

# 2011 Statewide Vegetation Statistics (formerly the CAR Reserve Analysis) - Simplified Report README

GIS Applications Section  
Geographic Information Services Branch  
Department of Environment and Conservation  
February 2012

## Table of Contents

1.	Required Files .....	2
2.	Purpose of the README document .....	2
3.	How to Cite this Report .....	2
4.	Purpose of this Analysis and Report.....	2
4.1.	CAR Reserve System in brief .....	2
4.2.	Vegetation Type Mapping .....	3
5.	How to extract the statistics .....	3
6.	Spatial Data Information (Metadata).....	3
7.	Items of note for the 2011 Report .....	4
7.1.	Change of Report Name .....	4
7.2.	Change in definition of Statistics.....	4
7.3.	Updates to the Input Spatial Datasets .....	4
8.	What is the difference between the Simplified and the Full (Detailed) Reports?.....	6
9.	Definition of Statistics presented in the Report.....	7
10.	What do I need to keep in mind when using the information in the Reports (Limitations)?.....	9
10.1.	In what instances should the Statewide Vegetation statistics be used?.....	9
10.2.	Scale .....	9
10.3.	Availability of more detailed Vegetation Type mapping in the South West .....	10
10.4.	Line Work Mis-alignment .....	11
10.5.	Remnant Vegetation Mapping .....	11
11.	Definition of the DEC Tenure and IUCN Categories used in the Report.....	13
12.	How to access the Reports .....	13
12.1.	Statewide Vegetation Statistics Reports.....	13
12.2.	Other relevant Reports/Analyses.....	14
13.	Other supporting information within the Excel Spreadsheet.....	14
14.	Who should I contact if I am having trouble using this Analysis or need more information?...	14



Note: Hyperlinks to the Simplified and the Full (Detailed) reports are to a DEC intranet site so are intended for use by DEC personnel only. Details of how external organizations can access the reports are provided in section 12.

## 1. Required Files

The Statewide Vegetation Statistics Report consists of two files:

1. An excel spreadsheet [Vegetation\\_Statistics\\_Statewide\\_2011\\_Simplified\\_report.xls](#) with the worksheet 'Simplified\_Report' containing the statistics
2. [Readme document](#) (this file) which provides information on the purpose of the report, definition of the statistics, input spatial dataset metadata and information on the limitations of the report. **PLEASE READ THIS INFORMATION PRIOR TO EXTRACTING/USING STATISTICS FROM THE EXCEL REPORT**

## 2. Purpose of the README document

This README document provides supporting information and metadata for the Report Statistics provided in the MS Excel Spreadsheet stated above. It should be referred to when using and interpreting information contained in the excel report.

## 3. How to Cite this Report

Recommended Citation:

Government of Western Australia. (2011). *2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Simplified)*. Accessed [month] [YYYY]. WA Department of Environment and Conservation, Perth, <https://www2.landgate.wa.gov.au/web/guest/downloader>

## 4. Purpose of this Analysis and Report

This report provides information on the pre-European and current extent of the Ecological Communities of Western Australia and reports on the status of the CAR Reserve System for WA. It reports only on the status of **reserves within the DEC managed estate**.

### 4.1. CAR Reserve System in brief

The CAR Reserve System is based on three principles:

1. **Comprehensive** – includes the full range of ecological/forest communities recognised at an appropriate scale within and across each bioregion.
2. **Adequate** – level (extent) of reservation that will ensure viability and integrity of populations, species and ecological communities. An extent protected threshold (target) is usually adopted
3. **Representative** – those areas reserved should reasonably reflect the biotic diversity of the communities

A combination of vegetation types and bioregions are used to define an ecological community as there can be a wide variation within an ecosystem at the continental scale. Therefore an assessment of the reserve system against CAR principles is done at a regional (bioregional) level. Bioregions are defined at two scales IBRA level and IBRA sub-region level.

In the statewide WA context there are a number of options for defining an ecological community when assessing the Reserve System against CAR principles:

- Broad level vegetation type mapping (Vegetation Associations) or the finer scale mapping (System Associations) can be used (see more information in section 4.2 below)
- IBRA regions or the finer scale regionalization of the IBRA sub-regions can be used.

Obviously you can choose one of all possible combinations of the above to do a CAR assessment.

The **CAR Statistics provided** in the excel reports **can** be used to **assess** how **comprehensive** and **adequate** the reserve system is. The report **cannot** provide information on **representativeness**

rather this requires on ground assessment by an experienced Ecologist who has knowledge of the ecological community.

