



NEOTROPICAL WATERBIRD CENSUS

How to participate in the Neotropical Waterbird Census?

Introduction

In this guide information is provided regarding how to participate in the Neotropical Waterbird Census. General information will be provided regarding how to use the spreadsheets, census dates, how to select sites, how to insert the gathered data in the database and other related issues. Further this publication contains a guide regarding how to prepare and present the annual report.

If any other question rises, please contact the NWC technical coordinator (arne@wamani.apc.org).

1. The NWC forms

The Participants will receive two forms (**SITE** and **COUNT**); one for information regarding the site visited and the other for the bird counts. Those forms will be send digitally to the national coordinator which will distribute them among all participants.

The **SITE - form** must be completed only during the first census at a site. In case that in posterior years, updated information can be provided, it is recommended to complete the forms again and send to the National Coordinator. Each site will have a site-code, which will be developed by Wetland International, Buenos Aires.

NOTE: *Please name sites accurately and as short and simple as possible.*

The **geographic coordinates** of the site are of high importance for developing maps and to carry out spatial analysis. Please check carefully that they are properly recorded. If you can add a map or sketch highlighting most prominent characteristics and reference points, this will be greatly appreciated.

The format of the coordinates as used in the NWC database is as follows: Sddmm (or Nddmm); Wdddmm. (Example: Laguna Arapano, Venezuela; N1059W06405). See also the example database in excel.

The **COUNT - form** is used to record numbers of birds surveyed. This form is specific to each country and has been prepared based on a waterbird list as suggested by the National Coordinator. We are currently reviewing the forms in order to update where necessary.

We are grateful when the forms of the census are completed as much as possible and consequently sent to the National Coordinator, preferable no later than the end of August (for July census) and late March (for February census). We particular suggest to keep copies of the forms sent.

2. Dates of the census

The approximate dates of the waterbird census are **5 to 20 February** for the summer census and **5 to 20 July** for the winter census. These dates keep changing slightly every year in order to include three weekends and allow those who must use their free time to have more options to go into the field.

3. Data Base

Gathered data during the NWC must be filled in the database by the national coordinator, after having received all count and site forms from participants. The database contains three spreadsheets; "Sites", "Census" and "Count". All data in the database reflects the entire data completed on the forms. The key among all three spreadsheets is the site code, which will be given by Wetlands International.

The first spreadsheet, Sites, will only have to be filled in once for each visited site, whereas the other two spreadsheets, Census and Count, will have to be filled in after every census. Nevertheless, in case that in posterior years, updated information can be provided on a particular site, it is recommended to add new data to the database.

Self explanatory information can be found in the empty NWC database in excel, send along with this document.

If questions arise, please don't hesitate to contact the Technical Coordinator.

4. General guidelines

1. The first task will be defining site, which can include an entire wetland or only part of it. In the latter case it is very important to define the boundaries of the area covered, in order to be able to repeat the same census each year and thus ensure that data is comparable in following counts. For more information and assistance to define a site you can write to the National Coordinator.
2. If possible, as much as critical wetlands as possible should be surveyed. Critical wetlands can be Birdlife's Important Bird Areas, designated Ramsar sites, WHSRN sites or any other legally protected wetland.
3. It is important trying to survey the same sites with the same method every year in order to be able to make comparisons. Remember, most valuable information comes from those sites counted each year by the same observer. Don't combine sites that previously were separately counted and make sure to fill in new forms for every new site. On forehand, make sure a site has or has not been surveyed in the past!
4. Always use the same name for each surveyed site.
5. Count all waterbirds present at the site, trying to give the most accurate count for each species (data like "hundreds" or "thousands" are not very useful).
6. Juvenile birds of species should be included in the total count of each species, but not chicks. However, it is interesting if observations of nests with chicks are included in the comments section of the forms.
7. If there are not many birds at a site as normally recorded, indicate possible reasons (e.g. drought, flood, the presence of hunters, etc.), in the "state of wetland" section or in the comments box.
8. If you notice an absence of a species that once frequented a particular site in large numbers, include this information on the COUNT-form, clarifying that no birds were present.
9. If a species is recorded that is not listed on the form, you can add it on the comments section or on a separate sheet. If not a waterbird species according to Wetlands International, then please do not add these numbers to the totals of birds and species surveyed. In appendix I a list of all South American waterbird families according to Wetland International is given.
10. Don't duplicate efforts. For each site it is necessary to complete one form. If more than one

observer surveyed the same site, results should be joined and completed on just one form (beware of double counts!).

11. Upon completion of the form carefully check whether the data of each species has been filled in on the right lines and that there is no confusion regarding scientific names.

12. If you believe that one or more of your sites is facing a serious threat like destruction or degradation, please inform the National Coordinator.

5. The quality of the information

The usefulness of the information gathered from the census will depend on its quality.

