

RAPID VILLAGE ASSESSMENT MANUAL

Draft for discussion, v1 (Oct 2021)

Introduction

This document outlines the methodology to be used for Rapid Village Assessments in the priority villages of the Darwin Initiative-funded project “Community-based integrated catchment management for conserving the Upper Chindwin River”.

The project aims to preserve ecosystems to support livelihoods and implement community measures for the conservation of wetlands that support and sustain resilient livelihoods.

Biodiversity and ecosystem service assessments will feed into Community Action Plans (CAP), developed alongside local stakeholders to establish sustainable agricultural, mining and water management practices.

This document provides templates for data collection in priority villages, which will contribute towards the fulfilment of three project outputs:

- 1.1. Scalable local ecosystem services assessment framework developed using principles from the RAWES Toolkit and delivered at nine villages
- 1.2. Local assessment of key endangered and livelihood species completed and optimal ecological habitat requirements
- 1.3. Detailed ecosystem services, land use, and habitat maps of nine villages

Aim and objectives

The Rapid Village Assessments will collect field data to short-list priority wetlands for community management, and to screen the wetlands against the Ramsar assessment criteria (see below). The RVA uses seven tools/methods as listed in [Table 1](#).

Table 1. Summary of steps and objectives in the rapid village assessment methodology

Step #	Tool	Objective
1	Contextual Information Cover Sheet	Document the RVA process
2	Village Profile Datasheet	Gather/update basic village data
3	Sketch Mapping and Ground Truthing Transect	Gain overview of the site for reference in later steps; provide data to ground-truth the habitat map
4	Rapid Assessment of Wetland Ecosystem Services (RAWES)	Rapid assessment of ecosystems services
5	Wetland Site Threats Assessment	Identify key threats following the Ramsar standard typologies
6	Reptile interview survey checklist	Rapid Reptile Survey
7	Expert field surveys	Rapid Bird Survey

The assessment will be undertaken in 10 villages nearest to the priority wetlands identified by WWT (“Wetland extent and land-cover changes in the Upper Chindwin River KBA,

2000 to 2020”, first draft); see following map and table.

For practical purposes, the village surveys will be broken down into two clusters; Wetlands 1-6 around and north of Hkamti, and wetlands 7-10, between Hkamti and Maing Naing.