The **CAR Statistics** provided in the report are (please see section 9 for definitions):

- Pre-European Extent (ha)
- Current Extent (ha)
- Current Extent Protected for Conservation (ha)
- % Current Extent Protected for Conservation

Based on input from a number of key Stakeholders in 2007 and 2011, **lands protected for conservation are defined in the CAR Reserve Analysis as being listed in the DEC Tenure dataset as Crown Reserves having an IUCN Category of I - IV**

Detailed background information on the CAR Reserve System for Ecological Communities in Australia is available from [http://www.daff.gov.au/\\_data/assets/pdf\\_file/0011/49493/nat\\_nac.pdf](http://www.daff.gov.au/_data/assets/pdf_file/0011/49493/nat_nac.pdf)

## 4.2. Vegetation Type Mapping

Ecological/forest communities are commonly used as surrogates for biodiversity when assessing a reserve system using CAR principles. In Western Australia ecological/forest communities are defined in a consistent way across the state by pre-European (Beards) vegetation-landscape mapping data. This dataset is hierarchical and enables reporting at the following scales:

- Vegetation Systems (combine elements of vegetation distribution and landscape types);
- Vegetation Associations (vegetation types - mosaics);
- Vegetation System - Associations (finest scale mapping of vegetation types - some are still mosaics).

For more information on the Pre-European mapping:

- See V:\GIS1-Corporate\Data\Vegetation\Pre\_European\Using\_PreEuroVeg.doc (DEC personnel only)
- Contact the Department of Agriculture and Food (GIS Data Administrator [gis@agric.wa.gov.au](mailto:gis@agric.wa.gov.au))

## 5. How to extract the statistics

In the 'Simplified\_Report' worksheet the autofilter function can be used to filter the records allowing you to extract statistics for either Vegetation Associations or System Associations across either an IBRA region or IBRA sub-region. For example if you are only interested in Vegetation Associations in the Avon Wheatbelt IBRA region then the autofilter on 'IBRA Region Code' can be used to limit the records to "AW". Only the Vegetation Associations in the Avon Wheatbelt are now shown in the report and the totals at the bottom are restricted to this subset.

See the Examples worksheet for more information on how to search using the autofilters and how to add the Vegetation Association description to each worksheet

## 6. Spatial Data Information (Metadata)

Data	Source	Custodian	Date
Remnant Vegetation	DAFWA/DEC	DAFWA	May 2011
Pre European Vegetation	DAFWA	DAFWA	May 2011
IBRA Regions	Australian Government Department of the Environment and Heritage	Australian Government Department of the Environment and Heritage	20/12/2004
Local Government Authority	Landgate	Landgate	21/12/2010
DEC Tenure	DEC/DAFWA	DEC	30/06/2011

## 7. Items of note for the 2011 Report

### 7.1. Change of Report Name

Input from stakeholders in 2011 recommended changes to the reporting (both full and simplified reports) including a name change to better reflect the current nature of the statistics. **CAR Analysis Statistics are still included in the report** and are highlighted in yellow (see section 9). The changes have been done in such a way that there are consistencies between years.

The old naming convention was "simplified\_CAR\_reserve\_analysis\_YYYY.xls". The following reports are available:

- [simplified\\_CAR\\_reserve\\_analysis\\_2009.xls](#)

The current naming convention is "Vegetation\_Statistics\_Statewide\_YYYY\_Simplified\_report.xls". The following reports are available:

- [Vegetation\\_Statistics\\_Statewide\\_2011\\_Simplified\\_report.xls](#) (this document describes this report)

### 7.2. Change in definition of Statistics

Input from key Stakeholders in 2011 recommended that this simplified report only contain statistics for protected lands (reserved for conservation) and not include lands proposed to be protected for conservation. This affects the following statistics:

Statistic	Change of definition for 2011
Current Extent Protected for Conservation (ha)	Now only includes lands with an IUCN category of I – IV. Does not include "Former Leasehold" which are lands proposed to be protected and therefore not reserved for conservation at this stage.
% Current Extent Protected for Conservation	
Extent Not Mapped as Remnant Vegetation that is Protected for Conservation (ha)	Includes lands which are <b>not</b> categorized as IUCN I – IV. Includes lands with an IUCN category of 5 or 6, or no IUCN category. 'Former Leasehold' or 'Crown Freehold Department Interest' lands are included in these statistics.
% Extent Not Mapped as Remnant Vegetation that is Protected for Conservation	
Current Extent Not Protected for Conservation (ha)	
% Current Extent Not Protected for Conservation	
Extent Not Mapped as Remnant Vegetation that is Not Protected for Conservation (ha)	
% Extent Not Mapped as Remnant Vegetation that is Not Protected for Conservation	

