate Egret	LC	1000
Ardeidae	<i>Ardeola grayii</i>	Indian Pond-heron	LC	-
Ardeidae	<i>Ardeola bacchus</i>	Chinese Pond-heron	LC	10,000
Ardeidae	<i>Ardeola speciosa</i>	Javan Pond-heron	LC	1000
Ardeidae	<i>Egretta garzetta</i>	Little Egret	LC	10,000
Ardeidae	<i>Egretta eulophotes</i>	Chines Egret	VU	75
Ardeidae	<i>Egretta sacra</i>	Pacific Reef-egret	LC	10,000
Burhinidae	<i>Esacus recurvirostris</i>	Great Thick-knee	NT	250
Burhinidae	<i>Esacus magnirostris</i>	Beach Thick-knee	NT	250
Charadriidae	<i>Pluvialis squatarola</i>	Grey Plover	LC	800
Charadriidae	<i>Pluvialis fulva</i>	Pacific Golden Plover	LC	1200
Charadriidae	<i>Charadrius hiaticula</i>	Common Ringed Plover	LC	10,000
Charadriidae	<i>Charadrius placidus</i>	Long-billed Plover	LC	250
Charadriidae	<i>Charadrius dubius</i>	Little Ringed Plover	LC	250
Charadriidae	<i>Charadrius alexandrinus</i>	Kentish Plover	LC	700
Charadriidae	<i>Charadrius mongolus</i>	Siberian Sandplover	EN	260
Charadriidae	<i>Charadrius leschenaultii</i>	Greater Sandplover	LC	2400
Charadriidae	<i>Vanellus vanellus</i>	Northern Lapwing	LC	10,000
Charadriidae	<i>Vanellus duvaucelii</i>	River Lapwing Grey-	NT	250
Charadriidae	<i>Vanellus cinereus</i>	headed Lapwing	LC	1000
Charadriidae	<i>Vanellus indicus</i>	Red-wattled Lapwing	LC	500
Charadriidae	<i>Vanellus leucurus</i>	White-tailed Lapwing	LC	1000 8
Ciconiidae	<i>Leptoptilos dubius</i>	Greater Adjutant	NT	70
Ciconiidae	<i>Leptoptilos javanicus</i>	Lesser Adjutant	NT	100
Ciconiidae	<i>Mycteria leucocephala</i>	Painted Stork	LC	1
Ciconiidae	<i>Mycteria cinereal</i>	Milky Stork	EN	3000
Ciconiidae	<i>Anastomus oscitans</i>	Asian Openbill	LC	2
Ciconiidae	<i>Ciconia nigra</i>	Black Stork	LC	250
Ciconiidae	<i>Ciconia episcopus</i>	Asian Woollyneck	VU	25
Ciconiidae	<i>Ciconia ciconia</i>	European White Stork	LC	30
Ciconiidae	<i>Ciconia boyciana</i>	Oriental White Stork	EN	10
Ciconiidae	<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork	NT	28,800
Glareolidae	<i>Glareola maldivarum</i>	Oriental Pratincole	LC	710
Glareolidae	<i>Glareola lactea</i>	Little Pratincole	LC	3
Gruidae	<i>Antigone antigone</i>	Sarus Crane	VU	120
Gruidae	<i>Grus grus</i>	Common Crane	LC	

Gruidae	<i>Anthropoides virgo</i>	Demoiselle Crane Black-	LC	800
Gruidae	<i>Grus nigricollis</i>	necked Crane Eurasian	VU	45
Haematopodidae	<i>Haematopus ostralegus</i>	Oystercatcher	LC	110
Heliornithidae	<i>Heliopais personatus</i>	Masked Finfoot	EN	3
Ibidorhynchidae	<i>Ibidorhyncha struthersii</i>	Ibisbill	LC	-
Jacanidae	<i>Hydrophasianus chirurgus</i>	Pheasant-tailed Jacana	LC	390
Jacanidae	<i>Metopidius indicus</i>	Bronze-winged Jacana	LC	710
Laridae	<i>Anous stolidus</i>	Brown Noddy	LC	20,000
Laridae	<i>Rhyncops albigollis</i>	Indian Skimmer	VU	40
Laridae	<i>Larus brunnicephalus</i>	Brown-headed Gull	LC	20,000
