

Key Biodiversity Areas Proposal Process

Guidance on *Proposing, Reviewing, Nominating* and *Confirming* sites.

Version 1.3 September 2026



Key Biodiversity Areas Proposal Process

Guidance on *Proposing, Reviewing, Nominating* and *Confirming* sites.

Version 1.3 September 2026

Citation: KBA Secretariat (2026). Key Biodiversity Areas Proposal Process: Guidance on Proposing, Reviewing, Nominating and Confirming sites. Version 1.3. Prepared by the KBA Secretariat and KBA Committee of the KBA Partnership. Cambridge, UK.

DOI: <https://www.keybiodiversityareas.org/working-with-kbas/proposing-updating/proposal-process>

Cover photo: © Bradley Dunn/Unsplash

Prepared by the KBA Secretariat for the KBA Committee.

Contents

Contents.....	3
1. The KBA Programme	6
2. The Global Standard, KBA Guidelines and KBA Proposal Process	6
2.1 The Global Standard for the Identification of KBAs	6
2.2 The Guidelines for using A <i>Global</i> Standard for the Identification of KBAs	7
2.3 Purpose of the current document: Key Biodiversity Areas Proposal Process: Guidance on Proposing, Reviewing, Nominating and Confirming sites.....	7
2.4 Proposal process.....	8
3. Roles of different actors in the process of Proposing, Reviewing, Nominating and Confirming Key Biodiversity Areas	9
3.1 Role of KBA National Coordination Group (KBA NCG).....	9
3.2 Role of KBA Proposers	10
3.3 Role of the KBA Regional Focal Point.....	10
3.4 Role of Independent Reviewers	11
3.4.1 Targeted independent reviews	11
3.4.2 Online review	12
3.5 Role of KBA Secretariat in Confirming Sites	12
4. Proposing a site as a KBA	13
4.1 Scoping likely species that might trigger KBA status	13
4.2 Where to find data on the assessment parameters	13
4.2.1 Mature individuals	14
4.2.2 Area-based parameters	14
4.2.3 Localities.....	15
4.2.4 Distinct Genetic diversity.....	15
4.2.5 Density or relative abundance of mature individuals	15
4.3 Spatial data.....	15
4.3.1 Submission of KBA boundary shapefiles	15
4.3.2. Submission of KBA element shapefiles.....	16
4.3.3 Submission of global distribution shapefiles	16
4.4 Adding KBA elements to an existing KBA.....	17
4.5 Documentation requirements.....	17

4.6 The World Database of KBAs and KBA Proposal Portal	17
4.7 Submission of a KBA Proposal.....	18
5. Review of proposed KBAs.....	18
5.1 Organisation of the Review	18
5.2 Who reviews what at each stage?	18
5.2.1 Regional Focal Point	18
5.2.2 Independent review.....	19
6. Nomination of site as a KBA	20
6.1 Responding to feedback from Reviews	20
6.1.1 Contention over the values of the assessment parameters for a biodiversity element at global or site level	21
6.1.2 Contention over the presence of a species at a site	21
6.1.3 Contention over the boundary delineation of the KBA.....	21
6.1.4 Contention over taxonomy or Red List category of the species	22
6.2 Further Review	22
6.3 Nomination of KBA	22
7. Confirmation of site as KBA.....	22
7.1 Checking by KBA Secretariat	22
7.2 Publication on KBA Website and IBAT	23
References	24
Annex A: National KBA Coordination Groups: guidance on the process of establishment and main roles.....	25
A.1 Roles of the KBA NCG	27
A.2 Key tasks of the KBA NCG required for KBA identification and proposal	28
A3. Role of KBA NCG in conserving KBAs	29
Annex B. Documentation and Mapping Standards for Key Biodiversity Area Assessments.	30
B.1 Data Documentation Standards	30
B.1.1 Required Supporting Information.....	31
B.1.2 Recommended Supporting Information	31
B.1.3 Discretionary (Optional) Supporting Information.....	31
B.1.4 Guidance notes on some required and recommended fields.....	31
B.2 Mapping Standards.....	41

B.2.1 Why spatial data are required	41
B.2.2 KBA boundaries.....	42
B.2.3 Site polygon maps	42
B.2.4 File format.....	43
B.2.5 Drawing a KBA polygon	44

1. The KBA Programme

The vision of the KBA Programme is *a comprehensive network of sites that contribute significantly to the global persistence of biodiversity, which is appropriately identified, correctly documented, effectively managed, sufficiently resourced and adequately safeguarded*. The Key Biodiversity Area (KBA) Partnership of 13 international conservation organizations¹ was launched in September 2016. The KBA Partnership supports the development and implementation of the KBA Programme, which consists of the current and future efforts to develop and maintain an up-to-date, fully documented list of sites identified against the KBA Standard, and to communicate, promote and position this information to enable achievement of the KBA vision. At the core of the KBA Programme is the KBA identification process, comprising the steps of Proposal, Review, Nomination, and Confirmation. Various actors are involved throughout the process: KBA National Coordination Groups, KBA proposers, KBA Regional Focal Points, KBA Validation expert, the KBA Secretariat, international expert groups, etc.² and the process is underpinned throughout by the World Database of Key Biodiversity Areas™ (hereafter referred to as the WDKBA). Anyone with relevant information on biodiversity elements that could potentially qualify a site as a KBA can propose a KBA.

2. The Global Standard, KBA Guidelines and KBA Proposal Process

2.1 The Global Standard for the Identification of KBAs

This *KBA Proposal Process* guidance aims to help individual experts or organizations who want to propose new KBAs, or update/re-assess existing KBAs applying the [Global Standard for the Identification of Key Biodiversity Areas](#) (IUCN, 2016 – henceforth *KBA Standard*). This document provides a step-by-step guide to the process of identifying or updating KBAs and where proposers can reach out for help in doing this. The steps outlined below assume that KBA identification is carried out at the national level using information for several taxonomic groups or elements of biodiversity in a coordinated fashion (ideally through a KBA National Coordination Group). Many of the steps, however, will also be applicable when the goal is to identify a single KBA or several KBAs based on a single taxonomic group or specific biodiversity elements (e.g. for threatened ecosystems).

¹ American Bird Conservancy, Amphibian Survival Alliance, BirdLife International, Conservation International, Critical Ecosystems Partnership Fund, Global Environment Facility, IUCN, NatureServe, Rainforest Trust, Re:wild, Royal Society for the Protection of Birds, World Wildlife Fund and Wildlife Conservation Society

² More information on these actors can be found at the KBA Website: <https://www.keybiodiversityareas.org/about-kbas/kba-programme>

The *KBA Standard* (IUCN, 2016) was prepared by the IUCN Species Survival Commission and World Commission on Protected Areas, in collaboration with the IUCN Global Species Programme. It describes 11 criteria, with an additional 12 sub-criteria, that can be applied to determine whether a site is a KBA. The *KBA Standard* defines the main terms required to apply the criteria, the thresholds that need to be met for each of the criteria and summarises the delineation procedures that should be applied to determine the boundaries of KBAs. This document is the authoritative account of what types of sites qualify as KBAs, and how they should be delimited.

2.2 The Guidelines for using A *Global* Standard for the Identification of KBAs

The *KBA Standard* is necessarily a short document. The [Guidelines for using a Global Standard for the Identification of KBAs](#) (KBA Standards and Appeals Committee, 2022 – henceforth *KBA Guidelines*) describe how to interpret and apply the KBA criteria and thresholds, providing the detail needed to better understand the criteria. The *KBA Guidelines* detail the approach for identifying a KBA, describe the criteria in detail with examples of different situations that may arise, detail how to delineate KBAs, document the distribution of KBA elements within KBAs, describe stakeholder consultation and advise on how to deal with uncertainty and re-assessments of sites. The purpose of the *KBA Guidelines* is to ensure that KBA identification is based on consistent, scientifically rigorous yet practical methods. The primary audience for the *KBA Guidelines* includes individuals or organisations interested in Proposing or Reviewing KBAs, [KBA National Coordination Groups](#) (KBA NCGs) and [KBA Regional Focal Points](#) (RFPs). The *KBA Guidelines* therefore provide guidance on how to apply the *KBA Standard*. They do not, however, provide guidance on the various steps that KBA proposers need to take, nor do they list the required and recommended data fields involved in preparing KBA proposals.

2.3 Purpose of the current document: Key Biodiversity Areas Proposal Process: Guidance on Proposing, Reviewing, Nominating and Confirming sites.

This document, the *Key Biodiversity Areas Proposal Process: Guidance on Proposing, Reviewing, Nominating and Confirming sites* (*KBA Proposal Process*), describes the process that should be followed to propose a site as a KBA to the KBA Secretariat for publication in the World Database of Key Biodiversity Areas™ (WDKBA), or to update the assessment of a KBA (for example by adding new “trigger” elements, changing the boundary of a site, or re-assessing a site after 8-12 years). It assumes that one or more sites have been assessed and are believed to meet the KBA criteria and thresholds (as described in the *KBA Standard* and the *KBA Guidelines*). The document describes how an individual or a KBA NCG can then formally propose the site to ensure it is recognised globally as a KBA.

2.4 Proposal process

For a site to become a global KBA it must meet at least one of the KBA criteria and thresholds in the *KBA Standard*. For those criteria based on individual species or groups of species, this includes confirmation that the species is present at a site with a threshold number of mature individuals (this is specified for most criteria but also recommended for the criteria where it is not specified – see the *KBA Guidelines*). For those criteria based on ecosystems or sites of ecological integrity there is also a requirement that the ecosystem is confirmed to be present at a site or that the site has data that demonstrates its ecological integrity. KBA assessments cannot be carried out remotely simply using global datasets without ‘on-the-ground’ confirmation of presence and threshold numbers. It is therefore recommended that countries establish a KBA NCG as a mechanism for ensuring coordination and collaboration of national experts working towards the development of a single, coherent list of KBAs in each country. The group can also manage KBA information at a national level, encourage monitoring and conservation of sites, and encourage the incorporation of KBAs in national legislation. It is expected that proposals for new or updated KBAs will largely originate from within the countries through the KBA NCGs or, where these aren’t yet established, through national experts.

A Key Biodiversity Area (KBA) can be proposed by a KBA NCG or a KBA proposer (for example a taxonomic expert or conservation scientist not involved with the National Coordination Group). When developing a proposal for a site there is a need to undertake a scoping of the species and ecosystems that might trigger KBA status and then compile relevant data on these KBA elements to make the assessment. The proposal is developed by assessing the data against the KBA criteria and at the same time making a delineation of the proposed site if proposing a new KBA. Proposers are encouraged to engage with the relevant [KBA Regional Focal Point](#) (KBA RFP) for their region who can help guide them through the process. When a proposer is happy with their proposal, they submit it to the same Regional Focal Point for review. If a KBA NCG exists in a country, then the KBA Proposer should share the proposal with the chair of that group and work with them to make the proposal. If there is no response within two months, then the KBA Proposer may make the proposal directly to the KBA Regional Focal Point. If a KBA NCG does not exist, then the KBA Proposer should make the proposal directly to the KBA Regional Focal Point. If a KBA Regional Focal Point does not yet exist for a region, then a proposer should contact the KBA Secretariat about who to contact.

