

SADC REGIONAL PROGRAMME FOR RHINO CONSERVATION

WILDB

NATIONAL DATABASE
VERSION 1.01

REFERENCE MANUAL



COOPERAZIONE
ITALIANA

ITALIAN COOPERATION

AID 5064



IUCN
The World Conservation Union



SPECIES SURVIVAL COMMISSION
AFRICAN RHINO SPECIALIST GROUP

PUBLICATION CREDITS:

Title: *WILDb* National Database version 1.01: Reference Manual
Author: Craig Springett & Wendy Marshall
Date: March 2003
Special acknowledgements: Rose Hamilton & Neil Langley, Sarah & Bruce Clegg, Graham Connear, Raoul du Toit and Rob Brett

This report is an output from a task of the **SADC Regional Programme for Rhino Conservation**.

ABOUT the SADC Regional Programme for Rhino Conservation:

The Programme is funded by the Italian Ministry of Foreign Affairs, Directorate General for Development Cooperation (Project AID 5064).

The Programme is contracted to CESVI and implemented through a regional consortium which comprises:

- The Secretariat of the Southern Africa Development Community (SADC)
- IUCN-ROSA (The World Conservation Union - Regional Office for Southern Africa)
- The IUCN African Rhino Specialist Group
- WWF-SARPO - (World Wide Fund for Nature - Southern Africa Regional Programme Office)
- CESVI (Cooperazione e Sviluppo)

The **Programme goal** is to contribute to maintain viable and well distributed metapopulations of Southern African rhino taxa as flagship species for biodiversity conservation within the SADC region.

The **Programme objective** is to implement a pragmatic regional rhino strategy within the SADC region following the acquisition of sound information on, firstly, the constraints and opportunities for rhino conservation within each range state and secondly, the constraints and opportunities for rhino metapopulation management at the regional level.

DISCLAIMER

The information, opinions and materials presented herewith do not necessarily reflect the official views of any of the organisations involved, including the Italian Ministry of Foreign Affairs, SADC, CESVI, IUCN-ROSA, WWF-SARPO, AfRSG or governments of SADC member countries.

CONTACT DETAILS FOR THE PROGRAMME:

Dr. Rob Brett
SADC Regional Rhino Programme Coordinator
IUCN-ROSA
6 Lanark Road Belgravia PO Box 745 Harare,
Zimbabwe
Tel: 263-4-728266 Fax: 263-4-720738
Email: robb@iucnrosa.org.zw
CESVI Zimbabwe Office
9 Northwood Rise, Mt Pleasant, Harare, Zimbabwe
TEL/ FAX: 263-4-882243, 884492, 850898
EMAIL: cesvi@africaonline.co.zw

SADC Secretariat
Directorate of Food, Agriculture and Natural Resources
P O Box 0095 Gaborone Botswana

Ministero degli Affari Esteri
Direzione Generale per la Cooperazione allo Sviluppo,
Unità Tecnica Centrale
Viale Contarini (angolo Viale Farnesina)
00194 ROMA ITALY

PROGRAMME WEB SITE: We invite you to visit our web site : www.rhino-sadc.org

Table of Contents

| | |
|--|----|
| Table of Contents..... | 3 |
| Introduction..... | 4 |
| Using this manual | 4 |
| Main Menu | 5 |
| Individuals Zone | 6 |
| Individual Details Page..... | 6 |
| Relationships Page..... | 9 |
| Female Statistics on the Relationships Page..... | 10 |
| History Page..... | 11 |
| Events zone..... | 12 |
| Event Types | 12 |
| Event Details Page..... | 13 |
| Event Details..... | 13 |
| Participant Details..... | 15 |
| Extra Details | 18 |
| Death details | 18 |
| Offspring details | 18 |
| Population Summary zone..... | 19 |
| Individuals Summary page | 19 |
| Calving Summary page..... | 20 |
| Event Summary page..... | 21 |
| Population Counts page..... | 22 |
| Count Breakdown..... | 22 |
| Count Details | 22 |
| Population Growth Rate | 23 |
| Customise WILDb Zone..... | 24 |
| Setup page..... | 24 |
| Lookup Values page | 25 |
| Event Types page..... | 25 |
| Species page..... | 25 |
| Age Classifications page..... | 26 |
| Export Reference Data Zone | 27 |
| Import from Site Db zone..... | 28 |
| Import Individuals | 29 |
| Remove Deleted Site Individuals | 30 |
| Match Parents | 30 |
| Identify Duplicates..... | 31 |
| Import Events..... | 31 |
| Import Population Counts..... | 31 |
| The Error Log | 31 |

Introduction

The WILDb National (Summary) Database is a Microsoft Access Database Application designed to aggregate and analyse data collected at ‘subpopulation’ level with the WILDb Local Database application. It was developed for use by National Parks and Conservancies by WWF SARPO as part of the SADC Regional Programme for Rhino Conservation, funded by the Italian Ministry of Foreign Affairs, Directorate General for Development Cooperation. The developers (Craig Springett & Wendy Marshall) acknowledge the developers of the KZN Wildlife Animal Population Database (Rose Hamilton & Neil Langley), and the Malilangwe Wildlife Database (Sarah & Bruce Clegg), for the species tables used in this database, and the input of Graham Connear, Raoul du Toit and Rob Brett.

Using this manual

This document is a more detailed supplement to the WILDb “Getting Started” manual, and assumes you are familiar with the introductory material presented there.

It is broken into several parts, each providing a detailed description of one of the WILDb “zones” (see “Main Menu” on page 5).