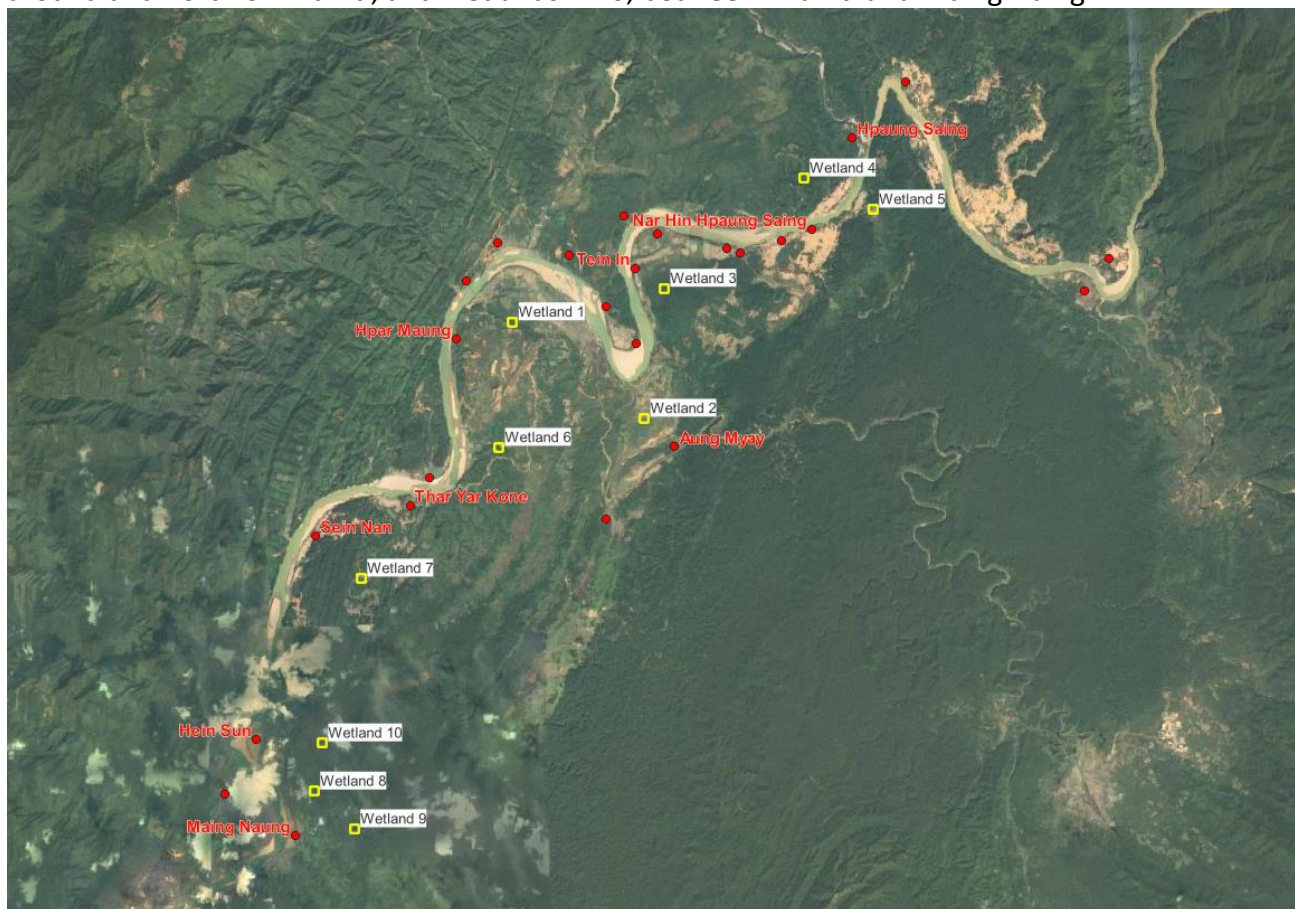


Fig 1: Proposed survey villages; all villages indicated with red dot, only survey villages are named. The wetlands are numbered as per the WWT initial assessment report.

Table 2. List of closest villages to each Wetland (initial screening of survey villages)

Wetland	Closest Village	Possible Other Village
1	Hpar Maung	Nant Mon, Hpakant
2	Aung Myay	Lar Wei
3	Kin Taw	Hnam Pin, Tein In, Ka Chin Ywar
4	Ma Kan Naung*	Nar Hin Hpaung Saing, Kaung Mu
5	Kaung Mu	
6	Thar Yar Kone	Ka Toe
7	Sein Nan	Thar Yar Kone
8	Maing Naung	Hein Sun
9	Maing Naung	
10	Hein Sun	

NB: This preliminary list assumes the nearest village to each wetland and on the same (ie, east) bank is the main source of users of that wetland, but this needs to be confirmed during the field survey.

* “New” village, ie, not included in the MIMU village dataset.

Ramsar Criteria

A wetland should be considered as internationally important if it meets one or more of the criteria described in [Table 3](#).

The RVAs will provide the information to define the boundary and ecosystems services, biological and livelihood values of each. Based on this information, it should be able to undertake a preliminary assessment of which criteria each wetland triggers. This will help prioritise the wetlands for follow-up activities.

Table 3. The nine criteria for identifying Wetlands of International Importance

Criterion	Definition	
1	Contains a representative, rare, or unique example of a natural or near-natural wetland type found within the appropriate biogeographic region.	
2	Supports vulnerable, endangered, or critically endangered species or threatened ecological communities.	
3	Supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region.	
4	Supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions.	
5	Regularly supports 20,000 or more waterbirds.	
6	Regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.	
7	Supports a significant proportion of indigenous fish subspecies, species or families, life-history stages, species interactions and/or populations that are representative of wetland benefits and/or values and thereby contributes to global biological diversity.	
8	Important source of food for fishes, spawning ground, nursery and/or migration path on which fish stocks, either within the wetland or elsewhere, depend.	
9	Regularly supports 1% of the individuals in a population of one species or subspecies of wetland-dependent non-avian animal species.	

Step 1: Contextual Information Cover Sheet

This Sheet records basic information about the Site, such as its name, size and location.

