

# Réseau de la Biodiversité de Madagascar: REBIOMA

De la science à la prise de décision



**WCS/REBIOMA**

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Symposium sur la Biodiversité, 07 Octobre 2015



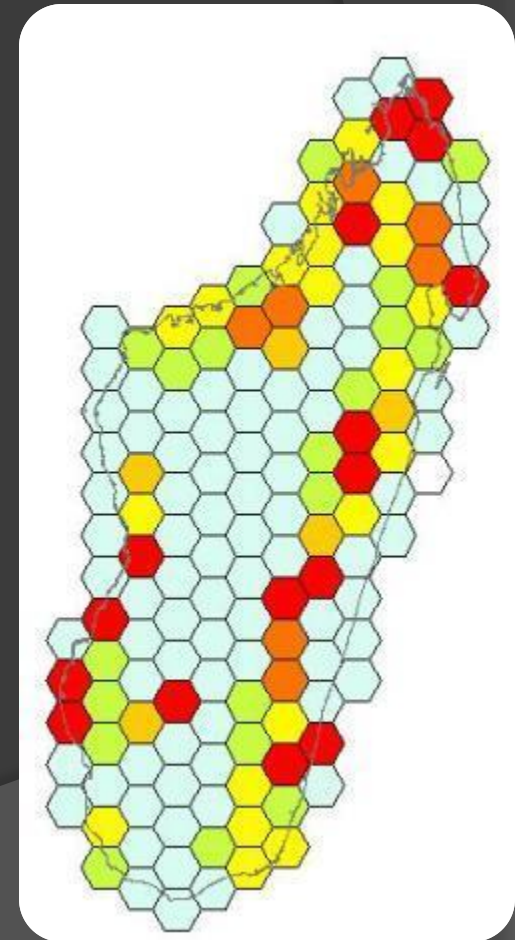
# Mission

Améliorer la planification intégrée de la conservation et du suivi de la biodiversité à Madagascar.



# Comment?

- Capitalisation des données sur la biodiversité (“*Données*”)
- Utilisation de différents outils pour la gestion et la gouvernance (“*Services*”)





# REBIOMA - *Données* : Portail de données

<http://data.rebioma.net>



# Objectif

Fournir des **données d'occurrences de la biodiversité mises à jour, validées** pour la communauté de la conservation à Madagascar

A propos et pour Madagascar



# Structure et fonctionnalité du portail



# Quelles Données ?

## Données d'occurrence d'espèces

- Qui ?**            Collectionneur, chercheur
- Quoi ?**            Espèce, Taxonomie, Caractéristiques
- Où ?**              Localité, Coordonnées géographiques
- Quand?**          date d'observation





# Chargement des données

## (1) Format de données à charger

### Format DarwinCore

→ Norme de métadonnées développées pour la description et la découverte de la diversité biologique

→ **Champs minimum requis:**

- **YearCollected:** Année de collecte
- **Genus:** genre
- **SpecificEpithet:** espèce
- **DecimalLatitude**
- **DecimalLongitude**
- **GeodeticDatum**
- **CoordinateUncertaintyInMeters,**
- **NomenclaturalCode.** (cf. <http://rs.tdwg.org/dwc/terms/index.htm>)



# Processus de validation de données

## (1) Validation automatisée

### **Taxonomie**

Référence Taxonomique :