Note that the screenshots in this manual containing example records do not necessarily represent realistic data.

Main Menu

The WILDb Main Menu provides access to the functional zones of the application using graphical buttons. Click one of these buttons to access a zone (or form). It is possible to have more than one form open at a time.



1. *Individuals* – This is where you view as well as record information about identifiable animals.
2. *Events* – This is where you view and record specific ‘happenings’ involving both known Individuals and animals that cannot be identified. Events recorded here may automatically update records in the Individuals zone.
3. *Population Summary* – Shows summarised details about the whole subpopulation, plus statistics derived from that data and the ability to record population counts.
4. *Customise WILDb* – Used to set up reference data such as SubPopulations, Reporting Periods, and Event SubTypes. The Customisation zone also allows you to define information about Species and Age Classifications.
5. *Export Reference Data* – Use this to create an export file containing system look-ups (Subpopulations etc) and Event Subtypes. Send this file to the sites for importing so they can use the new system values.
6. *Import from Site DB* – Use this to import a site’s summary data into the National Database

Individuals Zone

From *Individuals* you can view as well as create, edit, and delete details about identifiable animals in the imported subpopulations. These animals should be positively identifiable by significant markings – if you're not sure then don't record the animal here. Instead, sightings can be logged for "unidentified animals" in *Events*.

Individuals is split into four pages containing details about an Individual: "Individual Details", "Relationships", "History", and "Photos".

Individual Details Page

Individual Details Relationships History

Sub Population: Save Valley

National ID: 894 (or 22/Z/M/S) (check for other)

Species: rhino, white

Name: Jenny

Former Name:

Sex: Female

Date of Birth: 01-Jan-78

DOB Accuracy: Unknown

Introduced? 10-Apr-02

Current Status: Independent

Status Date: 27-Nov-01

Recognised:

Independent: 01-Jan-80

Site History:

| SubPopulation | Site IndividualID | Status | Start Date | End Date |
|---------------|-------------------|-------------|------------|-----------|
| Mallangwe | 127 | Independent | 26-Mar-02 | 14-Apr-02 |
| Save Valley | 1 | Independent | 14-Apr-02 | |

SubPop-> Save Valley
Species-> rhino, white
Nat ID-> 894
Name-> Jenny

Breeding Age?
Age Category: > 7 years
Current age: 295 (mths)

<- Goto Events

<- Print Report

<- Individual Filters (Off)

<- Find Individual

<- New Individual

Record 1 of 26

Details last updated: 17/08/2002 6:01:36 PM Edited At National Level?

This is the page on which you can directly edit details about an Individual. Required fields have red borders – the others you can ignore if you wish.

National ID is automatically allocated by WILDb, either when the animal is first imported from a site or when you create it manually. The generated ID should be provided to the site so they can record it locally. Shown after this is an **Alternate ID**, which is optional.

Species must be recorded (you can add a new species in the *Customise WILDb* zone). At the top of the drop down list are all the species for which Individuals have been recorded in your database. Following these are all other known species, in alphabetical order.

TIP: You cannot change an Individual's species if it has been involved in any Events with other animals. This is because each Event can pertain to only one species.



Date of Birth must be entered for all Individuals. This is because it is used in age calculations and population statistics. To select from a calendar, click the "Calendar" button. You can specify how accurate you think this birth date is with the **DOB Accuracy** field. Note that the Accuracy field does not currently affect calculations of age, etc.

If the **Mother** or **Father** is another Individual in the database (from any subpopulation) then you can select them from the list provided. This will help WILDb build the data on the Relationships Page. Otherwise you can tick the "check for other" box to manually enter the name of the parent.

Introduced should be ticked if the animal was introduced into the subpopulation rather than having been born there. This can be used to filter introduced animals out of certain population statistics – for example "Average Age at First Calf" should ignore Mothers who may have had unrecorded calves before they arrived at this site. The date beside this checkbox represents **Introduced Date**. Again, you can use the "Calendar" button to choose from a calendar.

Current Status is listed as either Dependent, Independent, Dead, or Removed. The first two refer to the Individual's dependence on its mother (and/or father for some species). "Removed" means that the animal is no longer part of this subpopulation, so should be excluded from Population Statistics. **Status Date** is the date that the status was last changed.

Certain Events can automatically update these fields. For example, when a "Death" Event is recorded the status of all Individuals involved can automatically be updated to "Dead". When an "Emigration" or "Removal" Event is entered, the status of Individuals can be updated to "Removed". In both cases, WILDb will ask you if you want to proceed with the status change(s).

Recognised date is the date when the Individual was first uniquely identifiable (this may be after having been tagged, for example). This will be initialised to the date an Individual record was created.

Independent date indicates when the Individual changed from *Dependent* to *Independent* status. This is set automatically when the status changes – whether that change is made manually or through an Event.



This image
represents
Unknown sex

The *Individuals* main page also provides some summary information pertaining to the Individual. Apart from an image representing its *sex*, the animal's current *age* (or age at death) is calculated and displayed here with the corresponding *Age Category* and whether this represents a *Breeding Age*. These categories are fully configurable for each species using the *Age Classifications* page on the *Customise WILDb* form.

The **Site History** box tells you where the animal has been recorded in the past. In the example screenshot above, “Jenny” was recorded at Malilangwe from March 26 to April 14 2002, and in Save Valley since then. The **SiteIndividualId** shows you the local WILDb Ids assigned to the animal at those sites. These Ids are mapped to the National Id in the National Database.