### 7.3. Updates to the Input Spatial Datasets

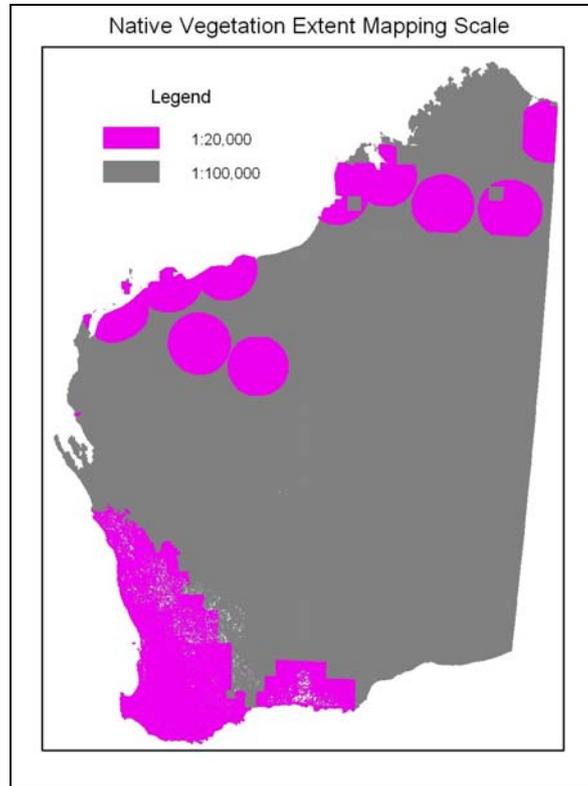
Each year the Analysis incorporates the latest available spatial datasets. See section 6 for details of the currency of the spatial datasets.

The DEC Tenure and Remnant Vegetation Extent datasets are updated on a continuous basis whilst the Pre European Vegetation and IBRA datasets periodically.

The following information is provided to give an indication of the nature of the significant updates to the Remnant Vegetation Extent and Pre European Vegetation datasets undertaken by the Department of Agriculture and Food (DAFWA) in the past 12 months. Note: this list is not exclusive as updates in other targeted areas would have continued to be undertaken especially for the Remnant Vegetation Extent dataset.

### 7.3.1. Remnant Vegetation Extent

For the Extensive Land Use Zone (ELZ) cleared areas have been removed from the dataset within 100 km of the town sites of Onslow, Karratha, Port Hedland, Tom Price, Newman, Broome, Derby, Kununurra, Fitzroy Crossing, Halls Creek and for major irrigated regions at Kununurra and Carnarvon. Other cleared areas have also been removed across the ELZ including mine sites. These updates are based on interpretation of aerial photography and are captured at the scale of 1:20,000. See Figure 1.



**Figure 1:** Minimum Capture Scale (m) of Remnant Vegetation Mapping. Note: areas in around Geraldton have been captured at 1:10,000 and on the Swan Coastal Plain between Dunsborough and Preston Beach at 1:5,000. Map supplied by DAFWA.

Therefore if a **comparison of statistics between the 2009 and 2011 CAR Reserve Analyses** is being undertaken **reductions** in 'Current Extent' and 'Proportion Remaining', for Vegetation Associations and System Associations in the ELZ, **are not necessarily due to clearing that has occurred over the last twelve months rather over many years**

Remnant Vegetation Extent mapping has been updated for the Perth Metropolitan Region (based on interpretation of 2009 aerial photography) since the 2009 CAR Reserve Analysis.

### 7.3.2. Pre European Vegetation Mapping

In the Shark Bay, Ord, Nullarbor, Pilbara and Murchison regions corrections have been made to some System, Vegetation Association and System Association boundaries. Also in some areas the attribution of Systems, Vegetation Associations and System Associations has been made to align with Vegetation Type allocations on the State-wide 1:3,000,000 map. Therefore if statistics have been extracted from any of these areas previously it is possible that names and codes relating to the above mentioned attributes would have changed. Any differences in Pre European or Current Extent should be checked in a GIS as they could be related to boundary changes rather than clearing.

## 8. What is the difference between the Simplified and the Full (Detailed) Reports?

The [Simplified Report](#) should be used initially to determine the levels of retention of a Vegetation Association or System Association within an IBRA or IBRA sub – region and also the level of protection for conservation. If statistics on the extent of lands proposed for protection (DEC tenure category of 'Former Leasehold' or 'Crown Freehold Department Interest') or extent of other lands within the DEC Estate are required then these can then be extracted from the [Full Report](#). Please refer to the table below when determining which report you need to use. See section 11 for a definition of the Categories.