Once the proposal has reached the KBA RFP s/he will organize a review process which may involve external experts, including those with expertise on the qualifying biodiversity elements. The proposer may need to respond to comments from the independent reviewers and/or KBA RFP before the proposal can be *Nominated* to the KBA Secretariat. When the site is nominated, the KBA Secretariat will check that the KBA criteria have been applied correctly, the proposal is sufficiently documented, and the delineation meets the *KBA Guidelines* and

KBA Standard. If there are any queries the KBA Secretariat may come back to the KBA RFP or proposer for clarification. Once the nomination has been approved the site is *Confirmed* for publication in the World Database of KBAs.

A schematic diagram of the process is provided in Figure 2.4.1.

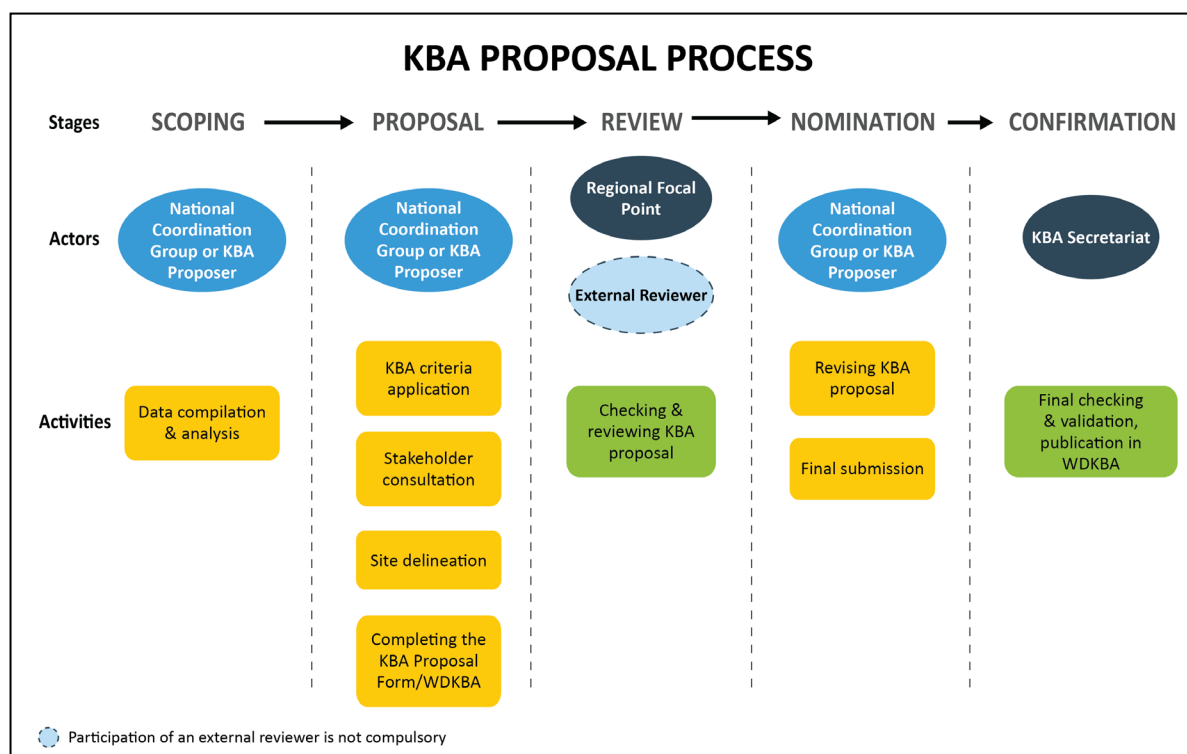


Figure 2.4.1. Schematic diagram of KBA Proposal process.

3. Roles of different actors in the process of Proposing, Reviewing, Nominating and Confirming Key Biodiversity Areas

3.1 Role of KBA National Coordination Group (KBA NCG)

The *KBA Standard* envisages that the KBA identification process will largely be driven by in-country organisations and experts to secure national support for the sites, which is essential for the future safeguard and conservation of these sites. KBA NCGs are envisaged as key structures to fulfil the role of coordinating the KBA identification process at the national level to bring together relevant stakeholders and data in a participatory and efficient way. A KBA NCG will ideally be established in each country of the world and provide the central coordination for the identification, mapping and monitoring of KBAs as well as management

of KBA data for that nation. KBA NCGs may in some countries build on or evolve from equivalent structures established previously to coordinate the identification of Important Bird and Biodiversity Areas, or AZE sites, as such groups typically involve many of the stakeholders expected to engage in KBA NCGs.

The main roles of the KBA NCG are summarised in Annex A (Recommended process of establishment and main tasks) together with the *Recommended Terms of Reference (TOR) for KBA NCGs* and *Guidance about forming KBA NCGs* available on the [KBA web site](#). The TOR document is provided as a guide for KBA NCGs but can be tailored for the local situation in each country.

3.2 Role of KBA Proposers

KBA proposers, who are not part of the relevant KBA NCG, or work in countries in which there is no KBA NCG, may include taxonomic experts, site managers, conservation scientists, museum employees, university lecturers, employees of national or international NGOs or people in similar roles who have sufficient data on species or ecosystems at a site and want to propose it as a KBA. They can be a national of the country in which the site occurs, or a non-national expert who has been working in the country.

In some instances, suites of KBAs may be assessed by teams of experts (for example a meeting of herpetologists might assess KBAs for all amphibians within a country). These assessments should develop individual proposals for each site using the process described in section 4. This is necessary in order to properly document the sites.

3.3 Role of the KBA Regional Focal Point

The [KBA Regional Focal Point](#) is appointed by the KBA Secretariat. Their main role consists of providing technical support to the proposer (KBA proposer or KBA NCG) throughout the KBA identification process. Proposers are therefore encouraged to engage with their KBA Regional Focal Point early in the process, possibly involve them in helping train members of the KBA NCG, and seek advice on application of the KBA criteria. Once the proposer has completed the first stage of the proposal process (assessing the site against the relevant KBA criteria on the basis of the latest data, compiling basic documentation, carrying out the first consultations with relevant stakeholders and delineating the site), the KBA Regional Focal Point will make the first review of the KBA proposals. Prior to engaging independent reviewers, the KBA Regional Focal Point will check that the data provided for the assessment in the proposal are reasonable, that the KBA criteria and delineation guidelines have been interpreted and applied correctly as described in the *KBA Guidelines*, and that the site boundary does not overlap existing KBAs. If the proposed or revised boundary does overlap that or another KBA (or other KBAs), then the Proposer will be asked to modify their newly proposed boundary to avoid overlap, or to consult the original proposer(s) of the overlapping KBAs to agree a common boundary (See KBA Guidelines section 7 and 8.2).

Once satisfied that these basic requirements are met, the KBA Regional Focal Point will make the proposal available for independent review. This may comprise both an open call for inputs that is advertised widely and targeted requests to specific experts who were not involved in the KBA Proposal process and who are knowledgeable about the species, ecosystem and/or location.

Once reviews are received, the KBA Regional Focal Point will assess the reviews and where necessary return the proposal to the KBA NCG or KBA proposer and work with them to address comments that have been made by the reviewers. It may be necessary to re-send the proposal to the reviewers again once comments have been addressed, particularly where the reviews have disagreed with the global or site-level estimates of the population of the KBA trigger species.

Proposers should note that this process may be repeated if comments are not addressed sufficiently which can slow down the process of confirming sites. So, every effort should be made to comprehensively address all comments made by the KBA RFP. The review process in general can take from 1 week to 2 months depending on the quality of the initial submission. Here again, proposers will find that working with their KBA RFP in advance will greatly speed up the KBA proposal process.

Once the reviewers' comments are addressed and the required documentation and consultation completed, the proposer will then *Nominate* the site to the KBA Secretariat.

3.4 Role of Independent Reviewers

3.4.1 Targeted independent reviews

Independent Reviewers (independent to the proposers and KBA Secretariat), who can comment on the biodiversity elements (species or ecosystems) that have been proposed as potential triggers of KBA status at a site, will be identified when required and invited to comment on the proposal. The proposer should aim to provide the names, affiliations and contact details of independent experts qualified to review the proposal, where known. The KBA Regional Focal Point has the discretion whether or not to solicit Reviews from these experts, as well as additional people.

Reviewers can come from a number of sources including:

1. National experts from museums, universities, herbaria, NGOs, governments and other institutions with relevant expertise who have not been involved in proposing a site. The inclusion of national experts will be very important as they will likely know the most recent situation at the site and the occurrence and status of triggering elements.
2. Species Survival Commission Specialist Groups that cover the relevant species triggering a proposed KBA, for A1, B1-3, D, and E. [The KBA Regional Focal Point should send the review request to the chairs/co-chairs, for them to send it in turn to relevant experts within their Specialist Group. With time the Specialist Group could develop a core set of KBA reviewers that the KBA Regional Focal Points could contact.

(<https://www.iucn.org/commissions/ssc-groups>)]. Where a species is not assessed on the [IUCN Red List of Threatened Species](#), the SSC group for that taxon will be consulted to check that it is a recognised species.

3. The Red List Authority responsible for the relevant species triggering a proposed KBA, for A1, B1-3, D, and E.
4. The Commission on Ecosystem Management Specialist Group that is mapping ecosystems globally and generating the information that will support a given ecosystem triggering a proposed KBA, for criteria A2, B4, and C.
(<https://www.iucn.org/commissions/commission-ecosystem-management/our-work/cems-specialist-groups>)
5. The World Commission on Protected Areas regional contacts for KBA proposals that overlap protected areas within the region in question.
(<https://www.iucn.org/theme/protected-areas/contact/protected-area-contacts-regions>)
6. Partners in the KBA Partnership with offices in the region or known relevant taxonomic expertise.

3.4.2 Online review

In addition to soliciting reviews from targeted individuals, KBA proposals may in time be made available for public review for a one-month period through the WDKBA or KBA website, with users able to post the reviews directly to the database. At present sites can be reviewed in the WDKBA by the RFP and invited reviewers only.

3.5 Role of KBA Secretariat in Confirming Sites

Once a KBA has been *Nominated* by the Proposer, following review by the KBA Regional Focal Point and independent reviewers, the KBA Secretariat will then carry out final checks before *Confirming* the site as a KBA and *Publishing* it on the WDKBA. This step is primarily to confirm that the criteria and delineation guidelines within the KBA Standard have been applied correctly, the documentation is adequate, and the consultation and Review processes have been sufficient. It will therefore primarily focus on:

1. Checking that the Proposal is interpreting the terms used in the *KBA Standard* correctly
2. Checking the criteria and thresholds have been applied correctly
3. Checking that the available data and information have been interpreted appropriately and consistently
4. Checking that the delineation of the KBA is appropriate and adheres to the *KBA Guidelines*
5. Checking that the documentation is sufficient
6. Checking that consultation and review have been adequate

If The KBA Secretariat Validation expert has queries about the proposal, they will return it to the proposer with comments to address similar to the process used by the KBA RFP.