Finally, **Edited At National Level?** tells you whether or not this record has been changed since it was imported from the site database.

Relationships Page

Individual Details Relationships History

Mother: Maggie
Father: *Unknown*

SubPop-> Save Valley
Species-> rhino, white
Nat ID-> 894
Name-> Jenny

Go To Birth Event

Jenny

♀
Age at First Calf: 250.1 mths
Avg Calving Interval: 21.6 mths
Next Calf Expected: 9/06/2004
Using Species Avg Interval: 21-Dec-23

Identified Siblings

| Type | Name | Sex | Age(Mths) | AgeCategory | Status |
|----------|------|-----|-----------|-------------|-------------|
| Maternal | Bob | M | 32 | 3.5-7 years | Independent |

(Double-click to edit individual)

Unidentified Offspring

| Sex | Age(Mths) | AgeCategory | Status |
|-----|-----------|-------------|-----------|
| M | 1 | <= 1 month | Dependent |

(Double-click to edit event)

Identified Offspring

| Name | Sex | Age(Mths) | AgeCategory | Status |
|--------|-----|-----------|-------------|-------------|
| Millie | F | 26 | 2-3.5 years | Dependent |
| Edwina | F | 44 | 3.5-7 years | Independent |

(Double-click to edit individual)

This page shows animals related to the Individual (across all subpopulations) plus calving details for females. It is a view of the data only – it cannot be edited directly from this screen. You can, however, jump to the relevant *Events* and/or *Individuals* record by “double-clicking” on a row (as indicated on the screen).

Note that “**Identified**” Offspring are those that have been imported or entered into the database as recognised Individuals. “**Unidentified**” Offspring are those which have not yet been recorded as Individuals – they only appear in the details of a Birth Event.

You can:

- Double-click on a parent to view the parent details;
- Double-click on a sibling to view the sibling details;
- Double-click on an “Unidentified Offspring” to view the Event at which the calf was born;
- Double-click on an “Identified Offspring” to view the Calf details;
- Click the “Go To Birth Event” button (if enabled) to view the Event at which this Individual (Jenny in the example above) was born.



Female Stats
explained

Female Statistics on the Relationships Page

If you are looking at a female animal, you will see some extra statistics in the *Relationships* form:

- **Age at first calf** is the calculated age of the Individual when it had its first *recorded* calf (whether the calf has now been identified or not)
- **Avg Calving Interval** is the average length of time between calves for this Mother (only shown if she has had at least two calves)
- **Next Calf Expected** is the date resulting from adding the Individual's Average Calving Interval to her last calving date
- **Next Calf using Species Avg Interval** is the same as the previous field, except that it uses the Average Calving Interval of the whole Species instead of just this Mother's average. Note that this average is calculated *including* Introduced mothers.

History Page

Individual Details Relationships History

Display No Sighting alarm after: 6 months
No. Sightings in Last 6 Months: 1

SubPop-> Save Valley
Species-> rhino, white
Nat ID-> 894
Name-> Jenny

| Most Recent: | ID | Date | Type | Sub Type |
|--------------|----|-----------|--------------|----------|
| Event | 13 | 17-Aug-02 | Reproduction | Birth |

Event History:

Event Type: Sighting Show All Event Types
SubType: Visual Show All Sub Types
Reporting Period: Last 3 Months Show All Dates
Start:
End:

<- Retrieve Results
0 Records

This page lists the latest recorded Event for the Individual.

The “No Sighting alarm” will provide a warning if the Individual isn’t sighted for the specified number of months. There is a default for each Species (on the *Species* form in the *Customise WILDb* zone), but here you can override that default if required. This is optional – leave it blank to keep the Species default.



“Retrieve Results” button

Click on the “Retrieve Results” button to see a count and list of recent Events for this Individual of the type specified under the “Event History” section. You can restrict the time period shown using “Reporting Period”. Choose the “Specify Range” period if you want to type in a date range yourself.

You can view details any of the Events referred to on this page by double clicking on the relevant row.

Events zone

In *Events*, you can Create, Edit, Delete and View details about Sightings, Births, Immobilisations, Translocations, and other important occurrences. Within these Events you can add *Participants* – recorded Individuals, unidentified animals, or both.

Event Types

Events can be one of several broad types, each of which has a number of “subtypes” (you can add to the latter if you wish using *Customise WILDb*).

Following are the available Event Types:

- **Sighting** – for recording a sighting of animal(s).
- **Emigration** – for recording a migration *out* of the subpopulation
- **Immigration** – for recording a migration *in* to the subpopulation
- **Introduction** – for recording the *import* of an animal(s)
- **Removal** – for recording the *export* of an animal(s)
- **Death** – for recording the Death of an animal(s)
- **Reproduction** – for recording the Birth of an animal or “litter”
- **Immobilisation** – for recording the Immobilisation of an animal(s)

Event Details Page

Introduction (Ecolog. Reasons) Data Verified?

Sub Population: Save Valley

Event Type: Introduction

Sub Type: Ecolog. Reasons

Date/Time: 01-Jan-00

Accuracy: Unknown

Species Code: rhino, white

Accredited Observer?