Name, affiliation and contact details for person responsible for completing the survey (email etc.)				
Date of assessment				
Name of village or wetland				
Alternate name				
Village tract				
Township				
District				
State/Region				
Approximate area (hectares and/or acres)				
Local conservation designations (eg, Reserved Forest, Wildlife Sanctuary etc)				
KBA name and number				
List any other International Designations e.g. World Heritage				
Wetland ownership details (please tick all that apply):	State	Private	Community	Other
Management Authority:				
Number of staff ¹ (put "none" if no staff assigned):	Permanent		Temporary	
No. of people involved in completing assessment				
Including: (tick boxes)	PA manager <input type="checkbox"/>	PA staff <input type="checkbox"/>	Other PA agency staff <input type="checkbox"/>	NGO <input type="checkbox"/>
	Local community <input type="checkbox"/>	Donors <input type="checkbox"/>	External experts <input type="checkbox"/>	Other <input type="checkbox"/>
	Site manager <input type="checkbox"/>		Government representative <input type="checkbox"/>	
Please note if assessment was carried out in association with a particular project, on behalf of an organisation or donor.				

¹ For sites that are managed for conservation, eg, nature reserves or Ramsar sites.

Step 2: Village Profile Datasheet

Date
 Surveyor(s)
 Respondents (and position)

Safeguards

- We have introduced ourselves, the project and its goals and outcomes, and this initial assessment to the respondents
- We have left a copy of the project description in a suitable place for public view
- We have been given initial consent to ask the information in this survey
- We have notified the respondents of the project grievance mechanism

Background

Village name	
Meaning of the name	
Year Established	
Year moved to this location	
Previous location	
Reason for moving	

Village history

Main events (eg, war, drought, famine, fire...). Start with the founding of the village at its current location.

Year or period	Event and description

Demographics

Approximate numbers may be used.

Total No. of HHs	
Total Women	
Total Men	
Total Children (<16 yr)	
Ethnicity/ethnicities	
Religion(s)	

Village sketch map

Start with roads, rivers and other key features. Add schools, leader's house, football pitch or play area, shops and other important social infrastructure, fields.

Vulnerable people (approximate numbers are sufficient)

Number or proportion (%) of households who depend on natural resources for their livelihood	
Number or proportion (%) of households that are female-headed households*	
Number or proportion (%) of households that are landless	
Months of hunger per year	
Any social problems (eg, drug abuse)	

* Note whether migration of labour affects this figure

Livelihood activities

Rank the following activities based on group consensus.

Activity	Rank	Notes
Fishing		
Livestock farming		
Rice cultivation		
Self-owned business		
Hunting		
Collection (insects etc.)		
Others (specify)		

Step 3: Sketch Mapping and Ground Truthing Transect

Before the field visit, print GoogleEarth images and topographic maps of each wetland site. Some assessment of habitat types is possible from this level of imagery but it is not always easy, especially for wetland habitats, so ground truthing is needed to confirm the main wetland components and their locations.

First sketch the wetland area(s) with knowledgeable community members, ideally people who use the wetlands regularly. Then transfer the results to the Google Earth or topographic map and walk around the accessible parts of the wetland. During this 'transect', modify and/or annotate the sketch map of habitats / land uses in the wetland.

- Following the initial sketch mapping, it is best if one of the field team is responsible for the final, annotated map to capture as much information as possible.
- Key habitat types that may be identified:
 - Non-wetland habitats: Forest, grassland, scrub
 - Wetland habitats: Flooded forest, wet grassland, emergent vegetation, floating vegetation, submerged vegetation, open water (including rivers and streams)
 - Land uses: Settlement, agriculture, road.
- Provide any additional habitat identification that may be relevant (type of agriculture, dominant vegetation species).
- Record at least 5-10 GPS waypoints per site. Ideally, GPS waypoints should be on the boundary of different habitats. Mark the waypoints on the sketch in full. If possible, use WGS84 and decimal degrees, and note the format and projection.

A sample map of the Tonle Bati wetlands in Cambodia is provided below.

RAWES assessments and bird surveys can then reference the sketch map.

- For each ecosystem service, write down the associated habitat and location that provides this service.
- For each bird seen, record the locations on the map.



Step 4: Rapid Assessment of Wetland Ecosystem Services (RAWES)

The following is adapted from RRC-EA (2020) *Rapid Assessment of Wetland Ecosystem Services: A Practitioners' Guide*. Ramsar Regional Center – East Asia, Suncheon, Republic of Korea.