4. Proposing a site as a KBA

The KBA Guidelines explain how the criteria should be applied to identify KBAs. This section describes some of the basic data that a proposer is likely to need, how to obtain the data and how to go about identifying a KBA.

4.1 Scoping likely species that might trigger KBA status

In many cases a KBA will be identified because someone working at a site knows that a species or ecosystem that is threatened (Criteria A) or geographically restricted (Criteria B) is present, or that the site is important for aggregations, refugia or recruitment (Criteria D). They may have made an assessment of whether the site is ecologically intact (Criteria C) or made a conservation planning assessment that quantitatively identified sites of high irreplaceability (Criteria E). Where a KBA NCG or a taxon-focused group (e.g. herpetologists) want to assess a much larger group of species, it is useful to make a preliminary scoping assessment to identify biodiversity elements likely to trigger the criteria, before attempting to apply the criteria to all species in a taxon that might occur within the country. Detailed guidance on scoping is given in the KBA Guidelines (sections 2.1, 4.1 and 5.2) for criteria A1-2, B1-4, C and D1-3.

Some KBA proposers may wish to focus on identifying KBAs for a particular species or taxonomic group; whereas others may be primarily interested in a particular site and prefer to start by conducting an inventory of biodiversity elements that may meet KBA criteria and thresholds at the site. Proposers might start by assessing whether existing sites in the country, such as protected areas, might qualify as KBAs.

A scoping tool that uses range area and modelled 'area of habitat' (AoH) has been developed by the KBA Secretariat to generate shortlists of species that may trigger KBA status within a country and identify where they may trigger KBA status. This tool contains all species assessed on the IUCN Red List of Threatened Species that have polygon range data. Contact the KBA Secretariat (DBaisero@keybiodiversityareas.org) if you would like a scoping made of a particular area in your country (you will need to provide ESRI shapefiles of the area). Note: you will also need to get expert validation on the maps generated via the scoping tool before you can use it (Extent of Suitable Habitat—ESH) as an assessment parameter.

4.2 Where to find data on the assessment parameters

The *KBA Standard* is designed to enable assessments of species for which there is limited information on population sizes, and there is a range of assessment parameters that can be used to infer whether population size thresholds are met for some of the species-based criteria.

Details about which assessment parameters can be used in applying the KBA criteria and thresholds, and how to resolve differences in the results found by applying different parameters are given in Section 3 of the *KBA Guidelines*.

4.2.1 Mature individuals

The IUCN Red List provides data on global population estimates for many species, often with a minimum and maximum value because of uncertainty. Site estimates of numbers of mature individuals can be compared with these estimates.

Where a species has not been assessed on the IUCN Red List, or if the species account on the IUCN Red List is old and needs to be updated, then the KBA proposer can reference a recent publication that gives an estimate of the global population/number of mature individuals to justify the use of a different or new population estimate (*KBA Guidelines* section 3.2).

4.2.2 Area-based parameters

Area of occupancy (AOO), *extent of suitable habitat* (ESH) and *range* are all area-based assessment parameters that can be used for some of the species-based criteria when there are not good estimates of the global or site numbers of mature individuals. Range and for some species AOO are given on the IUCN Red List web site.

Ranges of species can be downloaded from the IUCN Red List upon request (<https://www.iucnredlist.org/resources/spatial-data-download>). These ranges are provided in a projection of decimal degrees (Latitude, Longitude) and with the Datum WGS84. If area of these ranges is calculated in a standard GIS package they will be given in a measure of 'square degrees' which is meaningless. In order to calculate area accurately the ranges need to be projected into a metric projection. The IUCN Red List proposes using the *Equal Cylindrical Area Projection with Datum WGS84*. We have compared the results of area calculations from this projection with three other global metric projections and have concluded that KBA assessments should use this projection also when calculating the area of a range or ESH. Ranges also need to be processed following the KBA guidelines, applying the relevant fields for Presence, Origin and Seasonality (pages 204-205 in version 1.2).

Area of Habitat (AoH) maps (Brooks et al. 2019), that have been validated with point data will be made available on the IUCN Red List web site in the future. These are equivalent to ESH where there are no better maps. The KBA Secretariat will maintain global ESH maps that have been used in KBA assessments for species. If you plan to use the ESH parameter for a species assessment, please check with the KBA Secretariat Data Scientist (DBaisero@keybiodiversityareas.org) before developing your own map to check if one already exists.

AOO has a specific method described in the *KBA Guidelines* (section 3.7) based upon a grid of 2 x 2 km for species or 10x10km for ecosystems. AOO maps, where species have been assessed using this method, are sometimes available on the IUCN Red List. Standard grids can be accessed [here](#). If you plan to use AOO maps for a species, please check with the KBA Secretariat as for ESH maps above. Where global maps of AOO are proposed and accepted these will be filed and can be made available to other KBA proposers.

4.2.3 Localities

Sources of locality data include national herbaria or national biodiversity databases, the Global Biodiversity Information Facility, Global Seabird Tracking Database, Ocean Biogeographic Information System, and national databases such as NatureServe's National Species Dataset (for the US and Canada), and 'Inventaire National du Patrimoine Naturel' for France. Locality data should be checked by an appropriate species expert to ensure that the taxonomy is up-to-date and erroneous records are removed before applying the data in a KBA assessment. If you plan to use locality data for a species, please check with the KBA Secretariat as for ESH and AOO maps. Where global maps of localities are proposed and accepted these will be filed and can be made available to other KBA proposers.

4.2.4 Distinct Genetic diversity

In some instances, the data required for analysing distinct genetic diversity will exist in the literature. This is most likely for species of conservation concern with restricted distribution, species with restricted genetic diversity, and species that are related to high value domesticated species (e.g., crop wild relatives). However, in most cases, new data will need to be collected and compiled across a species range to allow comparisons of genetic distinctiveness.

4.2.5 Density or relative abundance of mature individuals

Density or relative abundance data, often from signs, can be found in the literature (for example dung counts of elephants or nest counts of apes) where surveys have been published. Often such survey data are in the grey literature (unpublished reports) and may take some effort to find. The same method needs to have been applied across the species range to identify the most important 5% of occupied habitat for a species (see section 2.7 of the KBA Guidelines).

4.3 Spatial data

Spatial data are used to calculate area-based measurements (range area, ESH area, AOO area). In addition, one or more shapefiles need to be submitted with any KBA proposal. This section summarises where spatial data can be obtained and summarises what is required. Detailed information on shapefiles is provided in Annex B: *Documentation and Mapping Standards*.

4.3.1 Submission of KBA boundary shapefiles

One or more shapefiles of the proposed KBA boundary must be submitted with every KBA Proposal and Nomination Form. A proposal will be returned if there is not an associated shapefile, unless the proposal is adding KBA elements to an existing KBA which already has a shapefile. The production of the KBA shapefile must take place as part of the delineation process which is described in detail in section 7 in the *KBA Guidelines*. This document does not repeat what is stated there and the proposer is encouraged to review that text before developing the shapefile. Details on shapefile submission requirements are also provided in *KBA Documentation and Mapping Standards*.

4.3.2. Submission of KBA element shapefiles

A KBA can be designated for one or more KBA elements (figure 4.3.1). If individual KBA elements are not distributed throughout the KBA, spatial data on their distribution within the KBA can be submitted in addition to the KBA boundary shapefile. This will be useful for informing management actions, but also in the event that the status or distribution of other trigger elements changes in future and this necessitates changes to the boundary of the site. It may also be useful to be able to demonstrate the distribution of triggering elements for particular taxonomic groups or ecosystems, or for particular KBA criteria.

4.3.3 Submission of global distribution shapefiles

Where area-based or locality assessment parameters are used there needs to be an accepted map of the global distribution of a species. For range maps we will defer to the IUCN Red List of Threatened Species and only accept these maps. If you believe the map is incorrect on the Red List and you have a more accurate map, please liaise with the SSC group for that species and get agreement that the map on the Red List website will be updated before submitting your proposal. In future, some AoH/ESH maps and AOO maps for many species will become available on the Red List website. For now, and for any species where no such maps are available, we will require that you also submit a shapefile for global ESH, AOO or Locality data for your proposed trigger species so that these can be filed for others to use when making assessments for the same species elsewhere.

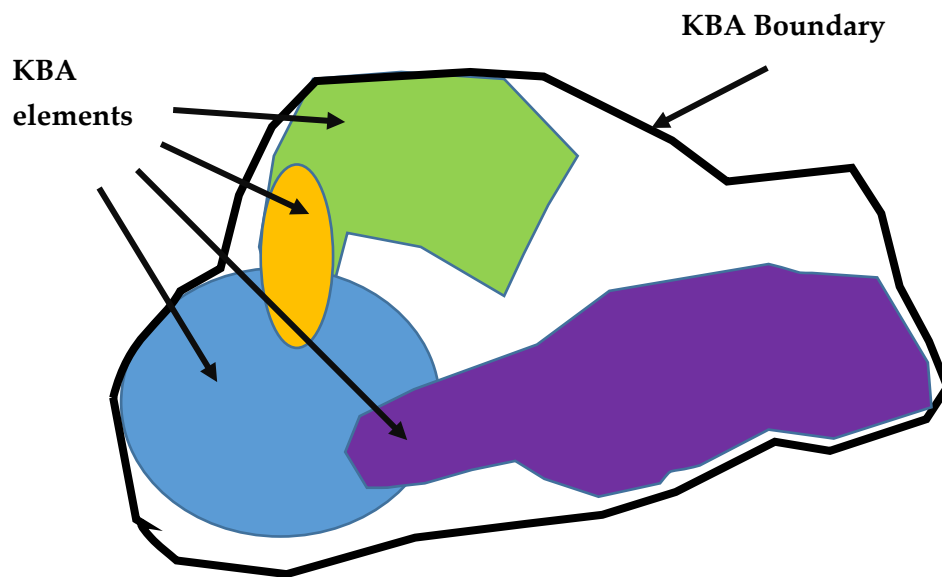


Figure 4.3.1. Relationship between KBA element distribution and the KBA Boundary. Where several KBA elements (species or ecosystem) occur within one KBA they may not all be distributed throughout the KBA. In such cases, the Proposer is encouraged to document where the species occurs within the KBA and to submit this as an additional shapefile. The boundary may also follow other jurisdictional boundaries and therefore be larger than just the location of the KBA elements.

4.4 Adding KBA elements to an existing KBA

There will be instances when a proposer wants to add additional KBA elements to an existing KBA. In this case, provided the boundary of the KBA has not changed, there is no need to submit a shapefile of the overall KBA together with the KBA Proposal and Nomination Form. However, it is valuable to review the existing KBA polygon to assess if it is accurate and precise (see Annex B. *Documentation and Mapping Standards*) and if it is modified to check the modification with the original proposer of the site. It is recommended that, if the KBA element is not distributed throughout the KBA, the distribution of the KBA element within the KBA should be submitted as a shapefile.