Participants

| Name | Sex | Age Category |
|---------|-----|--------------|
| Jeffrey | M | > 7 years |
| Susan | F | > 7 years |
| 1 Clean | U | 6-11 months |

Select -> + -

Group Size -> 3

Extra Details:

Alternate Ref:

From/To Subpopulation: Bubiana

Capture Date: 01-Dec-99 Release Date: 01-Jan-00

Capture Boma Period: 2 (days) Release Boma Period: 2 (days)

SubPop -> Save Valley
Species -> rhino, white
Event ID -> 3
Partcptnt -> Jeffrey

<- Goto Individuals

<- Verify All

<- Print Report

<- Event Filters (Off)

<- Find Event

<- New Event

Details last updated: 8/09/2002 9:54:58 PM Edited At National Level?

Record 29 of 38

This page shows Event details summarised for the National Database. Local Site versions of WILDb allow for the recording of more detail.

There are four main sections. The **Event Details** on the left side, the **Participant Details** in the middle, **Extra Details** at the bottom, and the **Navigation and control buttons** on the right. The latter have mostly been explained in the “Getting Started” Manual. The others are described here.

Event Details

This is where general details about the Event are shown. The fields are *not* recorded separately for each Participant. Fields outlined in red must be filled in.

Event Type holds one of the eight types listed above, and must be filled in. Note that Reproduction events can only have one (female) participant – the mother.

Sub Type is the Event Subtype. These are specific to Event Type. The list can be added to in *Customise WILDb*, but you can’t delete or change the Subtypes supplied with WILDb.

In **Date/Time** you can record the date and time that the Event *occured* (not the date of recording). This may be a “best guess” – Date **Accuracy** can be specified below. For Death Events, you can record the actual date of discovery in the *Extra Details* section (see page 18).

Species Code will be disabled (greyed out) once a participant has been added, since you can only have participants of a single species in the Event. Species that have been recorded as Individuals in the database are at the top of the drop-down list.

Accredited Observer shows whether or not the recording officer was listed as ‘accredited’ by the site.

The site’s database administrator may tick **Data Verified** to show that they are satisfied with the accuracy of the record. This feature may also be used at the National level.





“Verify All”
button

TIP: You can use Filters to scroll through all non-verified records. Use the “**Verify All**” button to tick all records in the current filter (a Rhino researcher may not care about the accuracy of Leopard sightings, for example).

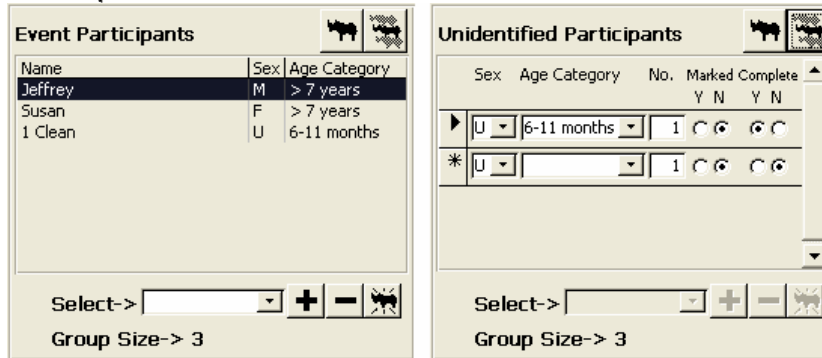
Details last updated tells you when the Event record was last changed, and **Editted at National Level** shows whether or not this record has been changed since it was imported from the site into the National database.

TIP: When you create a **new Event**, some fields will be copied forward to the new record. These fields are: Type, Subtype, and Species.

Any active filters will be reset when you create a new event.


 “Participants View” button,
 and

 “Unidentified Participants View” button


Participant Details



The screenshot shows two side-by-side panels. The left panel, titled "Event Participants", contains a table with columns "Name", "Sex", and "Age Category". It lists Jeffrey (M, > 7 years), Susan (F, > 7 years), and 1 Clean (U, 6-11 months). Below the table are a "Select->" dropdown menu, a "+" button, a "-" button, and a "Group Size-> 3" label. The right panel, titled "Unidentified Participants", has a similar layout but with a table for recording new entries. It includes columns for Sex, Age Category, No., and Marked Complete (Y/N). The table shows two rows: one with "U", "6-11 months", "1", and "Y N Y N", and another with "U", a blank, "1", and "Y N Y N". It also has a "Select->" dropdown, "+" and "-" buttons, and a "Group Size-> 3" label.

The Participant Details section has two alternative views as shown above – the “Event Participants” view and the “Unidentified Participants” view. The former shows the **Participants Listbox**, which lists *all* the animals involved in the Event. The latter contains the **Unidentified Participants Form**, which allows you to record those animals that were not successfully identified. You can toggle between these views using the buttons shown at left.

Note that you can only add known Individuals to the Event (see below) from the first view.


 “Select Individual”
 combo box


 “Add Individual”
 button

To **add an Individual** to an Event, you need to specify them in the “Select Individual” combo box, and then click the “Add Individual” button (you can only do this from the “Event Participants” view explained previously). The combo box will only show animals of the chosen Species, and only those who were “Active” at the time of the Event. For Reproduction Events, it only includes females.

Certain Event Types have implications for the Status of Individuals involved in them. When you add Individuals to these Events (or change the Event Type to one of them) you’ll be asked if you want **Individual Status** (and Status Date) to be updated accordingly. Similarly, if you remove Individuals or change Event Type away from one of the following the reverse update will be offered.

| Event Type | Optional Effect on Individuals |
|--------------|--------------------------------|
| Emigration | Status becomes “Removed” |
| Introduction | Introduced becomes “True” |
| Removal | Status becomes “Removed” |
| Death | Status becomes “Dead” |

Note that if you add a female Individual who has **Dependent Offspring**, then you will be asked if you want to add her Dependants at the same time:

| Dependants | | | | | | |
|-------------------------------------|--------|------------|------------|-----|--------------|-------------|
| Select Dependants to add | | | | | | |
| Include? | Status | StatusDate | CommonName | Sex | Age Category | Birth Event |
| <input checked="" type="checkbox"/> | | 26-Jul-00 | Millie | F | 2-3.5 years | |

Done

If you don't want to add a dependant, click off the "Include?" checkbox. You can also change the offspring's status with this form. If you do so, the status will be updated in the Individual's details and/or in the Birth Event where they were born. Click "Done" when you've completed the form.