Survey protocol in brief

Suggested workflow for each wetland site:

1. For each habitat type found at the site (see Step 3), complete the attached ecosystem services questionnaire (Appendix 1).
 - a. Record each ecosystem service – try to record some detail, not just yes or no for each question.
 - b. Estimate how many people benefit from the service (to the nearest order of magnitude).
 - c. Record the scale at which each service occurs (global, national or local).
2. The questionnaire should be completed by 2 observers, ideally the same 2 observers for all sites so that data collection is standardised across all sites. The observers are encouraged to hold discussions with locals to enhance knowledge of the site – either guides, or people in nearby villages.
3. Each questionnaire should take 20-30 minutes to complete, and there may be 5 to 10 habitat types at each site, each requiring a separate questionnaire. This means each site could take up to one day of fieldwork.
4. Biodiversity observations can be recorded at the same time as the ecosystem services assessment.

Ecosystem service	Describe benefit (Answer Yes or No and give a short description)	How many people benefit?	Scale of benefit
Provisioning services			
Important note! For all of the provisioning services, when recording how many people benefit, you need to record whether the resources are used personally or are sold on. Record the number of people who collect each resource and the number of people who buy them. This needs only be rough, for example 10 people, or 100 or 1000.			

Fresh water	Is the wetland a source of fresh water for people?		
	Is the wetland a source of fresh water for livestock?		
	Does the wetland store water for use in irrigation?		
	Negative service: is the wetland a source of pollution?		
Food	Are any crops grown in the wetland?		
	Are any plants harvested from the wetland for food?		
	Are any animals harvested from the wetland for food? For example, fish, crustaceans.		
	Do livestock feed in the wetland?		
Fuel	Is any material taken from the wetland to be used as fuel? For example, firewood or charcoal.		
Fibre	Is any material taken from the wetland to be used for building? For example, timber for houses and boats, or reeds for roofing.		
	Is any material taken from the wetland to be used for other purposes? For example, reeds for baskets.		
Natural medicines	Are any plants or animals harvested for their medicinal properties?		

Ornamental resources	Are any animals or plants collected for their ornamental value? For example, shells or flowers.		
Clay, mineral or aggregate harvest	Are sand or gravel extracted for use in construction?		
	Is clay extracted for use in brick making?		
Energy harvesting	Are natural water flows used to power equipment?		
Others?	Do people collect anything else from the wetland?		
	Negative service: does the wetland prevent people from collecting anything?		
Important note! For all of the provisioning services, it is important to record whether the harvest appears to be sustainable or may be damaging the wetland . If it is damaging the wetland, record the nature of this damage.			
Regulating services			
Air quality regulation	Is there a nearby source of air pollution that the wetland helps absorb?		
	Negative service: does the wetland emit any air pollution? For example, smoke from being burned, methane from decomposing vegetation.		
Local climate regulation	Does the wetland provide shade for people or livestock?		
	Does the wetland have areas of open water or wet vegetation? These will provide evapotranspiration, cooling the air.	Depends on the size of the wetland.	

Global climate regulation	Does wetland processes help to store carbon? For example, healthy wetland vegetation that forms deposits of peat.		
	Negative service: Does the wetland appear to generate greenhouse gases? For example, regular burning, or obvious methane production through decomposing vegetation.		
Water regulation	Is the wetland able to store water at time of high rainfall or river flow?		
	Does the wetland release water during the dry season?		
Flood regulation	Does the wetland store enough water to reduce flooding?		
Pest regulation	Does the wetland control populations of pest organisms? For example, by hosting predator species.		
	Negative service: Is the wetland a source of pest organisms?		
Human disease regulation	Do ecological processes in the wetland reduce human disease risk? For example, by filtering faecal matter from water.		
	Negative service: is the wetland contributing to spreading human disease? For example, large mosquito or tick populations.		
Livestock disease regulation	Do ecological processes in the wetland reduce livestock disease risk? For example, by filtering faecal matter from water.		

	Negative service: is the wetland contributing to spreading livestock disease? For example, mosquito populations.		
Erosion regulation	Does wetland vegetation protect soils from eroding?		
	Does the wetland slow water flows, preventing erosion downstream?		
	Are there any signs of erosion?		
Water purification	Are suspended solids in the water deposited in the wetland? For example, trapped by vegetation.		
	Do wetland processes clean incoming water?		
Pollination	Are there populations of pollinators in the wetland? For example, bees, wasps, butterflies, bats. Do they also pollinate surrounding crops or gardens?		
Fire regulation	Does the wetland help prevent the spread of fires? For example, ditches, streams and open water areas.		
	Negative service: do drained soils or dry vegetation help fires to spread?		
Cultural services			
Cultural heritage	Does the wetland have cultural importance? For example, an example of traditional uses or a cultural landscape?		
Recreation and tourism	Is the wetland used for organised or informal recreation?		