Laridae	<i>Larus ridibundus</i>	Black-headed Gull	LC	20,000
Laridae	<i>Larus ichthyaetus</i>	Great Black-headed Gull	LC	1000
Laridae	<i>Larus smithsonianus</i>	Arctic Herring Gull	LC	610
Laridae	<i>Onychoprion fuscatus</i>	Sooty Tern	LC	20,000
Laridae	<i>Onychoprion anaethetus</i>	Bridled Tern	LC	10,000
Laridae	<i>Sternula albifrons</i>	Little Tern	LC	1000
Laridae	<i>Gelochelidon nilotica</i>	Common Gull-billed Tern	LC	1000
Laridae	<i>Hydroprogne caspia</i>	Caspian Tern	LC	250
Laridae	<i>Chlidonias hybrida</i>	Whiskered Tern White-	LC	10,000
Laridae	<i>Chlidonias leucopterus</i>	winged Tern	LC	10,000
Laridae	<i>Sterna aurantia</i>	River Tern	NT	550
Laridae	<i>Sterna dougallii</i>	Roseate Tern	LC	440
Laridae	<i>Sterna sumatrana</i>	Black-naped Tern Common	LC	-
Laridae	<i>Sterna hirundo</i>	Tern	LC	460
Laridae	<i>Sterna acuticauda</i>	Black-bellied Tern	EN	250
Laridae	<i>Thalasseus bengalensis</i>	Lesser Crested Tern	LC	1000
Laridae	<i>Thalasseus bergii</i>	Greater Crested Tern	LC	10,000
Pelecanidae	<i>Pelecanus philippensis</i>	Spot-billed Pelican	NT	45
Pelecanidae	<i>Pelecanus onocrotalus</i>	Great White Pelican	LC	210
Phalacrocoracidae	<i>Microcarbo niger</i>	Little Cormorant	LC	1000
Phalacrocoracidae	<i>Phalacrocorax carbo</i>	Great Cormorant	LC	1000
Phalacrocoracidae	<i>Phalacrocorax fuscicollis</i>	Indian Cormorant	LC	300
Podicipedidae	<i>Tachybaptus ruficollis</i>	Little Grebe	LC	10,000
Podicipedidae	<i>Podiceps cristatus</i>	Great Crested Grebe	LC	350
Podicipedidae	<i>Podiceps nigricollis</i>	Black-necked Grebe	LC	1000
Rallidae	<i>Rallina fasciata</i>	Red-legged Crake Slaty-	LC	-
Rallidae	<i>Rallina eurizonoides</i>	legged Crake Eastern	LC	-
Rallidae	<i>Rallus indicus</i>	Water Rail Slaty-breasted	LC	-
Rallidae	<i>Lewinia striata</i>	Rail	LC	-
Rallidae	<i>Porzana porzana</i>	Spotted Crake	LC	-
Rallidae	<i>Zapornia fusca</i>	Ruddy-breasted Crake	LC	-
Rallidae	<i>Zapornia akool</i>	Brown Crake	LC	-
Rallidae	<i>Zapornia pusilla</i>	Baillon's Crake	LC	-

Rallidae	<i>Zapornia bicolor</i>	Black-tailed Crake White-	LC	-
Rallidae	<i>Amaurornis phoenicurus</i>	breasted Waterhen White-	LC	-
Rallidae	<i>Amaurornis cinerea</i>	browed Crake	LC	-
Rallidae	<i>Gallixrex cinerea</i>	Watercock	LC	-
Rallidae	<i>Porphyrio porphyrio</i>	Purple Swamphen Common	LC	20,000
Rallidae	<i>Gallinula chloropus</i>	Moorhen Common Coot	LC	-
Rallidae	<i>Fulica atra</i>	Pied Avocet	LC	20,000
Recurvirostridae	<i>Recurvirostra avosetta</i>	Black-winged Stilt	LC	1000
Recurvirostridae	<i>Himantopus himantopus</i>	Greater Painted-snipe	LC	1000
Rostratulidae	<i>Rostratula benghalensis</i>	Whimbrel	LC	1000
Scolopacidae	<i>Numenius phaeopus</i>	Eurasian Curlew	LC	650
Scolopacidae	<i>Numenius arquata</i>	Bar-tailed Godwit Black-	NT	1000