“Add New Individual”
button



“Delete Participant”
button

To create a brand new Individual record and add it to the Event in a single operation, click the “Add New Individual” button. This will jump to the *Individuals* zone with certain fields (such as “Recognised Date” and “Species Code”) initialised from the Event.

To **remove a participant** from the Event, highlight the animal or group in the participants listbox, and click the “Delete Participant” button. You can remove Individuals and Unidentified participants from the Event in this way.

To **add to or change the unidentified participants** in the Event, click on the “Unidentified Participants View” button, and fill in the small form provided. The row marked with an asterisk specifies a new record where you can specify a count of animals seen for a particular group description made up of **Sex**, **Age Category**, **“Marked/Clean animals”**, and **“Complete/Incomplete sighting”**. You can only record *one* group for each such combination – the group is collectively referred to as a participant. Age Categories can be customised for any species in *Customise WILDb*. “Marked” should be specified if the animal(s) in question do in fact exist as recorded Individuals in WILDb, but for some reason an accurate identification wasn’t made by the observer. Answer “Y” for “Complete” if the observer was able to view and record all identifying features.

TIP: If there is any doubt about the identity of an animal, they should be recorded as Marked but Unidentified participants, rather than attempting to guess their identity.

The currently selected participant is displayed in the top right hand corner of *Events*. This is the Individual or unidentified group to which all the extra pages of the form will refer.

Extra Details

In *Events*, different Event Types will offer different “Extra Details” below the “Event Details”. Only Sighting events do not offer any extra detail fields.

These extra fields are only available after at least one participant has been added to the Event. All information shown relates to the currently selected participant (as named in the top right corner of the form).

TIP: If you change the Event Type for an Event, any “Extra Details” recorded against that Event will be deleted (since they are no longer relevant).

Most of the fields are self-explanatory. Following are some explanations of the way they are used:

Death details

- Cause of death comes from the “Killer Species” if the Event Subtype indicates that another animal caused the Death. Otherwise it elaborates on the event subtype (“a natural causes” death might show “old age” or “fire”, for example).

Offspring details

- When the record is first entered, the Offspring Name will probably not be known (since it won’t be a recorded Individual until tagged). Thus the record only will contain sex and status (initially “Dependent”)
- Once identified, link an Individual to the Offspring record, by selecting it from the drop down list (which only includes Individuals born around the time of the Birth Event). If the Individual record does not yet exist, create it by clicking the “Create Individual” button
- Enter the new records one under the other to record multiple offspring


“Create
Individual”
button

Population Summary zone

This contains four pages that together provide a species-based analysis of the national population.

You can view a summary of Individuals with Age Category breakdowns, see Breeding Statistics for the population, fetch a summary of Events, or view details of Population Counts. The latter can in turn be used to calculate the Population Growth rate.

On all pages except the Population Counts page, specify a subpopulation to see data summarised from that site, or click “All” to see data from all subpopulations.

Individuals Summary page

This page provides a summary of recorded Individuals. For a given Species and (optionally) Subpopulation, it shows the current count of *active* Individuals, the Average Age at Independence, and a list of all Individuals. It also provides a count of Individuals within each of the defined Age Categories for the species (these can be customised in the *Customise WILDb* zone).

"No Sighting" Alarms

(1 Individual)

“No Sighting Alarms” button

To jump to the details of an Individual, double-click on the appropriate row.

Click the “No Sighting Alarms” button to see a list of all animals that haven’t been seen (recorded) for the pre-defined “alarm” period. This period is configurable for each Species (in *Customise WILDb*) and optionally for each Individual (on the “History” page of *Individuals*). The button is disabled if all Individuals are accounted for.

Calving Summary page

This page shows a list of all recorded mothers for a given species and (optionally) Subpopulation, together with Calving statistics for each:

- Number of births
- Dates of first birth and most recent birth
- Estimate of when the next birth is due
- Their age when they first gave birth
- Average interval between births

Double-click on a mother to see her Individual details.

Also on the page is a “Calving Summary” showing a *species average* of ages at first calf and calving intervals, along with a count of recorded mothers and the current number of active breeding females (recorded Individuals only). The species average is across all subpopulations if the “All Subpops” box is checked. Otherwise it includes the specified subpopulation only.

TIP: Calving stats include both identified and still “anonymous” offspring

You can choose to include or exclude **Introduced** mothers (those who were not born in the population). These animals may have had calves that have not been recorded in this database – so including them could bias the statistics (especially “age at first calf”).

You can also choose not to display birth details where the offspring have **died or been removed** from the population.

Finally, if you want to limit the **date range** upon which birth statistics are derived, turn off “calculate for all dates”. This will enable the “Start” and “End” date boxes – fill in one or both to focus on a particular period. Omit “End” date for “date X onwards”. Omit “Start” date for “up until date X”.