	Do tourists visit the wetland?		
	Are there wider benefits coming from these uses? For examples, restaurants and hotels.		
Aesthetic value	Is there a demand to site houses or other developments near the wetland? Is this demand a positive or negative for the region?		
	Is the wetland depicted in works of art?		
Spiritual and religious value	Does the wetland hold spiritual or cultural value to people?		
	Is the wetland used in religious ceremonies?		
	Are there any traditional management practices used at the wetland? For example, timing of crop planting or harvesting.		
Social relations	Have any communities formed around the wetland because of its usage? For example, fishing villages, birdwatching clubs, walking and jogging clubs.		
Education and research	Is the wetland used for educational purposes? For example, school visits or university researchers.		
	Are there any educational materials present for the public to look at?		

Step 5: Wetland Site Threats Assessment

Complete this assessment after the RAWES. It applies to the same geographic location and extent.

Please tick all relevant threats (both current and potential) as either of high, medium or low significance. Note that some of the activities listed are not always threats – only tick them if they threaten the site’s integrity in some way.

high significance are those threats which are seriously degrading values

medium significance are those threats having some negative impact

low significance are threats which are present but not seriously impacting values

N/A is where the threat is not present or not applicable in at the site

1. Residential and commercial development within the site

Threats from human settlements or other non-agricultural land uses with a substantial footprint

High	Med.	Low	N/A	Threat	Notes
				1.1 Housing and settlement	
				1.2 Commercial and industrial areas	
				1.3 Tourism and recreation infrastructure	

2. Agriculture and aquaculture within the site

Threats from farming and grazing as a result of agricultural expansion and intensification, including silviculture, mariculture and aquaculture

High	Med.	Low	N/A	Threat	Notes
				2.1 Annual and perennial non-timber crop cultivation	
				2.1a Drug cultivation	
				2.2 Wood and pulp plantations	
				2.3 Livestock farming and grazing	
				2.4 Marine and freshwater aquaculture	

3. Energy production and mining within the site

Threats from production of non-biological resources

High	Med.	Low	N/A	Threat	Notes
				3.1 Oil and gas drilling	
				3.2 Mining and quarrying	
				3.3 Energy generation, including from hydropower dams, wind farms and solar panels	

4. Transportation and service corridors within the site

Threats from long narrow transport corridors and the vehicles that use them including associated wildlife mortality

High	Med.	Low	N/A	Threat	Notes
				4.1 Roads and railroads (include road-killed animals)	
				4.2 Utility and service lines (e.g. electricity cables, telephone lines,)	
				4.3 Shipping lanes and canals	
				4.4 Flight paths	
				4.5 Ports with large scale loading and unloading of products	

5. Biological resource use and harm within the site

Threats from consumptive use of "wild" biological resources including both deliberate and unintentional harvesting effects; also persecution or control of specific species (note this includes hunting and killing of animals)

High	Med.	Low	N/A	Threat	Notes
				5.1 Unsustainable and illegal hunting, killing and collecting terrestrial (native) animals	

				(including killing of animals as a result of human/wildlife conflict)	
				5.2 Gathering terrestrial (native) plants or plant products (non-timber)	
				5.3 Logging and wood harvesting	
				5.4 Fishing, killing and harvesting (native) aquatic resources	

6. Human intrusions and disturbance within the site

Threats from human activities that alter, destroy or disturb habitats and species associated with non-consumptive uses of biological resources

High	Med.	Low	N/A	Threat	Notes
				6.1 Recreational activities and tourism	
				6.2 War, civil unrest and military exercises	
				6.3 Research, education and other work-related activities at the site	
				6.4 Activities of site managers (e.g. construction or vehicle use, artificial watering points and dams)	
				6.5 Deliberate vandalism, destructive activities or threats to protected area staff and visitors	

7. Natural system modifications

Threats from other actions that convert or degrade habitat or change the way the ecosystem functions.