Statistics on the Category:	Conservation Status	Reported on in:
IUCN 1 - 4	Lands Protected (reserved) for Conservation	Simplified and Full Reports
IUCN 5 - 6	Lands reserved with primary purpose not for Conservation (multiple use Crown lands)	Full Report only
No IUCN	Lands not reserved for Conservation (other lands)	Full Report only
Former Leasehold	Leasehold lands acquired and proposed for conservation (not yet reserved)	Full Report only
Crown Freehold – Department Interest	Freehold lands acquired and proposed for conservation (not yet reserved)	Full Report only
DEC Managed Land	All Lands managed by DEC. Not all are managed primarily for conservation and not all are reserved.	Full Report only

The following statistics are also included in the simplified report:

- The extent of areas not protected have been included to initially gauge what scope there is for reserving additional areas for conservation (estate planning);
- The extent of areas not mapped as remnant vegetation but are protected for conservation (likely to be non vegetated habitat types);
- The extents of areas not mapped as remnant vegetation and are not protected. This largely represents the area cleared;
- Proportions are based on pre-European extent for not just total current extent but for all other statistics. This will make it easier to assess if the level of protection of a vegetation type is above or below a specified target threshold.

The total areas of IBRA regions or IBRA sub-regions are provided in the [Full Report](#).

## 9. Definition of Statistics presented in the Report

CAR statistics are highlighted in yellow as they are in the excel report

Statistic (Column Title in Excel Report)	Definition	Comment/Useage
<b>Pre European Mapping Codes</b>		
System	Vegetation System (from pre-European vegetation mapping)	A single System can be selected using the autofilter function
Vegetation Association	Vegetation Association number (from pre-European vegetation mapping)	A single Vegetation Association can be selected using the autofilter function
SA_CODE	Vegetation System - Association code (from pre-European vegetation mapping)	A single SA_CODE can be selected using the autofilter function
<b>IBRA CODES</b> Note: some IBRA names were misspelled by the Custodian of the data. Therefore please check any IBRA or IBRA sub region names you extract from this report.		
IBRA Region Code	The two or three letter abbreviation for the IBRA region	A single IBRA Region can be selected using the autofilter function
IBRA Sub Region Code	The two or three letter abbreviation for the IBRA sub-region	A single IBRA Sub Region can be selected using the autofilter function
IBRA Sub Region Name	The full name of the IBRA sub-region	A single IBRA Sub Region can be selected using the autofilter function
<b>Vegetation Extent Statistics</b>		
Pre-European Extent	Total pre-European extent (hectares)	
Current Extent	Total extent of areas mapped as remnant vegetation (hectares)	
% Remaining	Proportion, of pre-European extent, of areas mapped as remnant vegetation (%)	Proportion retained.
Current Extent Protected for Conservation	Extent of areas mapped as remnant vegetation that are protected for conservation (categorised as IUCN 1 - 4 and are within DEC Managed Land) (hectares).	
% Current Extent Protected for Conservation	Proportion, of the pre-European extent, of areas that are mapped as remnant vegetation and are protected for conservation (categorised as IUCN 1 - 4 and are within DEC Managed Land) (%).	Proportion protected (reserved for conservation). Can be used to determine if the area protected meets a designated target (e.g., 15 %)