Event Summary page

Use this page to request a list of Events for a given Subpopulation, Species, Event Type, Event SubType, and Time period. Leave out any of these parameters by ticking the “Show All” checkbox. Specify a custom reporting period by choosing “Specify Range”.



“Retrieve Results” button

Once you’ve entered your criteria, click the “Retrieve Results” button to show the list of Events. Double-click on any Event to see its details.

The list returned by this query contains one line for every participant in the Event, plus that participant’s age at the time of the Event.



Population Counts page

Adding up the Individuals recorded in WILDb only gives a count of known (tagged) animals. Use this page to record/ view *overall* counts for a species, within a specified Subpopulation.

Click the “Add” button to create a new count for the specified Subpopulation. You’ll be asked for a **count date** – this defaults to “today”. You can record retrospective counts by changing the date.

The page is divided into several sections:

Count Breakdown

When a count is created (either in the Site or National database) WILDb will initialise the “Count Breakdown” by filling in a count of the Subpopulation’s recorded Individuals for each Sex / Age Category combination. It will initialise the **Definite**, **Probable**, and **Possible** totals to the same total. These numbers are estimates of total numbers, in decreasing “confidence of accuracy”. “Definite Total” is the number present “at least”. “Possible” is how many there might be at the most.

You cannot change the number of “Recorded Ids” if the Count Date is today. That’s because WILDb knows how many are recorded right now, so there’s no point telling it otherwise! If you are looking at a historical count, however, you can change all the numbers. WILDb doesn’t know what was recorded in the past – only what’s there now.

Each Sex / Age Category combination can only appear once. You don’t have to record them all.

Count Details

This section shows the **Date** of the count (which you can’t change), and an indication of the count **accuracy** level. **Edited at National level** shows whether the count has been changed since it was imported from the site.



Population Growth Rate

To obtain a calculation of Population Growth Rate between two population counts for a given subpopulation, choose a start and end count and click the "Calculate Growth Rate" button. The formula used is:

$$N_t = N_0 (1+r)^t$$

Where:

t is number of years,

N_t is Population after " t " years,

N_0 is starting Population, and

r is the growth rate.

The counts N_t and N_0 come from the *Definite* totals. WILDb works out the growth rate per annum.

Customise WILDb Zone

This zone contains five pages that are used to configure WILDb to your needs.

| Age Category | Description | Start Month | End Month | Breeding Age? | |
|--------------|-------------|-------------|-----------|-------------------------------------|-------------------------------------|
| | | | | Male | Female |
| A | Adult | 24 | 99999 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| J | Juvenile | 0 | 11 | <input type="checkbox"/> | <input type="checkbox"/> |
| S | Sub Adult | 12 | 23 | <input type="checkbox"/> | <input type="checkbox"/> |
| U | Unknown | | | <input type="checkbox"/> | <input type="checkbox"/> |
| * | | 0 | 0 | <input type="checkbox"/> | <input type="checkbox"/> |

Setup page

WILDb National Database does not currently use the **Default File Path** on this page.

Turn off **Filtering available** if you want to disable filtering (if you feel it to be too potentially confusing for users, for example). If you do this, the Filter button won't appear in the *Individuals* or *Events* zones. Clicking "Goto Events" or "Goto Individuals" on those forms will *not* limit the records shown to the chosen Individual/Event.



New record
indicator



“Delete Record”
button

Lookup Values page

Use this page to customise the “lookup data” (dropdown lists of options) for system fields such as “Subpopulation”, “Date Accuracy”, and so on. Add a new value by filling in the row marked with an asterisk. Delete a row by clicking on it, and then clicking the “Delete Record” button on the top toolbar.

Most lookups only allow a short and long **description**. The “SubPopulations” lookup has an extra checkbox used to record whether each location is an **International** one.

After adding Age Classification Systems on this page, you need to configure them using the *Age Classifications* page.

Changes made to lookup values are included when you *Export Reference Data* (see page 27)

Event Types page

Use this page to view and add event subtypes within each event type. Note that you cannot delete or edit the original subtypes included by WILDb.

Add a new event subtype by filling in the line marked with an asterisk (see “new record indicator” at left, above).

New Event Subtypes are included when you *Export Reference Data* (see page 27).

Species page

This page contains details about all Species you wish to record data for. **Age Classification** refers to which of the configured classification systems applies to this Species (see “Age Classifications page”, below).

Image file location (optional) points to a bitmap file within the default WILDb file path (see “Setup page”, above), which contains the image to be used as the Species’ Identifying Image.

WILDb will tick the **Individuals Known** checkbox if there are any recorded Individuals for this Species.

The **No Sighting Alarm** provides the default period after which an alarm screen will be shown if an Individual of this Species has not been seen. This can be overridden at the Individual level if required.

 "Shortcut" button

Age Classifications page

This is where Age Categories are assigned to Classification Systems, which in turn are listed in the *Lookup Values* page (jump straight to this by clicking the "shortcut button" beside the Age Classification box). Add as many categories as you want for a Classification System, as long as the Start and End months don't overlap. The final (ie oldest) category should have an End month such as 99999 to signify "forever". Tick "Breeding Age" against the categories within which an animal would normally be expected to breed.

Export Reference Data Zone

This zone is used to create an export file of reference data for sending to Site Administrators. Site Administrators can then import the reference data into their local WILDb database application.