High	Med.	Low	N/A	Threat	Notes
				7.0 Habitat clearing	
				7.1 Fire and fire suppression (including arson)	
				7.2 Dams, hydrological modification and water management/use	
				7.3a Increased fragmentation within the site	
				7.3b Isolation from other natural habitat (e.g. deforestation, dams without effective aquatic wildlife passages)	
				7.3c Other 'edge effects' on wetland values	
				7.3d Loss of keystone species (e.g. top predators, pollinators etc)	

7a. Hydrological change

High	Med.	Low	N/A	Threat	Notes
				7a.1 Dams within or upstream of site altering hydrological regime	
				7a.2 Water extraction/diversion within site or catchment	
				7a.3 Excess ponding of water in site (e.g. for flood storage)	
				7a.4 Loss of hydrological connectivity (e.g. via stop banks)	
				7a.5 Drought conditions	
				7a.6 Desertification	

8. Invasive and other problematic species and genes

Threats from terrestrial and aquatic non-native and native plants, animals, pathogens/microbes or genetic materials that have or are predicted to have harmful effects on biodiversity following introduction, spread and/or increase

High	Med.	Low	N/A	Threat	Notes
				8.1 Invasive non-native/alien plants (weeds)	
				8.1a Invasive non-native/alien animals	
				8.1b Invasive native species (plants or animals)	
				8.1c Pathogens (non-native or native but creating new/increased problems)	
				8.2 Introduced genetic material (e.g. genetically modified organisms)	

9. Pollution entering or generated within the site

Threats from introduction of exotic and/or excess materials or energy from point and non-point sources

High	Med.	Low	N/A	Threat	Notes
				9.1 Household sewage and urban waste water from outside the site	
				9.1a Sewage and waste water from facilities at the site (e.g. toilets, hotels etc)	
				9.2 Industrial, mining and military effluents and discharges (e.g. unnatural temperatures, de-oxygenated, higher salinity, other pollution)	
				9.3 Agricultural and forestry effluents (e.g. excess fertilizers or pesticides)	
				9.4 Garbage and solid waste	
				9.5 Air-borne pollutants	
				9.6 Excess energy (e.g. heat pollution, lights etc)	

10. Geological events

Geological events may be part of natural disturbance regimes in many ecosystems but they can be a threat if a species or habitat is damaged and has lost its resilience and is vulnerable to disturbance. Management capacity to respond to some of these changes may be limited.

High	Med.	Low	N/A	Threat	Notes
				10.1 Volcanoes	
				10.2 Earthquakes/Tsunamis	
				10.3 Avalanches/ Landslides	
				10.4 Erosion and siltation/ deposition (e.g. shoreline or riverbed changes)	

11. Climate change and severe weather

Threats from long-term climatic changes which may be linked to global warming and other severe climatic/weather events outside of the natural range of variation

High	Med.	Low	N/A	Threat	Notes
				11.1 Habitat shifting and alteration	
				11.2 Droughts	
				11.3 Temperature extremes	
				11.4 Storms and flooding	

12. Specific cultural and social threats

High	Med.	Low	N/A	Threat	Notes
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				12.1 Loss of cultural links, traditional knowledge and/or management practices	
				12.2 Natural deterioration of important cultural site values	
				12.3 Destruction of cultural heritage buildings, gardens, sites etc	

Step 6: Rapid Reptile Survey

This section to be, but a few questions during the key informant conversation are envisioned, eg:

1. Are there turtles in this area?
2. In which locations are they found (name, and indicate on map)?
3. When was the last time you know that one was seen?
4. Do people collect them?
5. For what purpose(s)?
6. Compared to 5 years ago, are they more common, less common, the same?
7. Compared to 30 years ago, are they more common, less common, the same?

Note to interviewer: If possible, try to assess how many species may be present, and some of their key characteristics. Once this is established, show pre-prepared images of any turtles and ask questions for confirmation, but try not to lead the respondents to a conclusion, eg, ask “Is this one here? Which one is this?” rather than “It’s this one isn’t it”. Include images of at least one turtle that is definitely not present in the area to get a sense of the reliability of the informants.

Step 7: Rapid Bird Survey

At some point during the RVA, undertake at least 3 hours of birding in the wetland. Record date, start and end times, and who was present. Where possible identify to species to create a bird list, but at least note approximate numbers in the following categories:

Wildfowl	Rails, Crakes and Coots
Divers and Grebes	Cranes
Cormorants and Darters	Waders
Pelicans	Terns and Gulls
Bitterns and Herons	Kingfishers, Bee-eaters, Rollers, Hoopoe
Storks	Dippers
Raptors (Birds of Prey)	

Any exceptional records should also be recorded, eg, signs of breeding, large roosts or congregations. Note also any signs of poaching or other forms of persecution.