4.5 Documentation requirements

It is important to document the KBA proposal adequately to allow review and validation to be made in a timely manner. For each criterion being assessed, documentation requirements are detailed in *KBA Documentation and Mapping Standards*. It is important these standards are followed together with the *KBA Guidelines* as they will ensure all the requirements for proposing a site are met including the requirements for submission of shapefiles and site delineation. The functionality has been developed within the WDKBA to allow submission of KBA proposals to be made online through the KBA website and *Guidance on using the WDKBA* gives an overview of the [proposal platform in the WDKBA](#). The WDKBA also includes a mechanism for bulk uploading assessments relating to large numbers of sites. A KBA Bulk upload form is also being developed in .csv which can be used when you have many species or sites that you want to upload easily. To access the Bulk upload form, please contact Olivia Crowe (Olivia.crowe@birdlife.org).

4.6 The World Database of KBAs and KBA Proposal Portal

Applying the *KBA Standard* is complex, and the WDKBA has thus been designed in such a way that a KBA proposer or KBA NCG is guided through the provision of the required data and the KBA criteria calculations and assessments are automated based on the data provided. A Proposer needs to register online by accessing the [KBA website](#) and selecting the blue *Menu* button in the top right and clicking on the yellow *Log in to WDKBA* button. This opens a new page with the option to *Register* (blue button top right) if this is the first time to login, or otherwise login with existing credentials. Once logged in a user has access to view all sites in the World Database of KBAs (WDKBA) by selecting *Sites* on the menu on the left-hand side (globe icon); users can also select if they wish to re-assess an existing site (only do this if you have the permission to do so from the NCG for that country). A user can also propose a new site by selecting the blue *Propose new site* at the top of the home page or *Sites* page. Selecting either will open a series of windows that guide the user in what data are required. A description of the online proposal portal with screen shots of the various pages and guidance on how to complete it is given in the document *Guidance on using the WDKBA*.

4.7 Submission of a KBA Proposal

New proposals and re-assessments of existing sites should now be made through the WDKBA. Functionality to support the creation and/ or upload of KBAs boundaries to the WDKBA is now available and described in the *Guidance on using the WDKBA*. If triggering elements (species or ecosystems) do not occur throughout the proposed KBA, the proposer is also encouraged to submit a shapefile showing the distribution within the site of each element or group of elements (see section 4.5.3). Submissions should be made to the KBA Regional Focal Point for the [particular region](#).

5. Review of proposed KBAs

5.1 Organisation of the Review

When a KBA Regional Focal Point receives a proposal, they will first review it and check that it meets all the requirements (see below). They may solicit Reviews from targeted individuals as and when needed.

5.2 Who reviews what at each stage?

5.2.1 Regional Focal Point

The KBA Regional Focal Point is a resource person who is tasked with helping Proposers go through the proposal and review process and should be considered a resource to be drawn upon to help in developing a proposal. Once a Proposal has been made, the KBA Regional Focal Point makes the first review of a KBA proposal. Prior to engaging independent reviewers, the KBA Regional Focal Point will check that:

1. the data provided for the assessment parameters in the Proposal are reasonable,
2. the KBA criteria have been applied correctly as described in the *KBA Standard* and *KBA Guidelines*,
3. delineation of the site follows the *KBA Standard* and *KBA Guidelines*.
4. that species proposed are listed on the underlying taxonomic database of the IUCN Red List (SIS) – if they are not the RFP will work with the proposer to check the taxonomy with the SSC chair of the particular taxonomic group and if accepted add the species name to the list in SIS.
5. that the documentation in the proposal is sufficient to allow sites to be reviewed, defended if challenged and re-assessed in future.
6. that consultation is adequate and documentation is sufficient to review the proposal
7. check that comments made about the proposal by external reviewers or the KBA Regional Focal Point are addressed sufficiently.
8. Approve the proposal for nomination to the KBA Secretariat.

Where Criterion B2, B3a, or B3b is applied (*KBA Guidelines* section 2.5 and 2.6), the KBA Regional Focal Point needs to confirm that the species are on the standard lists of restricted-range/ecoregion/bioregion-restricted species ([provided on the KBA website](#)). If such a list does not exist for the taxonomic group in question, then the proposer needs to provide a list for the taxonomic group, which will be reviewed by the KBA Regional Focal Point and where necessary independent reviewer(s).

Once satisfied that these basic requirements are met, the KBA Regional Focal Point may make the proposal available for independent review online for a month (when the system is established) and if needed independent reviewers will be targeted with an invitation to review. In some instances, all the relevant experts may have been involved in compiling the Proposal and it is not possible to identify or obtain responses from other experts. In such cases, the Regional Focal Point should request Reviews from experts who know the species in general and can comment on the site being proposed.

A Proposed KBA may be triggered by species from multiple taxonomic groups. The Regional Focal Point should attempt to solicit reviews from experts on each of these different groups, ideally people who also know the country/region in which the Proposed KBA is located. A review period of one month will be given to all reviewers.

5.2.2 Independent review

Independent reviewers will be invited by the KBA Regional Focal Point. The Regional Focal Point may consult with the IUCN SSC groups for the relevant taxa if they do not know of a potential reviewer or if the KBA Proposer does not suggest anyone as a potential reviewer. Independent reviewers can comment on any aspect of the proposal but will be encouraged to focus on particular aspects that the KBA Regional Focal Point and KBA Secretariat cannot assess.

The proportion of the global population of a species that occurs at the site can be observed, estimated or inferred using various assessment parameters, as described in the *KBA Standard* and *KBA Guidelines*. Independent reviewers should assess whether the most appropriate assessment parameters have been selected for the triggering element and determine whether:

1. the global values for the assessment parameter (e.g., global number of mature individuals; global extent of suitable habitat etc.) are valid?
2. the estimates for each of the assessment parameter(s) at the site are reasonable?
3. it is reasonable to claim that the triggering element (e.g., species, ecosystem) is present at the site and that identifications have been made accurately?
4. the proposed KBA boundary is appropriate?
5. if provided, the mapped distributions of the biodiversity elements within the site are appropriate?
6. additionally, if the reviewers know the site, they should assess the site description.

For some KBA criteria there are no specific assessment parameters but the area of an ecosystem or description of the ecological integrity of a site will be provided. The numbers given for area or other measures describing ecological integrity should also be assessed by the reviewer.

The application of the KBA criteria will be reviewed by the KBA Regional Focal Point and subsequently by the KBA Secretariat so, this does not need to be the focus of review by the independent reviewers. It is the information about the species or ecosystem that should primarily be reviewed.

Where a reviewer disagrees with an aspect of a KBA Proposal they should provide accompanying documentation to justify why they disagree. For instance, if they disagree about the global numbers of a species, they should provide a publication or source of the information that provides a revised number. This justification must be provided so that the KBA Regional Focal Point and KBA Secretariat can make an informed decision about a proposal.

6. Nomination of site as a KBA

6.1 Responding to feedback from Reviews

When the KBA RFP receives responses from reviewers they will evaluate the reviewers' comments and assess whether there is a need to return the KBA Proposal to the original proposer (KBA proposer or KBA NCG) to address those comments. Independent review comments are likely to refer to:

1. Queries over the population estimates for a species at global or site level
2. Queries over the presence of a species at a site
3. Queries over the boundary delineation of the KBA and KBA elements
4. Queries over the taxonomy or Red List category of the species
5. Queries over an ecosystem extent or boundaries
6. Queries over the ecological integrity of a site

The KBA RFP may comment on the list above but will also comment on whether the documentation in the proposal is sufficient. The documentation of the rationale for a site's KBA status, the site description, documentation of its manageability and of its delineation are important parts of the proposal and may be important if a site is queried or challenged in future. The source of global and site estimates as well as presence of a species at a site and the numbers of reproductive units must also be well documented in case of challenges in future. *Documentation and Mapping Standards* gives the required documentation.

6.1.1 Contention over the values of the assessment parameters for a biodiversity element at global or site level

Where an independent review disagrees with the values of the assessment parameters for a biodiversity element at either the global or site level, the reviewer must provide documentation for their figures and also discuss why the documentation provided by the proposer is not considered the most reliable information. The KBA Regional Focal Point will return the review to the original proposer and work with them to address the comments. The proposer can disagree with the reviewer's comments, and they should then try to find a mutually agreeable solution to address the KBA Regional Focal Point's/Independent reviewer's original concerns. If a solution cannot be found, the KBA Regional Focal Point may also approach the KBA Secretariat and IUCN SSC Red List Authority for that taxon to discuss the data. The KBA Regional Focal Point and the KBA Secretariat will make a final assessment. The reviewer may also disagree with the best assessment parameter to use and similarly must document why they believe a different one should be applied.

6.1.2 Contention over the presence of a species at a site

For the species-based criteria, where an independent review disputes that a species is present at a site, the onus is on the proposer to properly document that the species does occur there and has sufficient reproductive units as specified in the *KBA Standard*. If the contention is that the species is being misidentified, the reviewer must provide documentation showing why the species is unlikely to occur at the site and the proposer must respond to this with some evidence (e.g. specimen or clear photographic image). The KBA Secretariat and KBA Regional Focal Point will only continue consideration of the KBA proposal in such an instance if there is credible evidence that the species is present.

6.1.3 Contention over the boundary delineation of the KBA

The boundary of a proposed KBA may be contended because:

- a. It is not ecologically appropriate for the biodiversity element (e.g. it omits much of the key habitat for a species triggering the criteria)
- b. It is not accurately delineated – the boundary does not follow the border features described in the delineation text (see Annex B)
- c. It is not well delineated as a manageable unit (see *KBA Guidelines* section 7)

The KBA Regional Focal Point will return comments on each of these to the proposer and will work with them to take them into account or explain why the proposer disagrees with them. The KBA Regional Focal Point may discuss the responses with the KBA Secretariat to reach a final decision on the boundary.

Revised shapefiles should be submitted if the boundary is altered based on the comments of the reviewer(s). If the revised boundaries affect the proportion of any trigger elements, those details will also need to be updated.

6.1.4 Contention over taxonomy or Red List category of the species

The KBA Review process will not aim to resolve taxonomic disagreements. The taxonomy used on the IUCN Red List (or an updated list recognised by the IUCN SSC Red List Authority for that taxon) will be the authority applied for species names. If a proposer disagrees with the existing taxonomy, they are encouraged to engage with the IUCN SSC Red List Authority for their taxon to update the taxonomy first before proposing a KBA for a species that is not recognised. If there is no IUCN SSC Red List Authority for a taxon, then the KBA Regional Focal Point and KBA Secretariat will work with the proposer to engage the IUCN SSC to decide on what taxonomy is most widely recognised for that taxon and, if accepted, to add the name to SIS (Red List database with underlying taxonomy).

Similarly, the KBA Secretariat will refer to the Red List status accepted by the IUCN Red List (or an updated list recognised by the IUCN SSC Red List Authority for that taxon) and will not review the Red List status of a species if it is not accepted on the IUCN Red List. Where proposers believe that the Red List status should be changed, they should work to update the Red List account with the relevant SSC group.