Scolopacidae	<i>Limosa lapponica</i>	tailed Godwit	NT	1300
Scolopacidae	<i>Limosa limosa</i>	Ruddy Turnstone	NT	1600
Scolopacidae	<i>Arenaria interpres</i>	Great Knot	LC	300
Scolopacidae	<i>Calidris tenuirostris</i>	Red Knot	EN	4300
Scolopacidae	<i>Calidris canutus</i>	Ruff	NT	540
Scolopacidae	<i>Calidris pugnax</i>	Broad-billed Sandpiper	LC	-
Scolopacidae	<i>Calidris falcinellus</i>	Sharp-tailed Sandpiper	LC	300
Scolopacidae	<i>Calidris acuminata</i>	Curlew Sandpiper	LC	850
Scolopacidae	<i>Calidris ferruginea</i>	Temminck's Stint	NT	900
Scolopacidae	<i>Calidris temminckii</i>	Long-toed Stint	LC	1000
Scolopacidae	<i>Calidris subminuta</i>	Red-necked Stint	LC	250
Scolopacidae	<i>Calidris ruficollis</i>	Sanderling	NT	4800
Scolopacidae	<i>Calidris alba</i>	Dunlin	LC	300
Scolopacidae	<i>Calidris alpina</i>	Little Stint	LC	10,000
Scolopacidae	<i>Calidris minuta</i>	Spoon-billed Sandpiper	LC	2400
Scolopacidae	<i>Calidris pygmaea</i>	Long-billed Dowitcher	CR	8
Scolopacidae	<i>Limnodromus scolopaceus</i>	Asian Dowitcher	LC	5000
Scolopacidae	<i>Limnodromus semipalmatus</i>	Eurasian Woodcock	NT	280
Scolopacidae	<i>Scolopax rusticola</i>	Solitary Snipe	LC	10,000
Scolopacidae	<i>Gallinago solitaria</i>	Wood Snipe	LC	100
Scolopacidae	<i>Gallinago nemoricola</i>	Swinhoe's Snipe	VU	70
Scolopacidae	<i>Gallinago megala</i>	Great Snipe	LC	400
Scolopacidae	<i>Gallinago media</i>	Pintail Snipe	NT	10,000
Scolopacidae	<i>Gallinago stenura</i>	Common Snipe	LC	10,000
Scolopacidae	<i>Gallinago gallinago</i>	Jack Snipe	LC	10,000
Scolopacidae	<i>Lymnocyptes minimus</i>	Terek Sandpiper	LC	100
Scolopacidae	<i>Xenus cinereus</i>	Common Sandpiper	LC	500
Scolopacidae	<i>Actitis hypoleucos</i>	Green Sandpiper	LC	1900
Scolopacidae	<i>Tringa ochropus</i>	Grey-tailed Tattler	LC	1000
Scolopacidae	<i>Tringa brevipes</i>	Spotted Redshank	NT	700
Scolopacidae	<i>Tringa erythropus</i>		LC	250

Scolopacidae	<i>Tringa nebularia</i>	Common Greenshank	LC	1100
Scolopacidae	<i>Tringa totanus</i>	Common Redshank	LC	1000
Scolopacidae	<i>Tringa glareola</i>	Wood Sandpiper	LC	1300
Scolopacidae	<i>Tringa stagnatilis</i>	Marsh Sandpiper	LC	1300
Scolopacidae	<i>Tringa guttifer Phalaropus</i>	Spotted Greenshank	EN	10
Scolopacidae	<i>lobatus Stercorarius</i>	Red-necked Phalarope	LC	10,000
Stercorariidae	<i>parasiticus Stercorarius</i>	Arctic Skua	LC	-
Stercorariidae	<i>pomarinus</i>	Pomarine Skua	LC	-
Threskiornithidae	<i>Threskiornis melanocephalus</i>	Black-headed Ibis	NT	100
Threskiornithidae	<i>Platalea leucorodia</i>	Eurasian Spoonbill	LC	200
Threskiornithidae	<i>Pseudibis papillosa</i>	Indian Black Ibis	LC	100
Threskiornithidae	<i>Pseudibis davisoni</i>	White-shouldered Ibis	CR	4
Threskiornithidae	<i>Plegadis falcinellus</i>	Glossy Ibis	LC	-



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