Statistic (Column Title in Excel Report)	Definition	Comment/Useage
Current Extent Not Protected for Conservation	Extent of areas mapped as remnant vegetation that are <b>not</b> protected for conservation (either categorised as IUCN 5 – 6 or no IUCN and are within DEC Managed Land, or are not within DEC Managed Land) (hectares).	These give an indication of the extent not cleared and not protected (reserved for conservation). Or in other words, the extent of potential areas that could be considered when identifying suitable areas for additional protection.
% Current Extent Not Protected for Conservation	Proportion, of the pre-European extent, of areas mapped as remnant vegetation that are <b>not</b> protected for conservation (either categorised as IUCN 5 – 6 or no IUCN and are within DEC Managed Land, or are not within Managed Land). (%).	Proportion that is retained but not protected (reserved for conservation).
Extent Not Mapped as Remnant Vegetation that is Protected for Conservation	Extent of areas <b>not</b> mapped as remnant vegetation that are protected for conservation (either categorised as IUCN 1 - 4 and are within DEC Managed Land) (hectares).	The remnant vegetation mapping does not include habitats which have no or low vegetation cover (e.g., open water, rock outcrops, drainage lines, extensive sand plains). These non vegetated habitats occur within areas protected (reserved) for conservation so this statistics gives an indication of their extent. Potentially some cleared areas could be included in this statistic so interpretation by someone with local knowledge of the reserve is required.
% Extent Not Mapped as Remnant Vegetation that is Protected for Conservation	Proportion, of the pre-European extent, of areas <b>not</b> mapped as remnant vegetation that are protected for conservation (either categorised as IUCN 1 - 4 and are within DEC Managed Land) (%).	Proportion that is not mapped as remnant vegetation but is protected (reserved for conservation).
Extent Not Mapped as Remnant Vegetation that is Not Protected for Conservation	Extent of areas <b>not</b> mapped as remnant vegetation and are <b>not</b> protected for conservation (either categorised as IUCN 5 – 6 or no IUCN and are within DEC Managed Land, or are not within DEC Managed Land) (hectares).	This statistic indicates the extent that has been cleared that is outside areas protected for conservation. Potentially it may include areas that are not cleared rather are habitats of low or no vegetation cover (see comments above).
% Extent Not Mapped as Remnant Vegetation that is Not Protected for Conservation	Proportion, of the pre-European extent, of areas <b>not</b> mapped as remnant vegetation and are <b>not</b> protected for conservation (either categorised as IUCN 5 – 6 or no IUCN and are within DEC Managed Land, or are not within Managed Land). (%).	Proportion that is not mapped as remnant vegetation and is not protected (reserved for conservation).

## 10. What do I need to keep in mind when using the information in the Reports (Limitations)?

### 10.1. *In what instances should the Statewide Vegetation statistics be used?*

These statistics should be used to provide a general overview of the status of vegetation communities within an IBRA Region or sub Region noting the limitations below on scale, availability of more detailed vegetation mapping, line work mis-alignment and remnant vegetation mapping

A full understanding of the limitations, noted below, is required prior to using the statistics to assess clearing applications.

Care should also be taken when using these analyses and reports to inform reserve acquisitions. Other information on biodiversity values of an area should also be considered and information from people who are familiar with the vegetation types and vegetation condition of the area should also be considered.

### 10.2. *Scale*

The original Beards Vegetation Associations, which the pre-European mapping dataset is based on, were mapped at the 1:250,000 scale and so are not designed to inform at a finer scale. The Vegetation Associations indicate what vegetation types may occur in the area (either common vegetation communities or mosaics). So care should be taken when using Vegetation Associations with finer scale mapping such as the 1:5,000, 1:10,000 or 1:20,000 Remnant Vegetation Extent mapping. It cannot be assumed that in heavily cleared areas that the range of vegetation communities described by one Vegetation Association will all be represented in the few remaining remnants. In these instances advice from an experienced Ecologist with knowledge of the vegetation types of the area should be sought. More detailed vegetation type mapping may be required before an assessment of the levels of retention and protection of a vegetation type can be undertaken.

It is recommended by the data custodians that the combined current extent and pre-European vegetation type data should be used at scales no finer than 1:250,000. With this in mind further rounding may be appropriate. The rounding in subtotal calculations can be altered:

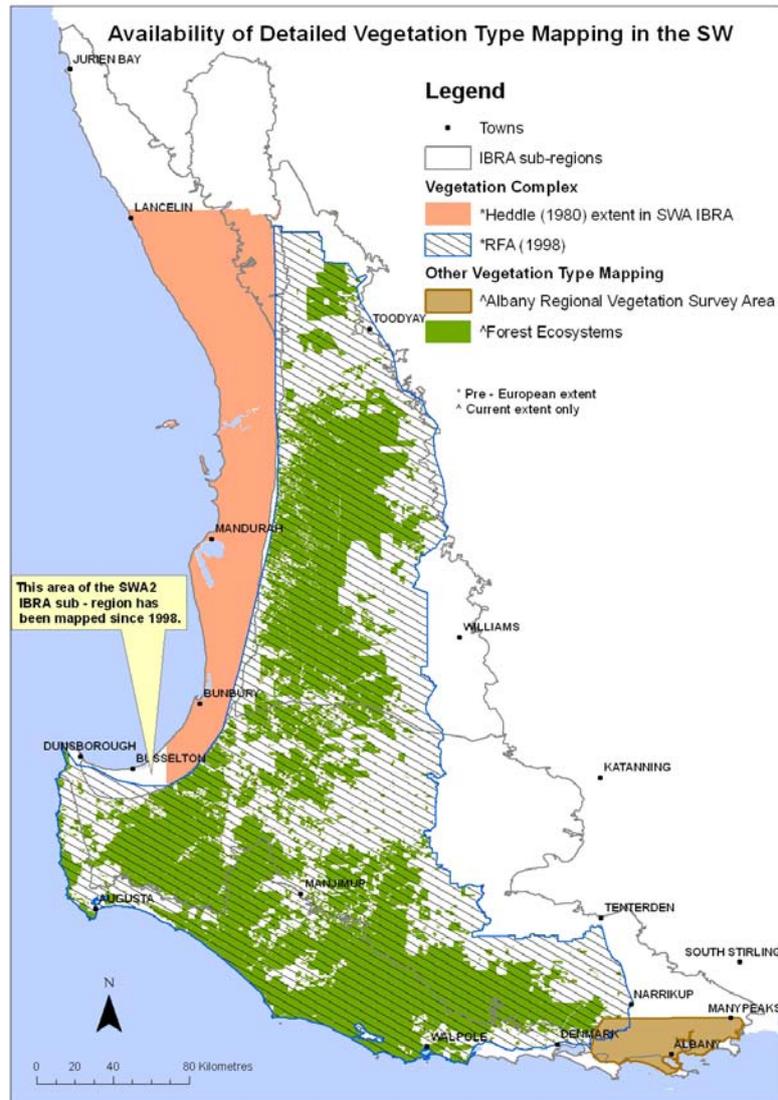
Round to the nearest:	Excel Formula:
hectare	=round(first cell in range to last cell in range, <b>0</b> )
ten hectares	=round(first cell in range to last cell in range, <b>-1</b> )
hundred hectares	=round(first cell in range to last cell in range, <b>-2</b> )

Hectares have been given to two decimal places which is the default processing precision.

### 10.3. Availability of more detailed Vegetation Type mapping in the South West

For some parts of the South West of the state, more detailed vegetation type mapping is available and should be used in preference to the pre-European (Beards) mapping. See table below and Figure 2 for information on these datasets. Currently an annual reporting process for the vegetation complex mapping (RFA and Heddle) is being developed. For more information contact Shane French in GIS Applications.

<b>Dataset</b>	<b>Extent</b>	<b>Does the dataset map the pre – clearing extent of vegetation types or just the current extent?</b>
Heddle Vegetation Complexes (System 6; 1980)	Parts of the SWA1 and SWA2 IBRA Sub Regions. The Jarrah Forest areas are superceded by the dataset below.	Yes
Mapping of Vegetation Complexes in the South West forest region of Western Australia (1998).	Parts of the JF1, JF2 and WAR IBRA Sub Regions. An additional part of the SWA2 IBRA Sub Region is also covered (area not part of the above dataset).	Yes
Forest Ecosystems	Parts of the JF1, JF2 and WAR IBRA Sub Regions.	No. Confined to the RFA boundary.
Albany Regional Vegetation Mapping (2010)	Parts of the WAR and JF2 IBRA Sub Regions	No



**Figure 2:** Availability and extent of detailed vegetation type mapping in the South West of Western Australia.

#### 10.4. **Line Work Mis-alignment**

There is some mis-alignment of line work between datasets. This affects the following information in the CAR Reserve Analysis report:

- The IBRA regions and sub regions boundaries are largely based on information from the pre-European mapping. These datasets, from different custodians, are currently mis-aligned resulting in small areas of a Vegetation Association or System Association being assigned to the incorrect IBRA region or sub region.
- Mis-alignment of the DEC Tenure and pre-European dataset results in small areas of DEC Tenure being allocated to the incorrect Vegetation Association or System Association and thus IUCN category. On the coast it could result in marine DEC Tenure categories being included.

#### 10.5. **Remnant Vegetation Mapping**

There are two limitations of the Remnant vegetation mapping:

1. Within the intensive land use zone there is no distinction between cleared areas and non vegetated "natural areas". These non vegetated "natural areas" include open water, drainage lines, extensive sand plains, with little vegetated cover, or rock outcrops.
2. Not all islands are included in the remnant vegetation mapping.

If these limitations are not taken into account then, potentially, the extent of areas cleared could be overestimated.