6.2 Further Review

If the comments made following the independent Review are fully accepted by the proposer and the proposal changed in the light of the comments, the KBA Regional Focal Point will check that the comments are satisfactorily addressed. If this is the case, the proposer is requested to Nominate the KBA and provide any required documentation that may have been missing before this stage.

If there is disagreement over aspects of the Review the KBA Regional Focal Point will make a decision over whether to send the proposal out for further review or not, based on the response of the proposer to the review. Rebuttals are more likely to be accepted if backed up by adequate documentation. If the KBA Regional Focal Point is not convinced by the rebuttal they may send the proposal out for further review by the original reviewer(s) and possibly other reviewers.

6.3 Nomination of KBA

Once comments received during the Review have been satisfactorily addressed by the proposer, the proposer Nominates the site with all the required information as well as shapefiles.

7. Confirmation of site as KBA

7.1 Checking by KBA Secretariat

Following the reviews by the KBA RFP and independent reviews, Nominated KBAs will be checked by the KBA Secretariat. This step is primarily to confirm that the criteria and

delineation guidelines within the KBA Standard have been applied correctly, the documentation is adequate, and the consultation and Review process has been sufficient. It will therefore primarily focus on:

1. Checking that the Proposal is interpreting the terms used in the KBA Standard correctly, particularly the assessment parameters and specific terms in the criteria (e.g. restricted-range; ecoregion/bioregion-restricted, aggregations, refugia, recruitment, etc.).
2. Checking the criteria and thresholds have been applied accurately
3. Checking that the available data and information have been interpreted appropriately and consistently
4. Checking that the delineation of the KBA is appropriate and adheres to the *KBA Guidelines*
5. Checking that consultation has been adequate (see section 8 of *KBA Guidelines*).

These checks are not as intensive as those made by the KBA Regional Focal Point but are made as a double-check to ensure nothing is missed in the first review.

Once validated, sites that meet KBA criteria for at least one element (species/ecosystems) and are documented sufficiently will be Confirmed and published.

7.2 Publication on KBA Website and IBAT

Confirmed KBAs will appear on the WDKBA as soon as they are confirmed. They will appear on the KBA website (WDKBA) and [website dashboard](#), and the [Integrated Biodiversity Assessment Tool](#) (IBAT) at the next scheduled update to these (which typically happen twice a year). IBAT not only provides the KBA data available on the WDKBA but also packages it in formats that are useful for commercial companies making Environmental Impact Assessments for a site, Strategic Environmental Impact Assessments for a larger project or scoping for Critical Habitat Analysis.

8. Appealing a KBA that is confirmed

A standard appeals process has been developed by the KBA Standards and Appeals Committee (KBA SAC) and adopted by the KBA Committee. This process should be engaged in when an individual or party disagrees over whether a site meets the KBA criteria described in the *KBA Standard* and *KBA Guidelines*.

The criteria, thresholds and delineation procedures themselves are not subject to appeal. Appeals may only concern the data that underpin the assessment or whether the criteria, thresholds, and delineation procedures have been applied in a way that is consistent with the Standard. Appeals for any other reason (subjective, political, economic, etc.) will not be entertained because KBA designations are primarily science-based.

The Appeals process is coordinated by the KBA Secretariat. The KBA Standards and Appeals Committee (KBA SAC) is responsible for arbitrating over formal Appeals against the identification of particular sites as KBAs.

This appeals procedure is available on the [KBA Website](#).

References

- Brooks T.M., Pimm S.L., Akcakaya H.R., Buchanan G.M., Butchart S.H., Foden W., Hilton-Taylor C., Hoffmann M., Jenkins C.N., Joppa L. and Li B.V. (2019). Measuring terrestrial area of habitat (AOH) and its utility for the IUCN Red List. *Trends in Ecology & Evolution* 34:977-986. DOI: <https://doi.org/10.1016/j.tree.2019.06.009>
- Christenhusz, M.J.M., & Byng, J.W. (2016). The number of known plants species in the world and its annual increase. *Phytotaxa*, 261, 201-217.
- IUCN (2016). *A KBA Standard for the Identification of Key Biodiversity Areas, Version 1.0. First edition*. Gland, Switzerland: IUCN.
- KBA Standards and Appeals Committee (2018). *Guidelines for using a KBA Standard for the Identification of Key Biodiversity Areas*. Version 1.0. Prepared by the KBA Standards and Appeals Committee of the IUCN Species Survival Commission and IUCN World Commission on Protected Areas. Gland, Switzerland: IUCN.

Annex A: National KBA Coordination Groups: guidance on the process of establishment and main roles

The *Global Standard for Identification of Key Biodiversity Areas (KBA Standard)* contemplates the KBA identification process to be largely driven by local organisations and experts to secure buy-in and ownership, which are essential for the future safeguard and conservation of these sites. KBA National Coordination Groups (KBA NCG) are proposed as key structures to fulfil the role of coordinating the KBA identification process at the national level to bring together relevant stakeholders and data in a participatory and efficient way. A KBA NCG will ideally be established in each country of the World and provide the central coordination for the identification, mapping and monitoring of KBAs as well as management of KBA data for that nation.

This annex provides guidance to relevant stakeholders (e.g. national representatives, Partners or offices of KBA Partners, governments and others) regarding the process of establishing National KBA Coordination Groups (NCGs). It also outlines the main tasks KBA NCGs can perform in the KBA identification, documentation, promotion and conservation process. Other relevant documents to this process include the *KBA Guidelines*, “[Recommended Terms of Reference for National KBA Coordination Groups](#)”, and “[Guidance on Forming KBA National Coordination Groups](#)”, where more details are given about how to form KBA NCGs than is possible here. It is recognized that the mechanism for the establishment and operations of KBA NCGs will differ in each country and the aim of these recommendations are for general guidance to help steer groups that are forming.

It is understood that the structure and composition of the KBA NCGs will vary according to the needs of the country. The membership of the KBA NCG may include representatives of the following organizations and stakeholder groups:

- National representatives of the KBA Partners
- Other organizations and scientific institutions holding relevant data or expertise
- Relevant government departments and agencies, particularly those that can support the conservation or protection of sites identified
- Private sector organizations holding relevant data on KBAs
- Representatives of indigenous peoples and local communities.

It is hoped that KBA NCGs have some representation by governments and stewardship bodies because these bodies have the mandate to develop, implement and enforce policy and legislation, designate and manage protected areas, and will hopefully use KBAs for planning purposes. However, it is recognised that in some countries it may not be possible to always involve government representatives initially.

It is likely KBA NCGs will become established in a variety of ways, but we here give suggestions on how to catalyse these groups and what they will be responsible for.

Step 1: Forming a core group of national representatives of KBA Partner organizations and/or other interested groups: as a first step, national representatives of the relevant KBA Partners and groups who have interests in forming a KBA NCG should form a small group to work on establishing a KBA NCG. Usually, there is more than one organisation with these interests in a given country and therefore coordinating their respective activities related to KBAs is highly desirable. These organisations may hold information on KBAs previously identified in the country (IBAs, AZE sites, CEPF KBAs, etc.) and would also typically carry out a wide range of activities on KBAs such as monitoring, on the ground conservation, community outreach, management, restoration, awareness-raising and capacity building.

Step 2: Identifying stakeholders to form the National KBA Coordination Group: the core group of KBA Partner national representatives should compile a list of stakeholders who hold data relevant for the identification of KBAs or who may be interested in engaging in their identification. These stakeholders will normally include national or international scientific institutions, museums, universities or conservation NGOs (including AZE members) working on one or more taxonomic groups (e.g. mammals, amphibians, reptiles, marine or freshwater fish, plants, invertebrates) or other biodiversity elements (e.g. ecosystems, habitats). They will ideally include representatives of relevant governmental departments and agencies also who will be able to mainstream KBAs into national legislation and policy. It is important to identify individual experts within these institutions but also independent experts who can contribute to the process.

Step 3: Prepare a brief Terms of Reference for the KBA NCG: A brief and simple ToR should be developed by the core group for the KBA NCG including the rationale for the group, principles of operation, criteria for membership, operational procedures and expected results/outputs. This can be developed on the basis of the document “Recommended Terms of Reference for KBA NCGs” available on the [KBA Website](#). There should be a clear reference to the KBA identification process and how the KBA NCGs work will feed into it as well as how the group will aim to monitor and secure the KBAs for the future. The group will appoint a chairperson, who initially could be a representative of a KBA Partner organisation, because of the need to understand how to apply the KBA criteria, and the Chair could be rotated at fixed intervals. The TOR should also define the process for decision-making and internal procedures.

Step 4: Invite experts to take part in the work of the KBA NCG: Once the main stakeholders are identified, they should be invited to participate in the work of the KBA NCG. In larger countries or those with very large and active research and conservation communities, there may be too many individual experts to sit on the Group itself, so it should be agreed on how experts should be selected to represent their areas of expertise (taxonomic groups, institutions that hold data, government and conservation managers) on the KBA NCG. The KBA NCG

should have the broadest possible representation of these groups and should work on the basis of inclusion, collaboration and consultation, but at the same time be flexible enough to make decisions. We therefore recommend that ideally no more than 12-20 individuals should be in the KBA NCG.

A.1 Roles of the KBA NCG

The main roles of the KBA NCG include the following:

- Coordinate KBA proposals and re-assessments of sites at the national level
- Compile and maintain a database of relevant stakeholders at the national level who can play a role in the KBA Programme
- Ensure that members of the KBA NCG and KBA Proposers apply the *KBA Standard* correctly
- Coordinate the application of the *KBA Standard* to review existing KBAs and identify new ones with relevant experts. This can include the organisation of national or sub-national workshops with experts.
- Ensure accurate and precise delineation of KBAs and that they do not overlap with existing KBAs for the country. Where there is overlap, the KBA NCG will help resolve it by encouraging review and consensus-building with proposers of existing KBAs
- Ensure adequate consultation takes place in the development of a KBA proposal as described in the *KBA Guidelines*
- Provide the liaison with the relevant KBA Regional Focal Point
- Organise the submission of proposals in close collaboration with the KBA Regional Focal Points and/or the KBA Secretariat
- Maintain national documentation about the KBAs of the country and encourage monitoring and conservation of each site
- Promote the use of KBA data and KBA sites nationally and internationally to support conservation and sustainable development planning and implementation.
- Coordinate fundraising efforts, including the engagement with donors and development actors active in their countries, supporting conservation of KBAs
- Collaborate with the national focal points of the relevant international Conventions (e.g. CBD, Ramsar, CMS, World Heritage) to ensure that KBAs are taken into consideration in national implementation plans and strategies
- Work to encourage recognition of KBAs nationally to improve their protection
- Where it makes sense, develop a national strategy for the conservation and sustainable management of KBAs. This could include information on research, monitoring, advocacy, policy, awareness-raising and capacity building aspects of the KBA initiative.