The following items will be included in the export:

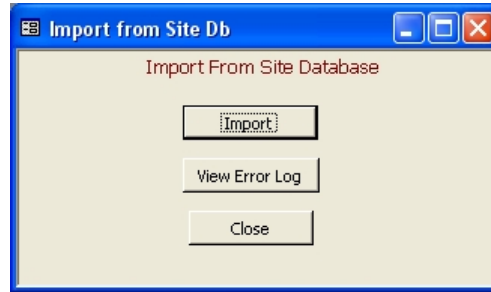
- Event subtypes
- System lookup values, including SubPopulation codes

Use *Customise WILDb* (see page 24) to modify this reference data.

After clicking “Export”, a Windows Explorer window will allow you to specify the location and name of the export file – call it whatever you like but don’t overwrite existing database files! The default is WILDb_RefData_DDMMYY.

This file should then be sent (via floppy disk, email, or similar) to the Site Administrators. They can import it using the “Import System Reference Data” button in their *Customise WILDb* zone. After doing this they can use the new subpopulations, event subtypes, etc.

Import from Site Db zone



Use this zone to import Individuals and Events from a file provided by a WILDb site (subpopulation). This file (create by clicking “Export to National Db” on the site database main menu) contains the following data:

- Basic data concerning all Individuals including a count of sightings in the last 6 months
- Basic data concerning all Reproduction, Death, Migration, Translocation, and Immobilisation Events
- Basic data concerning the most recent sighting for each Individual
- Population Counts flagged in the site as “full counts, to be exported”

It does not include

- Any detailed data that involves the use of locally customisable lookup fields, such as observer ids, place names, etc. The one exception to this is “cause of death” details.
- Any event coordinates
- Photos and identifying images
- Sightings other than the most recent for each Individual
- “Extra details” data for Events
- Partial or non-exportable population counts

Click “Import” to load the Site’s data. A Windows Explorer window will ask you to specify the location and name of the file to be imported. The import process goes through several steps to try to ensure correct identification of Individuals and their parents, even across subpopulations. On completion you’ll be presented with a screen showing information, error, and warning messages. This list should be examined to ensure WILDb did not incorrectly identify an individual or parent, for example.

To achieve this, the National Database maintains a mapping table (called SiteIndividualsLookup) that maps Individual Ids from the Site databases to Individual Ids from the National Database. Any single Individual in the National Database may have several Site Individual Ids mapped to it, if that animal has moved between subpopulations.

Following is a detailed breakdown of the process, which is done in several separate steps.

Import Individuals

For each Individual in the Export (Site) Database:

If we have never encountered this Site Individual before:

- Try to match with an existing National Individual using National ID if it is supplied,
- Try to match with an existing National Individual using Name and DOB if National ID not supplied or no match found

If a match for a National Individual was found

- Create a new SiteIndividualsLookup row (ie map) from the new Site Individual ID to the existing National Individual

If more than one match was found, log a warning

Else (no match on National Individuals)

- Create a new National Individual from the details supplied in the Export database
- Default its National ID to the National Individual ID
- Create a new SiteIndividualsLookup row (ie map) from the new Site Individual ID to the new National Individual

At this point, we have a Site Individual and a corresponding National Individual (either newly created or pre-existing).

Determine which subpopulation currently “owns” the Individual, according to the National Db (note that if the National Individual is newly created for this import, then the first step below will be taken):

If the Individual already belongs to the subpopulation whose data we are importing:

- If the Site has a different National ID recorded for the Individual, log a warning.
- **Update** the details for the National Individual based on the data supplied by the Site.

Else (the Individual currently belongs to a different subpopulation than the one whose data we are importing)

If the Site database does not show status as “Removed” or “Dead” (ie they claim the animal is active there):

If the National Individual (in a different subpop) has status “Removed” then all is OK:

Log a msg to say the animal is moving subpopulations, but there are no clashes with status.

Else both subpopulations are claiming the animal is active at their site

Log a warning to say the animal is moving subpopulations, but it is still active in the old one.

- **Update** the SiteIndividualsLookup map to show the start/finish dates at the respective subpopulations
- **Update** the Individuals table to show the animal is now in the new subpopulation
- **Update** the details for the National Individual based on the data supplied by the Site.

Else (the animal is “Removed” or “Dead” in the Site database being imported)

- Ignore the Site Individual ID.

Loop to next Site Individual ID

Remove Deleted Site Individuals

The next step is to remove Site Individual Ids where the animal has been deleted from the site database (cleaning up of invalid records, for example):

For each existing Site Individual ID in the National Database for the subpopulation we are importing:

If the Individual ID no longer exists in the Site database being imported

Log a warning to say that the mapping from this subpop is being deleted.

If the National database identifies this Site as “owning” the Individual

Try to find a different site that also contains this Individual

If one is found, then make that Site “own” the Individual

Else no one wants this Individual, so delete it.

Delete the mapping from this Site to the National Individual ID

Loop to next Site Individual ID in the National Database

Match Parents

The next step is to attempt to map the site mother/father ID (or name) to a National Individual ID.

For each Individual in the Site database being imported:

If the National Individual to which it is mapped does not already have a Mother ID

and the database being imported does provide a Mother ID or Alternate Name:

Try to find its Mother:

If the database being imported provides a Site Mother ID

Record the Mother ID as the National Individual to which the Site Mother ID is mapped.

Else use the Mother Alternate Name. That this can be a name OR a National ID.

If Alternate Name is numeric, it might be a National ID

Try to find a National Individual with *Name* OR *National ID* matching the Mother’s Alternate Name

Else (not numeric)

Try to find a National Individual with *Name* matching the Mother’s Alternate Name

If we found a National Individual:

Record the Mother ID as the National Individual found

(if more than one match found, look for one from this subpopulation first)

Repeat the above for Father ID

Loop to next Individual in the database being imported

Identify Duplicates

Finally (for Individuals import) search for occurrences where two or more Site Individual Ids for a given SubPopulation both map to the same National Individual ID.