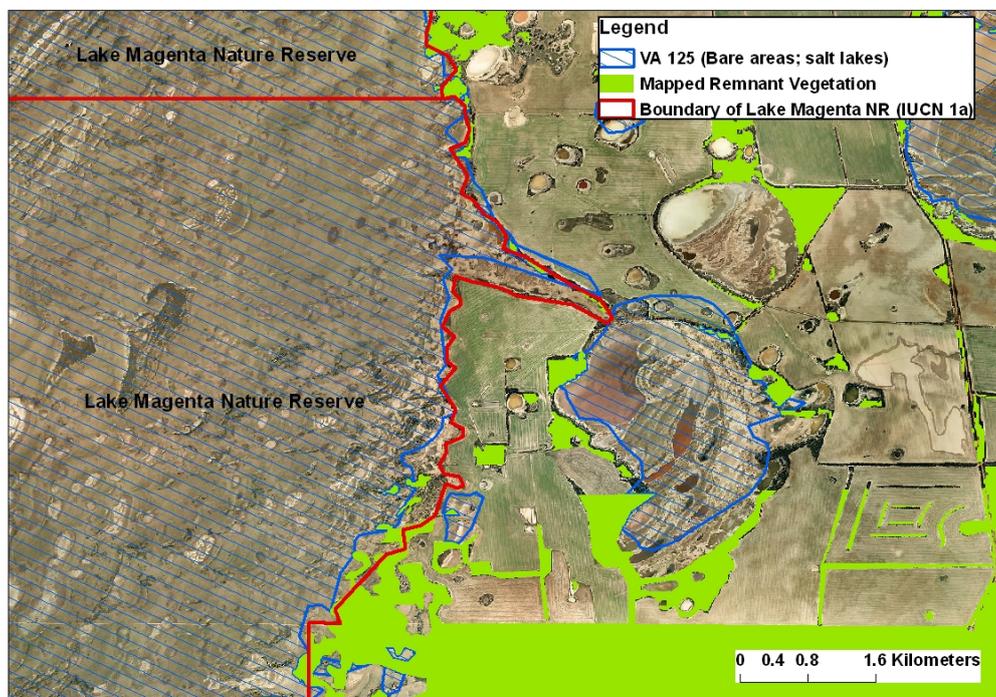
To prevent this, a number of measures can be put in place:

1. Always read the descriptions of the Vegetation Associations (see Veg Assoc Description worksheet in the report) to ascertain if in their undisturbed state they have no or low vegetation cover. Take particular note of those with 'bare areas', 'sparse', 'succulent steppe', or banksia-xylomelum alliance in the descriptions (Note: this list is not exhaustive so advice from an Ecologist should be sought);
2. In a GIS package view the Pre European vegetation, Remnant Vegetation, DEC Tenure, WA Coastline, other available habitat mapping which delineates non vegetated "natural areas" (e.g. Wheatbelt Wetlands) and, if available, aerial photography spatial datasets. The Pre European dataset will provide the boundary of the non vegetated Vegetation Association. Checks can then be done to see if:
  - a. non vegetated areas that have not been disturbed are mapped as remnant vegetation mapping (check against aerial photography).
  - b. If offshore islands which are part of a Vegetation Association have been included in the remnant vegetation mapping (check against aerial photography and WA Coastline datasets)

If they are not, then consider utilising the statistics "Extent Not Mapped as Remnant Vegetation that is Protected for Conservation" and "Extent Not Mapped as Remnant Vegetation that is Not Protected for Conservation". Put a qualifier statement in any reporting "*these statistics are indicative only due to the limitations of the mapping*".

For example:

Vegetation Association 125 (Bare areas; salt lakes) in the Western Mallee IBRA subregion is generally not mapped as remnant vegetation (Figure 3). The IBRA subregion itself has been heavily cleared for agriculture but these lake areas are not necessarily under production although some are likely to be disturbed or not in good condition. Some areas of VA 125 are reserved for conservation within the DEC Estate (e.g. Lake Magenta Nature Reserve). Therefore it is likely that these reserved areas are not disturbed and can be included as "Current Extent".



**Figure 3:** The extent of remnant vegetation and boundaries of Vegetation Association 125 in the Lake Magenta area of the Western Mallee IBRA sub – region.

For an example on how to deal with instances where there is limited remnant vegetation mapping for offshore islands see example 3 in the 'Example' worksheet in the excel report.

## 11. Definition of the DEC Tenure and IUCN Categories used in the Report

Based on input from a number of key stakeholders in 2007 and 2011, **lands Protected for Conservation are defined in the CAR Reserve Analysis as being listed in the DEC Tenure dataset as Crown Reserves having an IUCN Category of I - IV**