A.2 Key tasks of the KBA NCG required for KBA identification and proposal

The main tasks of the KBA NCG related to the *identification, documentation and proposal* of KBAs are summarized here:

- Establishing contact with the relevant KBA Regional Focal Point and the KBA Secretariat (see KBA Website <http://www.keybiodiversityareas.org/>)
- Identifying potential funding sources for the work of the KBA NCG.
- Taking stock of existing information relevant to the application of the *KBA Standard*. This information should include: global and national Red Lists, data on the distribution, population and ecology of species by taxonomic group, vegetation maps, information on ecosystems, etc.
- Once established, the KBA NCG should agree on a process of assessing KBAs nationally - which taxa to assess and how. Once a first national assessment has been made for several taxa it is likely that the KBAs identified will be updated by assessments made by specific taxon-focused interest groups or groups interested in particular sites. The KBA NCG should play a role of encouraging and facilitating these groups.
- Agreeing on principles of data sharing among the participating institutions and individual experts for the benefit of KBA identification.
- List and map sites, starting with the existing KBAs identified in the country, and their trigger species and digitized boundaries (available from www.keybiodiversityareas.org), then scoping and compiling lists of potential trigger species or ecosystems, their distribution, key localities and population information for each of the relevant KBA criteria and sub-criteria. These lists should include information on the species or ecosystems likely to meet the KBA criteria.
- Apply the relevant KBA criteria and sub-criteria to identify candidate KBAs for individual trigger species or groups of trigger species within the country following the *KBA Standard* and *KBA Guidelines*. It is important to use the existing KBAs as a starting point to assess: a) whether new trigger species should be added to those already identified for these KBAs, potentially with adjustments to the existing site boundaries; or b) whether new KBAs should be identified on the basis of the distribution and population data of potential trigger species or ecosystems outside the boundaries of existing KBAs.
- Where existing KBAs are based on older assessments of IBAs, sites identified through CEPF ecosystem profile processes, or important freshwater sites that did not apply the thresholds in the *KBA Standard*, these KBAs should also be assessed against the criteria to assess if they meet global or regional KBA status.
- For a first national assessment, organising a series of national workshops to bring together experts and information is recommended. An initial workshop providing training in the KBA criteria and how to apply them, with practical application to data from the country, is a good way to start the process. This can be followed up by

- nominating working groups to assess different taxa over a period of time and subsequent workshops to present and assess the resulting KBAs that are identified.
- Provide relevant information on proposed new KBAs or re-assessments of existing KBAs using online *Proposal Portal* on the KBA website, uploading information directly to the World Database of KBAs.
 - On the basis of the expert feedback, work with the original proposers of any existing KBAs to agree on any revisions to the boundaries of existing sites, and if necessary, collect and provide new information to confirm the validity of proposed sites.
 - Compile all the required information for KBA proposals and work with the KBA Regional Focal Point to make the proposals and respond to independent reviews of the proposals. Once the KBA Regional Focal Point is happy that the proposals meet all the requirements the KBA NCG will then officially nominate the KBAs within the *Proposal Portal*.
 - Work with KBA proposers that come to the KBA NCG wanting to propose a new KBA or add a new qualifying element to an existing KBA. In particular the KBA NCG can help them apply the KBA Criteria correctly and put them in touch with KBA Regional Focal Points for support.

A3. Role of KBA NCG in conserving KBAs

Identification of KBAs is only the first step. Once identified there is a need to monitor and conserve them. The KBA NCG should promote the monitoring of KBAs nationally, particularly the collection of data on the KBA trigger elements at regular intervals (at least 8-12 years), assessments of threats to the KBAs and also documentation of the conservation actions being taken to reduce threats to a site. In time the WDKBA will be able to accept these types of data to build up a measure of the status of KBAs around the world.

KBA NCGs also play a role in promoting the conservation of KBAs in their country in addition to overseeing KBA proposals and re-assessments. Ideally the government representatives of KBA NCGs will help promote the recognition of KBAs in national conservation planning processes, and in particular their recognition in national policy and legislation. Laws that recognise KBAs as sites of global significance for biodiversity will help safeguard these sites within a country. Other KBA NCG members can raise funding and engage with local communities to work to conserve KBAs that are recognised, ensuring their conservation.

Annex B. Documentation and Mapping Standards for Key Biodiversity Area Assessments.

Please note that this is a working document which is subject to modification and addition; all future versions will be given a new version number. If you are unsure whether you are working from the most recent version, please check the KBA website or contact the KBA Secretariat. This document should be used in conjunction with, and makes frequent cross-reference to, the KBA Guidelines.

This document provides the standards required when proposing sites for inclusion in [The World Database of Key Biodiversity Areas](#)™ (WDKBA). The WDKBA is the official global source for KBAs; sites listed elsewhere may not have been formally reviewed and confirmed by the KBA Secretariat. This document outlines what information is required or recommended to support a KBA assessment and complements the [KBA Guidelines](#). This document should be used alongside the KBA Standard and the KBA Guidelines. **Following this guidance is important to ensure consistency and quality. Many proposal reviews and confirmations are delayed because they lack the required documentation, so please read this guidance carefully, and follow it closely.**

In addition to the documentation requirements, this document lists the standard checks that must be completed before proposing an assessment in the WDKBA (the WDKBA system includes an automated integrity checker that performs some basic checks).

For assessments being submitted from a large national process (e.g., comprehensive national or regional assessments for one or more taxonomic groups) or assessments coordinated by the KBA National Coordination Groups (NCGs), it is the responsibility of KBA NCGs or Proposer(s) to ensure that all assessments have been checked for completeness and consistency before submission. If no NCG is in place for the country, KBA proposers should contact the KBA Secretariat. The KBA Secretariat will carry out further consistency checks on submitted assessments to confirm that the *KBA Standard* has been applied appropriately and consistently.

Refer to this document while entering information into the WDKBA. If you need further guidance, please contact the KBA Secretariat.

B.1 Data Documentation Standards

This section describes data fields that must be completed for all KBA proposals. These include information about:

- the site,
- the biodiversity elements that trigger KBA criteria

- threats to the site.

Spatial data (maps) are covered separately in Section 2.0.

Data documentation fields fall into three categories:

B.1.1 Required Supporting Information

This is essential information that must be provided for a KBA proposal to be accepted. There are two subsets of required information:

- Information required for **all** proposals (e.g., site name, country)
- Information required only for specific KBA criteria

For example, information such as site name, country etc. must be provided for all proposals. However, if a site is proposed based on threatened species, you do not need to provide data on threatened ecosystems. although you should try to assess the site against as many criteria as possible. At least one KBA criterion must be supported with sufficient data. Details of required fields for all proposal and for each KBA criterion are summarised in Tables 1 and 2, respectively.

B.1.2 Recommended Supporting Information

This information is not mandatory but is highly encouraged. The information helps improve understanding and conservation of the site. These fields are summarised in **Table 3**.

B.1.3 Discretionary (Optional) Supporting Information

This information is not required for submission but may be useful for specific projects or analyses. KBA project managers should clearly identify which additional fields they want to include in assessments and inform assessors contributing to the project about this at the start of the project.

B.1.4 Guidance notes on some required and recommended fields

Guidance notes on required and recommended fields are given in the tables below. Additional notes and guidance are also given below.

Site names: There are no rigorous rules for naming KBAs, although it is recommended that the following should be observed:

- Use the name of an existing protected area if the KBA matches it (e.g. “Danube Delta”), but avoid the designation of the site (e.g. “Danube Delta Ramsar Site”) as there may be several designations at the site, and the boundaries may change over time. Exceptions can be protected area names that are in common usage, such as “Yellowstone National Park”, and where this is unlikely to change.
- If the KBA is larger than an existing protected area, make this clear in the name (e.g. “Loch Maree and surrounding hills”).

- Avoid abbreviations (for example, use “Mountains” and not “Mts”), and acronyms, including “KBA”.
- Do not include species names (e.g. “Buxa Important Reptile Area”) because other taxa may be added over time.
- International names should use English or appropriate local names in Roman characters; national names may use other scripts supported by UTF8 (e.g. Arabic, Cyrillic etc.); use diacritic marks (accents etc.) where appropriate.
- If/when using indigenous names, involve and obtain consent from customary rights holders
- Names should be less than 250 characters in length.

OECMs: This free-text field should be used to describe whether the site is likely to meet the definition of an “[other effective area-based conservation measure](#)” (OECM). The current definition of an OECM is: “A geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the *in situ* conservation of biodiversity, with associated ecosystem functions and services and where applicable, cultural, spiritual, socio-economic, and other locally relevant values”. In other words, OECMs are not protected areas, but are managed in ways that achieve long-term biodiversity conservation and fulfill other ecological and cultural benefits.

“Source” fields: These fields describe where the data came from. For example:

- Cite published papers or provide links where available
- If the information comes from experts, include their name and e-mail(with their permission).

Table B.1. Supporting information for all KBA proposals that relate to the KBA proposer and the site. Required fields are in bold, recommended fields are in italics (fields in bold italics are required for some criteria but not all).

Section in WDKBA	Purpose	Guidance notes	Data field names and units/format
Register in WDKBA: Data Captured when registering to use the WDKBA: Names, affiliation, contact details and relationship to relevant KBA Partner (if one exists), Agreement to data terms of use	To identify who is proposing a new KBA or changes to an existing one To alert Regional Focal Points about potential KBA proposals To identify links between KBA Partners and affiliates To allow proposers and reviewers to be contacted easily in the	- All contact details are stored within WDKBA; only names (e.g. surname and initials of individuals, or name of KBA National Coordination Group) are displayed	Name (text) Email (text) Organisation (optional: text) Country where living (select from dropdown) Role (select from dropdown): either individual or NCG Country of interest (text; selection from dropdown) <i>KBA_Partner</i> (optional: selection from dropdown if affiliated with a KBA Partner institution) Password (text) (repeated for validation)

	case of the assessment content being questioned To support WDKBA functionality Proposer agrees to allow data storage in WDKBA and use of data to identify and conserve KBAs	Users not agreeing to these terms of use should contact the KBA Secretariat before proceeding further	Terms_and_use (check box - must agree to data being stored on WDKBA before can register)
Date of proposal submission	To identify priority where proposed KBA boundaries overlap To ensure timely review	All required fields are indicated on Sheet 3 of Interim KBA Data Form	Date of Proposal: (Automatically recorded when proposals are submitted to RFP)
About proposal	To record what criteria have been applied by the proposer To record what consultations were made when developing the proposal Provide suggestions for independent reviewers	Ideally all criteria are considered for a site. However, it is recognised that often the data are not available to do this. Select which Criteria were applied to KBA trigger elements in the proposal. Include criteria that were applied where no trigger elements were identified Consultation field should include specific names and ideally e-mail addresses in case follow up is needed. Make sure that the people whose names and email addresses included in this section have consented to providing their details. Note: their names and contact details will not be accessible by the public.	Purpose of your proposal (selection from dropdown menu) Provide details (summarise the key points of the proposal, including species or groups assessed or disqualified, and specify any edits if it is an edit-only assessment) Criteria assessed (selection from dropdown) Upload supporting material (Upload files that support the proposal. These can include shapefiles of the trigger elements, reports of surveys, ecosystem maps, ESH/AOO/Locality maps etc. In the case of Criterion C or E or application of the genetic distinctiveness assessment parameter a report is needed as part of the proposal and should be uploaded here. NB. The shapefile of the KBA boundary should be uploaded on the Map page - not here). Consultation Biodiversity knowledge holders (text; which relevant experts and stakeholders (e.g., scientist, conservationists, indigenous peoples) contributed data to proposal for site) Previous proposers (text; describe consultations with previous proposers, especially regarding boundary or site changes; if there are no