Log each as an error. These will occur if a Site database contains two animals with the same National ID or Name/DOB, for example.

Import Events

With Events, the WILDb National Database keeps a copy of the most recent sighting, plus all occurrences of other event types. All of these events are re-imported every time, rather than updating with changes (since the volume should be low with sightings removed, and it is much easier to ensure data integrity this way).

This is done by first deleting all events for this subpopulation. After this, all the Events from the database being imported are reinserted into the National DB. Event Participants are then copied, with all Site Individual ID's being mapped to National Individual ID's on the way.

Note that you need to ensure that creating and editing events nationally is done as a temporary measure only. Always make sure the site administrator also creates the event in their database so that you won't lose the data at next import time.

Import Population Counts

Like Events, Population Counts are first deleted (for this subpopulation) then re-imported from the Site extract database.

The Error Log

WILDb keeps a log of information, error, and warning messages to show exactly what it is doing during each import of Site data. This log is automatically displayed after each import. Click "View Error Log" from the "Import from Site Db" zone to view it at other times.

After specifying a subpopulation and an import date (done automatically when displayed after an import), the list of status messages will be displayed. Some common messages are:

- Updating Individual 'nnn' (National Id xxx)
(Info)
This shows that WILDb matched a Site's Individual with an existing (or newly created) National animal, and is updating the National record
- Inconsistent National Id for 'nnn' (Site has xxx; National Db has yyy)
(Warning)
This shows that WILDb matched a Site's Individual with an existing (or newly created) National animal, but their recorded National Ids differ. Either change the National Db Id or contact the Site to ensure they change their version.

- Moving Individual 'nnn' from Subpopulation 'pop1' to 'pop2'
(Info)
WILDb has detected that an existing animal from a different subpopulation is now present at the Site whose data is being imported ('pop2' in this case). It has already been recorded as status 'removed' at the old site, so no problem
- Moving Individual 'nnn' from Subpopulation 'pop1' (WAS STILL ACTIVE) to 'pop2'
(Warning)
As above, except the animal is not yet recorded as 'removed' from the original population.
- Record has been edited in National Database - overwriting changes
(Warning)
WILDb is importing a Site's Individual details over the top of changes made by the National Coordinator. Check that the Site Administrator had incorporated the changes.
- Status changing from A to B
(Info)
An Individual's status has changed between imports.
- Offspring has moved subpopulations. Resetting MotherId based on new data
(Warning)
WILDb is making sure that when an animal moves subpopulations we don't ignore the new Site's allocation of Mother ID.
- First appearance of Individual 'nnn' at this Subpopulation (National Id = xxx)
(Info)
WILDb has detected a known Individual at a subpopulation it hasn't been recorded in before. Make sure that WILDb has correctly matched the animal to the existing one from another site.
- Site Individual 'nnn' potentially matches more than one National DB Individual (Matched on National ID)
(Warning)
WILDb has found more than one Individual in the National Database with a matching National ID. Make sure it has chosen the correct one, and take steps to fix the duplicate Ids.
- Site Individual 'nnn' potentially matches more than one National DB Individual (Matched on Name and BirthDate)
(Warning)
As above, except WILDb had to use the combination of Name and Birth date to attempt to match an Individual, since National ID was not supplied.
- Created new Individual 'nnn' and assigned National ID 'xxx'
(Info)
WILDb was unable to match an Individual in the Site Db with any existing Individuals in the National Db, so it created a new National Individual. Inform the site database administrator of the generated National Id, so they can update their database (you can change the generated ID if required, as long as it remains unique)

- Matched Parent with 'nnn' (subpop) using Site's Parent ID (Info)
The site extract provided an ID for an Individual's parent. This was used to successfully identify the parent as an Individual in the National Db. This message is only shown the first time a parent is identified in the National Db
- Matched Parent with 'nnn' (subpop) using Site's Alternate ID (Info)
The site extract provided an alternate name (no ID) for an Individual's parent. This was used to successfully identify the parent as an Individual in the National Db. This may be followed by the warning '*** More than one potential match found! ***'. In this case, make sure WILDb has identified the correct animal as the parent
- Failed to match MotherID (Warning)
WILDb was unable to identify a MotherID. This would happen, for example, if the site provided an alternate name for a Mother which did not match anything in the National Db
- Site Individual with ID <SiteIndividualID> is a duplicate for National Individual 'nnn' (National ID xxx) (Error)
WILDb has identified two or more Site Individual records as pointing to the same animal. Ensure the Site Administrator removes the duplicate.
- Deleting Individual 'nnn' from Subpopulation (Warning)
The site no longer includes an Individual, so WILDb is removing the reference from the site to that animal. This should not happen unless the original Individual was an error record, or a duplicate that has been removed, etc. Even after Death an Individual should stay in the Site's database – it is referenced by the Death event, for example
- Leaving Individual – still referenced by subpopulation 'subpop' (Warning)
This message may follow the previous one. It means that although the Individual no longer appears in the Site whose data is being imported, it is still included in another Site's data so it can't be deleted from the National Db
- Removing Individual – not referenced by other subpopulations (Warning)
This message may follow the 'Deleting Individual' one above. It means that the Individual that has disappeared from a Site's data doesn't appear in any other Site's data either, so it can be deleted from the National Database.