Category	Definition	Reported on in:
IUCN 1 - 4	Lands in the Department of Environment and Conservation (DEC) Estate that have been categorised as World Conservation Union protected areas 1 - 4 Note: currently no DEC conservation reserve is categorized as IUCN 1b	Simplified and Full Reports
IUCN 5 - 6	Lands in the DEC Estate that have been categorised as World Conservation Union protected areas 5 - 6	Full Report only
No IUCN	Lands in the DEC Estate that have not been categorised as World Conservation Union protected areas	Full Report only
Former Leasehold	Former pastoral leases, or parts of, acquired for conservation by the Department of Environment and Conservation and being held under an interim management arrangement prior to formal reservation. This land is held by the state as Unallocated Crown Land until reservation to conservation reserve is complete.	Full Report only
Crown Freehold – Department Interest	This is defined as Freehold land (estate in fee simple) which has been acquired in the name of the State of Western Australia for the purpose of conservation but which has yet to be reserved under the Land Administration Act and for which the Department of Environment and Conservation is the agency responsible for its management.	Full Report only
DEC Managed Land	This includes all land managed by the DEC. Please contact DEC Land Unit Section for full definitions of DEC Tenure Categories.	Full Report only

Detailed definitions of the IUCN categories are available from the IUCN website [http://www.iucn.org/about/work/programmes/pa/pa\\_products/wcpa\\_categories/](http://www.iucn.org/about/work/programmes/pa/pa_products/wcpa_categories/)

For more information on the DEC Tenure Categories or IUCN categories of Reserves in your area of interest:

- Refer to the DEC Estate spatial data on the CDDP (DEC personnel only).
  - For ArcMap and Map Window (DEC GIS) users select Tenure/DEC Tenure/DEC Estate on the Corporate Data Menu and look at the information under IUCN in the attribute table.
  - For GIS Viewer users select the theme Planning and Cadastre/DEC Tenure
- Refer to the 'DEC Managed Lands and Waters' spatial data on the SLIP WA Atlas online GIS Viewer <https://www2.landgate.wa.gov.au/bmvf/app/waatlas/>
  - Add a WMS Layer and go to 'Administrative and Political Boundaries'/'DEC Managed Lands and Waters'.

## 12. How to access the Reports

### 12.1. Statewide Vegetation Statistics Reports

The simplified and full reports are available:

- Through the CDDP on V:\GIS1-Corporate\Data\Vegetation\Analysis (DEC personnel only)
- GIS Branch intranet site on the page [Reservation and Vegetation Statistics](#) (DEC personnel only)
  - [Vegetation Statistics Statewide 2011 Simplified report.xls](#)
  - [Vegetation Statistics Statewide 2011 Full report.xls](#)

- SLIP Portal (<https://www2.landgate.wa.gov.au/web/guest/downloader>).

These can also be requested by contacting Shane French (see contact details below) or the DEC Spatial Database Administrator (ph 9334 0347).

## 12.2. **Other relevant Reports/Analyses**

The 2011 analyses of the status of conservation reserves are available on the GIS Branch intranet site or on the CDDP V drive (DEC Personnel only)

- [DEC Terrestrial Lands by IBRA Sub Regions 2011.xls](#)

CAR Analysis reports from previous years are also available:

- Through the CDDP on V:\GIS1-Corporate\Data\Vegetation\Analysis (2005, 2006, 2007 update, 2009 full and 2009 simplified) (DEC personnel only)
- GIS Branch intranet site on the page [Reservation and Vegetation Statistics](#) (DEC personnel only) (2007 update, 2009 full and 2009 simplified)
- SLIP Portal (<https://www2.landgate.wa.gov.au/web/guest/downloader>). (2007 update and 2009 full)

These can also be requested by contacting Shane French (see contact details below) or the DEC Spatial Database Administrator (ph 9334 0347)

## 13. **Other supporting information within the Excel Spreadsheet**

The following worksheets within [Vegetation Statistics Statewide 2011 Simplified report.xls](#) provide additional supporting information or examples of how to use the report

- **Examples** – includes examples of how information within the report can be extracted to answer common questions in regard to the proportion of vegetation types remaining or protected. It also has descriptions of how the MS Excel Auto filter and vlookup functions can be utilized within the excel report
- **Veg Assoc Description** – see the Examples worksheet for information on how to add these descriptions to the Simplified\_Report worksheet.

## 14. **Who should I contact if I am having trouble using this Analysis or need more information?**

Shane French  
 Manager, GIS Applications Section  
 Geographic Information Services Branch,  
 Department of Environment and Conservation (DEC)  
 17 Dick Perry Avenue,  
 Kensington WA 6151  
 (LOCKED BAG 104 BENTLEY DELIVERY CENTRE WA 6983)  
[www.dec.wa.gov.au](http://www.dec.wa.gov.au)  
[Shane.French@dec.wa.gov.au](mailto:Shane.French@dec.wa.gov.au)  
 (08) 9334 0352