			changes, state that no changes were made) Government (text; describe engagement with relevant local or national government authorities, including participation in meetings or workshops) Customary or legal rights holders (text; describe what consultations were made with customary/legal rights holders) Contributors to this assessment (text; list contributors' name and affiliations, but exclude contact details) Reviewers (optional text; must include name, affiliation and contact details, preferably an email address)
Site Details: Name and Location	To uniquely identify the proposed or exiting KBA To support WDKBA functionality	-The KBA ID (SitRecID) is available for existing KBAs and will be assigned to new KBAs on first submission -See notes above on naming sites	Site ID (unique numeric code – automatically generated by WDKBA) <i>Site name(National)</i> (text; can be in any script) Site name (International) (text; must be in roman script) Country (text; selection from dropdown) <i>State/Province</i> (text; optional)
Site Details: Site Details	Description of the site, including a brief narrative summary of why the site is important, a brief description of the site (habitat etc.), how the site is manageable, delineation rationale (i.e. how the boundaries of the sites were drawn), and how the site relates to existing protected areas with their names. This section may also elaborate on whether the site may qualify as an OECD, and why.	The free text fields should be written in English and will be displayed in WDKBA as summaries of why the site is important. In particular Site description, Rationale for KBA status, Delineation rationale and Manageability are important fields that will be used to populate text on factsheets for the site on the KBA website. Examples of suitable text for these fields are given below this table.	Site description (text; a concise, standalone description of the site covering its main habitats, altitude range, geographic occurrence, and notable features, written for a general audience without cross-references because it will be used on the KBA factsheet) <i>Site area</i> (numeric; in km²) <i>Latitude</i> (numeric; dd.dddd, WGS84) <i>Longitude</i> (numeric; (dd.dddd, WGS84) <i>Lowest elevation</i> (m) (numeric; Lowest elevation in metres a.s.l) <i>Highest elevation</i> (m) (numeric; highest elevation in metres a.s.l) <i>Minimum depth</i> (m) (<i>Bathymetry</i> in depth (m)

			below sea level; depth values should positive) Maximum depth (m) (depth values should be positive) System largest; 2nd largest; 3rd largest; system smallest (text; multiple selection from dropdown) Rationale (KBA identification) (text; outline the criteria that the biodiversity elements meet with all acronyms spelled out on first use; When sites are re-assessed or trigger elements added, this rationale needs to be updated) <i>Biodiversity values</i> (text; what other species or ecosystem may be a conservation target at the site but doesn't trigger KBA status) <i>Site values</i> (optional text; list whether the site has any indigenous groups/local communities that hold customary rights at the site)
Site Details: Manageability and Delineation	To describe why the boundaries were placed where they are in the shapefile and to describe how the site is considered manageable. This section also records which KBAs are superseded by a new KBA (NOTE: agreements with the original KBA proposers is needed before this can be proposed)	The aim of this section is to understand the thinking behind the delineation and manageability and to provide sufficient information that, should the site be challenged, it can be defended.	Manageability (text; a publication-ready explanation of why and how this site can be managed as a single unit that will appear in the site factsheet) Superseded sites (optional text; name what KBAs are being replaced by the new site here and why – compulsory of a site is being superseded but not otherwise) Delineation (text; a describe of how the boundary was placed where they are; include justification relative to existing site boundaries where relevant and noting any alignment with national borders or protected areas, with references to spatial data sources.)
Site Details: Protected or Conserved areas	Provide estimates of coverage of the site by recognised protected areas and OECMs.	Protected areas should be taken form Protected Planet and the World database of PAs. OECMs should	Coverage by Protected Area (numeric range; selection from dropdown of 10% interval ranges)

		be officially recognised and published in the OECM database	<i>Coverage by PA calculated</i> (optional numeric; add this if you have calculated it exactly) Coverage by OECMs (numeric range; selection from dropdown of 10% interval ranges) <i>Coverage by OECMs calculated</i> (optional numeric; add this if you have calculated it exactly)
Site Details: Habitats and Land Use	Provide a summary of the types of habitat and land use taking place at the site	List the main habitat types at the site together with their approximate percentage coverage of the site. Also describe how the land at the site is currently managed and who manages it.	What habitats are present? (list habitats present at site from pull down menu with approximate percentage at site) <i>General habitats description</i> (optional text; provide a publication ready general description of the major habitats present at the site that will appear on the KBA factsheet) <i>Land use</i> (optional text; describe the current land use at the site and who manages it)
Site Details: Pressures	Capture the general threats affecting the site which may include additional threats to those affecting the trigger elements	Think about the major threats affecting the integrity of the site and list them here.	<i>Pressures description</i> (optional text; describe the main pressures and threats impacting the site as a whole)
Site Details: Additional details	Capture notes that may help the Reviewers better understand any responses to the fields relating to the site. Also give additional references if they exist that relate to the site as a whole.	Add additional explanation about the site and clarify any issues which may not be easily addressed in the other fields about the site.	<i>Additional details</i> (optional text: provide any other information relating to the site that may help reviewers assess the proposal) <i>References</i> (optional text: list the references to reports, papers, url sites etc that support the proposal) <i>Contributors</i> (text: list the contributors' names, and where relevant, their institutional affiliations in a way that is ready for publication in the site factsheet. Contributors should be informed in advance that they will be acknowledge; do NOT include any contact details and do NOT delete existing information.)

--	--	--	--

Table B.2. Supporting information for assessment of trigger elements. Required fields are in bold, recommended fields are in italics (fields in bold italics are required for some criteria but not all).

Pages in WDKBA Proposal Portal	Purpose	Guidance notes	Data field names and units/format
Assessment page: Species-based criteria (A1, B1-B3, D1-D3) Search by Scientific name for the species -type first 6 letters and slowly add to the name until you see the option you want in the selection list below the window.			
Species Assessment: Species	To provide the relevant data for a species that may trigger KBA status	The WDKBA uses the extended SIS list of species that underpins the IUCN Red List of Threatened Species. If your species does not appear as you search for it, then contact the RFP or KBA Secretariat. If a common name exists add that. Many fields will be entered automatically when proposing on the WDKBA here – Taxonomic group, IUCN Red list status, Range restricted status (B2), and eco/bioregion restricted status (B3a/B3b). If you believe your species is restricted (B2/B3a/B3b) and is not shown as such, please contact the KBA Secretariat which maintains lists of restricted species.	Scientific name (text; selection from dropdown or autofill) <i>Common_name</i> (text; Enter if this exists) Taxonomic group (text; autofill from WDKBA) IUCN Red List category (text; autofill from WDKBA) Possibly Extinct (text; autofill from WDKBA) Assessment system (text; auto-filled as 'IUCN Global Red List' if WDKBA contains species threat status already; alternatively, proposer can propose an alternative system (eg. G-ranks) if species is not assessed on IUCN Red List) IUCN Red List criteria (Auto-filled by WDKBA – guides whether A1c/d can be applied) Globally Sensitive Species (Yes/No auto-filled by WDKBA – guides whether the species is treated as a sensitive species automatically or not) Range-restricted (Yes/No from dropdown; autofill from WDKBA) Ecoregion/Bioregion restricted (B3a/b – auto-filled by WDKBA. Name of eco/bioregion is also provided automatically).
Species Assessment: Assessment	To provide the global and site data for a species that will be used to calculate whether they	Here data on the season for which the site is being assessed (resident=present year-round (default); breeding, non-breeding and migration stop over site). Select the assessment	Season (text; selection from dropdown menu) Assessment parameter (text; selection from dropdown) Global Estimates Min. Global (optional numeric, integer; the minimum global

	meet the KBA Standard as trigger species	parameter used. If range is selected and there is a polygon range on the Red List, the correct area will be supplied for the global estimate. Similarly, if the mature individuals are recorded on the Red List these will be provided. If the global data are not provided you can enter values for min, best and max values of survey estimates. If you only have one estimated number then put that in Best and leave min and max empty. Source data need to be sufficiently detailed for global, site, evidence of presence and RU numbers to be able to find the publication/webpage/contact individual during the review process or if subsequently queried. Select the nature of occurrence for the species - multiple options can be selected and are used to apply relevant criteria calculations. Justify why species aggregate, are part of best 5% of habitat, are in one of the top 10 largest aggregations etc. with some detail to allow review.	estimate for the assessment parameter) Best Global (numeric, integer; the assessment parameter value where you either only have one estimate, or use the mid-point of the values in the Min. Global and Max. Global fields) Max. Global value (numeric, integer; the maximum global estimate for the assessment parameter) Source (global estimates) (text; this should clearly describe where the global data estimate comes from -links to webpages or references to publications should be provided in full) <i>Additional information</i> (optional text; provide any notes to better explain global numbers used; if using localities as the assessment parameter, please explain how localities are defined for the species) Site Estimates Year site value (Min and max year if averaged over several years, same value for both min and max otherwise - numeric, integer, year) Min. Site (numeric, integer) Max. Site (numeric, integer) Best Site (numeric, integer) Source (text; this should clearly describe where the site data estimate comes from--links to webpages or references to publications should be provided in full) Derivation of estimate (dropdown menu) Evidence of presence (text; provide evidence that the species is present at the site – if based on observation by an expert then name expert with contact e-mail) Year (presence) (numeric integer; year when species was last observed within the site) Min no. reproductive units (RUs) (numeric, integer; field is mandatory to assess criteria A1 (except A1e), B1, B3b, and E) Source of RU data (text; this should clearly describe where the site data RU estimate comes
--	---	---	---

			from--links to webpages or references to publications should be provided in full. If based on expert sightings, then provide the name and email address of the expert). Define 10 RUs for species (text; provide a text description of what would constitute 10 RUs for the species; mandatory for s) Nature of occurrence (dropdown; select all the criteria relevant for the species) Justification (Criterion D, aggregations) (mandatory when applying Criterion D text; justify the aggregation for the species—forming aggregations at the site (D1); forming aggregations at the site in times of environmental stress (D2); that the site is a recruitment source for the global population (D3)) Source (text; provide source of information used in the justification in sufficient detail that a reviewer can locate it—i.e., full reference, links, etc.) Other IBA-related criteria conditions (optional dropdown menu) <i>Additional details site estimate</i> (text; additional notes can be put here to help explain the site estimate provided) Sensitive Species (tick-box; click this box if you want the species to be treated as sensitive at the site) Provide more details about species sensitivity at this site (mandatory if Sensitive Species is ticked, text; explain why this species should be treated as sensitive at the site)
Density or relative abundance of mature individuals	To determine how global and site-level populations are assessed To support WDKBA functionality To facilitate site review	For assessing B3c, data need to be provided on density of mature individuals OR relative abundance of mature individuals. See KBA Guidelines section 3.9	Density_individuals (numeric, float, individuals per km²) Relative_abundance_individuals (numeric, float)

[illegible]

			Irreplaceability score (numeric float) Assessment year (numeric integer)
--	--	--	---

Table B.3. Supporting information recommended for all KBA proposal for pressures and conservation actions.