We know that between completion of the forms and the publication of the annual report and storage in regional database, numerous errors can occur. For example, in the field mistakes can be made regarding a marked underestimate or overestimate of the number of waterbirds present at one site, or by failing to properly identify a conspicuous and/ or difficult to identify species. Often, also mistakes are being made while completing the forms (filling in counts on the wrong line) or while inserting data into the database.

6. Problems with estimated numbers

Waterbird counting, particularly in the case of large flocks of ducks and migratory shorebirds, can be difficult, and even experienced people may show noticeable differences in estimating abundances. The best you can expect is a reasonable estimate with a low standard error (for example between 10% and 20%). In this case it is always advisable to have a second or third opinion at the time of completing the information on the forms.

The only solution to errors in estimations is by experience gained with practice and by comparing own estimates with those of other observers. A particularly useful exercise is to quickly estimate small or medium sized flocks, and then to count one by one all individuals to check the accuracy of the estimate.

In the case of difficulties in determining count numbers of waterbirds and as a result of vague estimates, it is important to make a note of it in the comments section of the forms.

7. Problems with the identification of species

In theory there should be few problems with the identification of waterbirds in the Neotropical Region, since most species are relatively easy to distinguish and in addition there are good guides for identifying birds in the field, at least for most of the countries in the region.

However, even with the best guide in hand, identifying some species can be problematic, for example with the small rail species and some species of migratory shorebirds. Also in mixed flocks of flamingos or coots distance can cause problems when identifying to species level. In cases where it is not possible to make the identification at the species level, counts can be filled in on the line of for example "ralidae spp.", shown on the forms.

Of high importance is the correct identification of rare or threatened waterbird species. Counts of these species should be well verified by other observers before adding to the spreadsheet.

A contents guide for the annual report

- **Summary in English** (1/2 page)
- **Introduction**
Presentation of the country, including a brief description of its geographical location and political division. An overview of wetlands, and their role as waterbird habitat. Information regarding the current situation of wetlands.
- **List of participants** in alphabetical order. Include a list of organizations that collaborated with censuses in the country
- **Census results** (separate by date: February and July)
 - **General overview of the census:** number of sites visited, number of counted waterbirds and number of species observed. Comparison with previous years (if possible) regarding coverage and participation. Any other aspects of particular interest.
 - **Comments on sites** regarding high counts of waterbirds or rich species diversity. Include data regarding most representative groups and species of waterbird. Also information regarding the status of a particular site, human activities, threats, etc. can be included.
 - **Comments on species** or groups of species of special concern for conservation and/ or rare and hypothetical records.
- **Comments on gaps in information** regarding important sites for waterbirds that are not covered by the census and should be included in the future. **(OPTIONAL)**
- **Conclusion/ discussion. (OPTIONAL)**
- **Photo** of a visited site or observed waterbird(s) during the census
- **Sites table:** indicating total of birds and species for every site and grouping sites by political division (i.e. states, departments, provinces, etc).
- **Species table:** indicating total number of birds recorded, separated by both months February and July (nomenclature should follow Wetlands International 2006).
- **Map** of the country indicating all visited sites to give an idea regarding coverage.

APPENDIX I.

Waterbird families of the Neotropics (according to wetlands International)

PODICIPEDIDAE	(Grebes)
PELECANIDAE	(Pelicans)
PHALACROCORACIDAE	(Cormorants)
ANHINGIDAE	(Darters)
ARDEIDAE	(Hérons)
CICONIIDAE	(Storks)
THRESKIORNITHIDAE	(Ibises and Spoonbills)
PHOENICOPTERIDAE	(Flamingos)
ANHIMIDAE	(Screamers)
ANATIDAE	(Ducks, Geese and Swans)

GRUIDAE	(Cranes)
ARAMIDAE	(Limpkin)
RALLIDAE	(Rails, Gallinules and Coots)
HELIORNITHIDAE	(Finfoots)
EURYPYGIDAE	(Sunbittern)
JACANIDAE	(Jacanas)
ROSTRATULIDAE	(Painted-Snipes)
HAEMATOPODIDAE	(Oystercatchers)
RECURVIROSTRIDAE	(Stilts and Avocets)
BURHINIDAE	(Thick-knees)
CHARADRIIDAE	(Plovers)
SCOLOPACIDAE	(Sandpipers, Snipes and Phalaropes)
THINOCORIDAE	(Seedsnipes)
LARIDAE	(Gulls)
STERNIDAE	(Terns)
RHYNCHOPIDAE	(Skimmers)
SPHENISCIDAE*	(Pinguins)
SULIDAE*	(Boobies)
PHAETHONTIDAE*	(Tropicbirds)
FREGATIDAE*	(Frigatebirds)
STERCORARIIDAE*	(Skuas and Jaegers)

* Waterbird families that are being considered for aggregation in future publications of wetlands International