Pages in WDKBA Proposal Portal	Purpose	Guidance notes	Data field names and units/format
Pressures and actions: Conservation actions	Provide a summary of ongoing and required conservation actions for a site	Options exist to list the IUCN standard list of conservation actions - both ongoing actions and those that are estimated as needed in the future	<i>Ongoing conservation actions at site</i> (Yes or No dropdown, with additional dropdown with multiple tick boxes) <i>Conservation actions needed at site</i> (Yes or No dropdown, with additional dropdown with multiple tick boxes)
Pressures and actions: Pressures	Provide a summary of the threats to a site	Options exist to assign threats to the site using the standard IUCN classification of threats and timing of threats. Multiple threats can be listed for a site and can be used in time to compare threat status across sites, countries and regions.	<i>Level one</i> (text, from dropdown) <i>Level two</i> (text, from dropdown, options conditional on previous selection) <i>Level three</i> (text, from dropdown, options conditional on previous selection) <i>Timing</i> (text, from dropdown)

B.2 Mapping Standards

B.2.1 Why spatial data are required

All KBAs should have both tabular and spatial data. The tabular data, described above, explains why a site is important for biodiversity; the spatial data shows where the site is and how large it is. Spatial data are necessary for assessing whether a site meets the KBA criteria; supporting analyses, such as protected area coverage and land-use change, and clearly communicating site locations to support conservation planning. All KBA proposals must include accurate map of the site boundary based on the best available knowledge and data. This map is used in the WDKBA. This section explains what spatial data are required, the relevant formats and standards, and how to prepare the boundary map. Guidance on how KBAs should be delineated are given in the *KBA Guidelines* (section 7); this document aims to provide technical advice on how to implement this guidance.

B.2.2 KBA boundaries

The delineation of KBAs is defined by two processes, as explained in the KBA Guidelines. The first step of the process is to identify and map the area where the species or ecosystem that triggers the KBA Criteria. For example, if a site qualifies as a KBA because of an endangered species (Criterion A1), the first step is to map the distribution of that population within the site. The second step is to refine these 'ecological' boundaries, if necessary, so it is practical for management (see KBA Guidelines section 7.3). This could involve aligning the boundaries with existing protected areas, habitat types, physical features such as a road, a river or a watershed, the elevation levels such as contour lines on mountain maps. Further details on KBA delineation are given in the KBA Guidelines (section 7).

Delineating freshwater KBAs, particularly in streams and rivers, can be difficult because species may occur throughout the catchments, or be limited to some tributaries. Existing maps of hydro-basins may be useful for delineating KBAs, but large hydro-basins mapped at landscape scales often contain mostly non-freshwater habitat and so present a poor representation of the trigger species' distributions. Best practice recommended in these cases would be to use smaller units (e.g. HydroBASIN Level 12 basins) for mapping KBAs and refine these to create realistic and manageable boundaries.

Once the map boundaries are defined, they must be converted into a spatially referenced polygon map and uploaded to the WDKBA on the *Map* page.

B.2.3 Site polygon maps

The spatial attributes (e.g. country, latitude and longitude of the site's mid-point) are captured in the tabular data; the most important spatial component of any KBA proposal is a high-resolution and spatially referenced polygon map of the site boundary. The map must be **accurate** (i.e. the polygon is in the right place) and **precise** (i.e. the edges of the polygon are carefully drawn to include only relevant areas). The differences between accuracy and precision are illustrated in Fig. 1. Inaccuracy may arise from errors, incorrect projection, or the use of inaccurate base maps (e.g. an inaccurate protected area boundary). Imprecision may result from inadequate use of base maps while drawing the site (e.g., rough drawing), or the maps being drawn at too low a spatial resolution (e.g. the zoom level is set too low).

The KBA polygon maps are reviewed using background satellite imagery, and checked that the boundary matches the description in the delineation rationale for the site. Proposers can upload their shapefiles for a site on the *Map* page and overlay it on background satellite imagery to check that the boundary follows relevant features. Simple boundaries can be edited on the *Map* page (see *Guidance on using the WDKBA* section 3.3). Shapefiles should be submitted in the required geographic projection (decimal degrees, WGS 1984); proposed boundaries should not overlap existing KBAs.

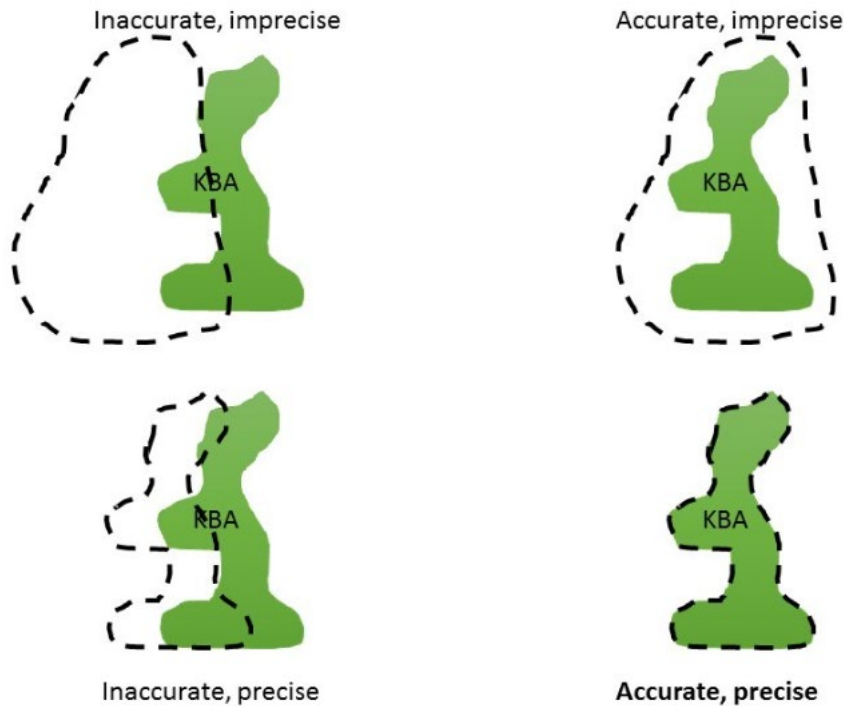


Figure B.1. The concepts of accuracy and precision in drawing the boundaries (shown as dashed lines) of a KBA (shown in green). Proposers should seek to produce boundaries that are both accurate and precise.

B.2.4 File format

KBA boundaries must be submitted as zipped ESRI shapefiles (*.zip format). A shapefile is a group of at least 4 related files that have the following extensions: *.shp, *.dbf, *.shx and *.prj; all of these files should be included in the zipped folder. Shapefiles can be created using GIS software such as ArcGIS, or freely available alternatives like QGIS and GRASS. A [QGIS tutorial](#) is available to help users carry out common calculations needed to identify KBAs and to delineate site boundaries.

Users who prefer to map KBAs in Google Earth, or Google My Maps in Google Drive, may initially create .kml files that they convert to shapefiles before submission. This can be done using free online file converters such as MyGeodata (<https://mygeodata.cloud/converter/kml-to-shp>). Instructions on how to create polygon maps in Google Earth are provided here: <https://www.iucnredlist.org/resources/grid> (Note: these instructions are written for mapping species distributions, but the same methods apply to KBA polygons).

In some cases, a single KBA may comprise of more than one polygon (see KBA Guidelines section 7.3.4 for information on where this is permissible); in such cases, all polygons should be included in a single shapefile.

If a proposer is submitting multiple KBA proposals, it is easiest to submit one shapefile per KBA. Although it is possible to include several KBAs in one shapefile, this approach is more complicated. In such cases, the attribute table should clearly link each polygon to a specific site by including both, the unique WDKBA numeric identifier and the site's international name. During upload to the *Map* page, the correct polygon shapefile must, then, be selected for each site.

Users who do not have access to GIS software and cannot prepare maps in Google Earth should contact the KBA Secretariat for assistance. Additional guidance on using QGIS to create site boundaries is available on the [KBA website](#).

B.2.5 Drawing a KBA polygon

Polygons should be based on the WGS84 geographic coordinate system using Decimal Degrees projection (Latitude, and Longitude). In ArcGIS, this is called *Geographic Projection–World-WGS84*, while in QGIS it is referred to as *WGS 84 coordinate Reference (EPSG:4326)*. Users should check the projection of the file before submission. To check the project in ArcMap, go to the file's properties and check the Source tab. If the "Geographic Coordinate System" says <Undefined>, you can use the Define Projection (Data Management) tool. If the "Geographic Coordinate System" is something other than the WGS_1984 projection, you can convert it using the Project tool.

When drawing KBA boundaries, it is recommended to work at a zoom level of 1:50,000 or higher resolution (i.e., more detailed). One useful approach is to first draw a rough outline at a lower zoom level and then refine it at a higher resolution. The use of base layers is recommended to guide the drawing of site boundaries. The recommended base layers for country boundaries, administrative districts and land/sea boundaries can be downloaded free of charge from the GADM dataset (<https://gadm.org/data.html>).

Where possible, KBA boundaries should take into account the boundaries of protected areas; this does not mean that all KBAs should be protected areas, but that existing protected area boundaries should be considered where relevant). Protected area boundaries can be downloaded from: <https://www.protectedplanet.net/> but should be checked for accuracy. Note: these datasets may not include all protected areas recognised nationally; it may be worth requesting protected area data directly from the relevant government authority.

Other useful base layers, such as elevation, bathymetry, lakes, rivers and catchment boundaries, can be downloaded from: <https://www.iucnredlist.org/resources/spatialtoolsanddata>.

To assess the accuracy and precision of the boundaries, maps should be checked against satellite imagery (e.g. Google Earth, ESRI base maps, Bing imagery), either during or after preparation. This helps confirm that the boundaries are correctly positioned and match the features described in the delineation rationale. In ArcGIS and QGIS, Bing imagery can be added as a background layer.

KBA boundaries should not overlap with one another, so consider the location and extent of existing KBAs when drawing a new site boundary. Existing and other proposed KBAs can be visualised on the *Map* page in the WDKBA proposal process.

Particular care should be taken when drawing KBA boundaries at coastal sites or on small islands, since even small mapping errors might result in the inclusion of relatively large areas of ocean in terrestrial sites.

Smoothing a polygon removes sharp angles in the polygon and is used for aesthetic and visual reasons. If this tool is used in ArcGIS or QGIS, please ensure that it does not affect the precision or accuracy of the KBA polygon. Also please consider using “check and repair geometry” features on shapefiles as small breaks in the polygon can cause problems during import.

Finally, the shapefile’s attribute table should include at least two key fields: the WDKBA Site ID number and the international name of the site. Including these fields helps ensure that the shapefile can be correctly identified and processed if any issues arise during submission.