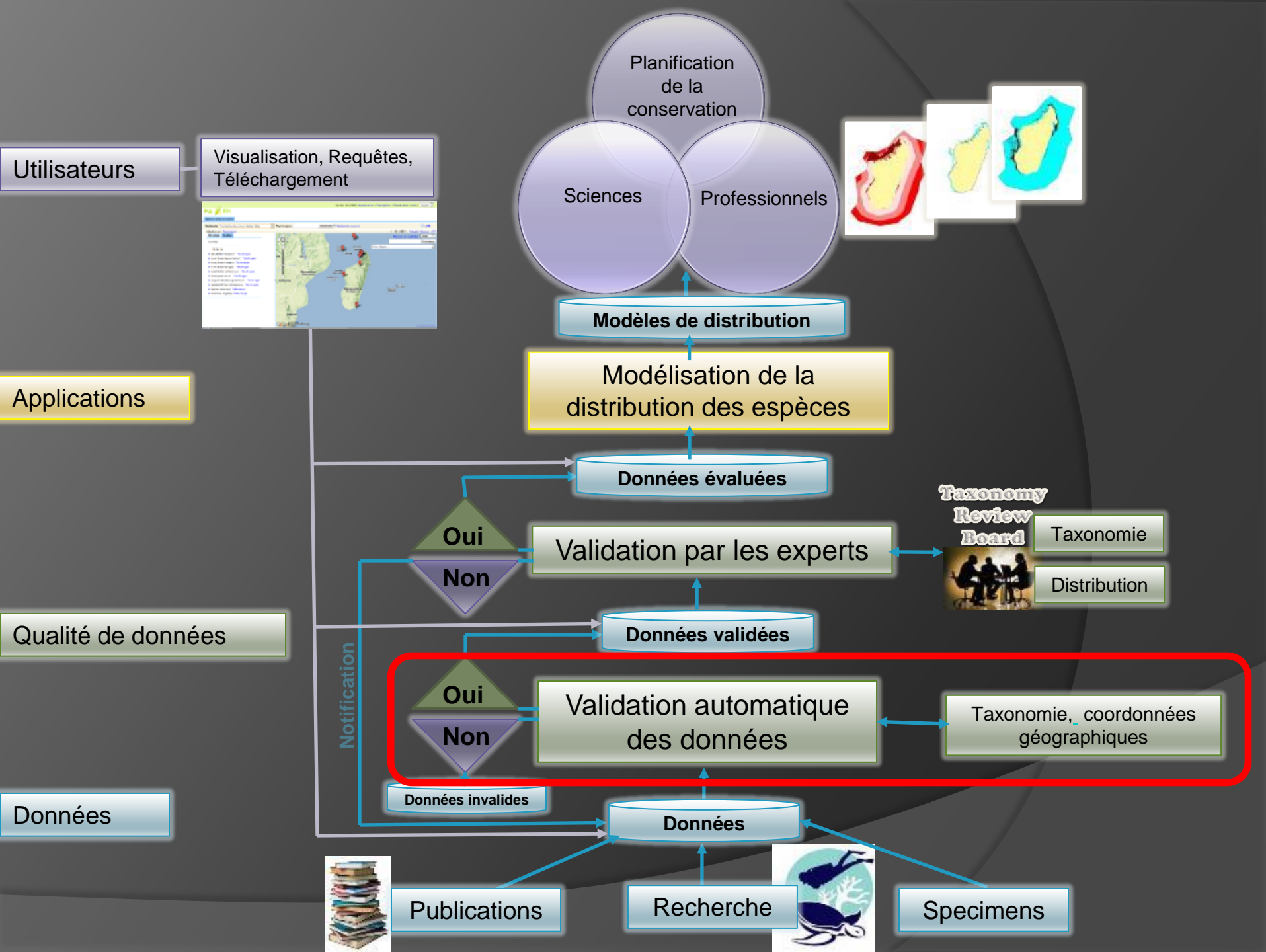
→ Validité taxonomique

### **Géographie**

Bio-Geomancer:

→ Validité géographique



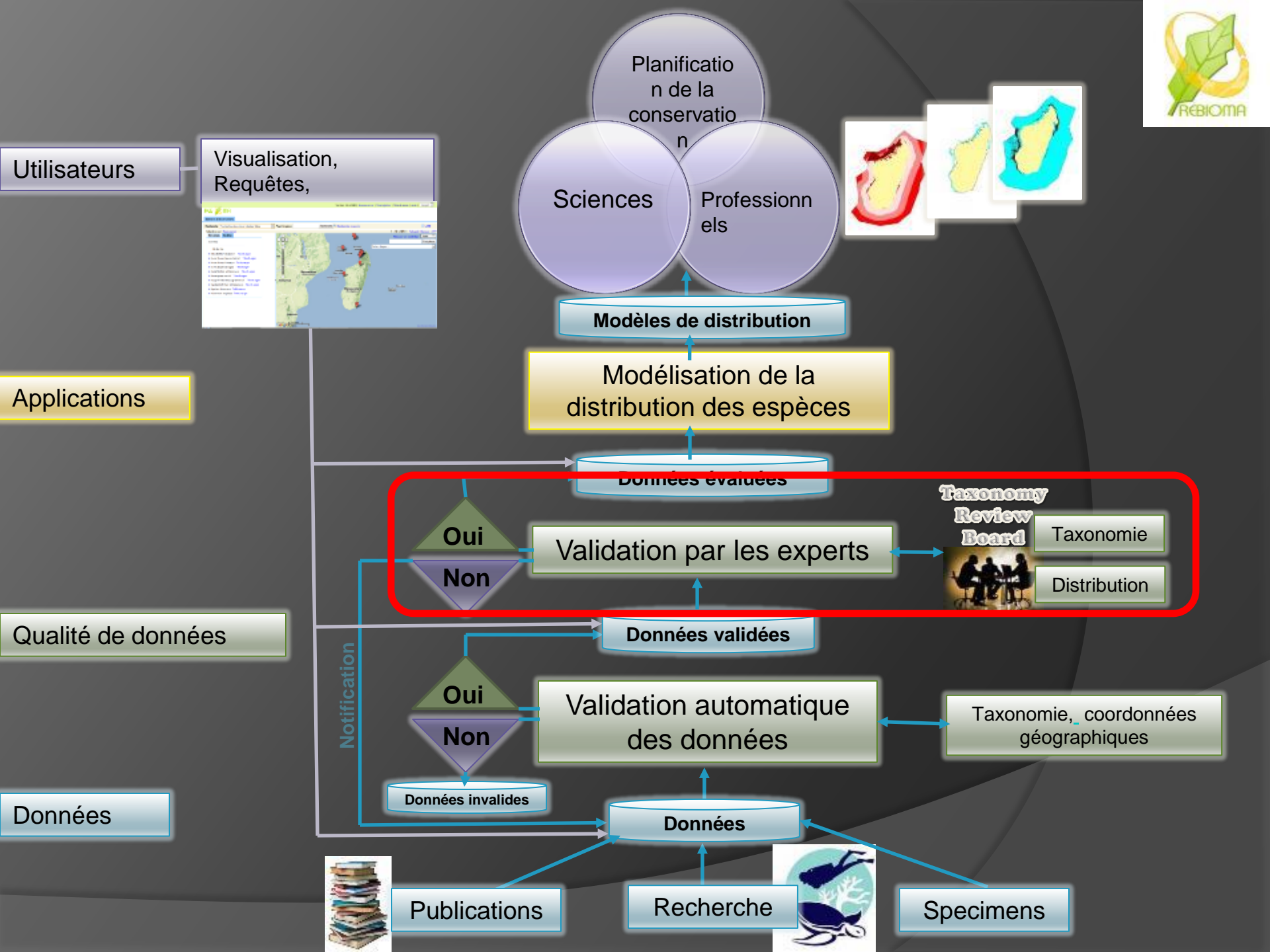


# Processus de validation de données

(2) Validation par les Experts (Comité de validation Taxonomique) ou Taxonomic Review Board

- Les Experts sont notifiés sur les nouvelles données
- Les Experts marquent les données :  
« **fiable** » ou « **questionnable** »







# Portail de données en ligne

<http://data.rebioma.net>

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**REBIOMA**

occurrences | **Species explorer** | Data dashboard

Search  for taxon  Search [Advanced Search](#) | [Shapefile](#) [List](#)

Select: **All None** 1 - 17 of 17  [CSV](#) [Toggle Control Visibility](#)

**Results** | Models

- [306976](#) - [layer values](#) [detail view](#) > Accepted Species - Fossa fossana
- [306977](#) - [layer values](#) [detail view](#) > Accepted Species - Fossa fossana
- [306978](#) - [layer values](#) [detail view](#) > Accepted Species - Fossa fossana
- [306979](#) - [layer values](#) [detail view](#) > Accepted Species - Fossa fossana
- [306980](#) - [layer values](#) [detail view](#) > Accepted Species - Fossa fossana
- [306981](#) - [layer values](#) [detail view](#) > Accepted Species - Fossa fossana
- [306982](#) - [layer values](#) [detail view](#) > Accepted Species - Fossa fossana
- [307024](#) - [layer values](#) [detail view](#) > Accepted Species - Fossa fossana

Map showing Madagascar and surrounding regions (Malawi, Mozambique, Comoros, Mayotte, Glorioso Islands, Juan De Nova Island, Mauritius, Réunion). Occurrence points are marked on the map. Coordinates: -18.396230138028842, 3.193359375. Scale: 200 km. [Données cartographiques ©2015 AfriGIS \(Pty\) Ltd, Google](#) | [Conditions d'utilisation](#)

# Modèles de Distribution des espèces

- Modélisation automatique à partir de données publiques et privées certifiées par les experts
- Par le logiciel de modélisation MAXENT (<http://www.cs.princeton.edu/~schapire/maxent/>) est utilisé pour produire continuellement ces modèles de distribution

inputs: données d'occurrence évaluées fiables + données environnementales pour plusieurs époques.

# Boophis madagascariensis

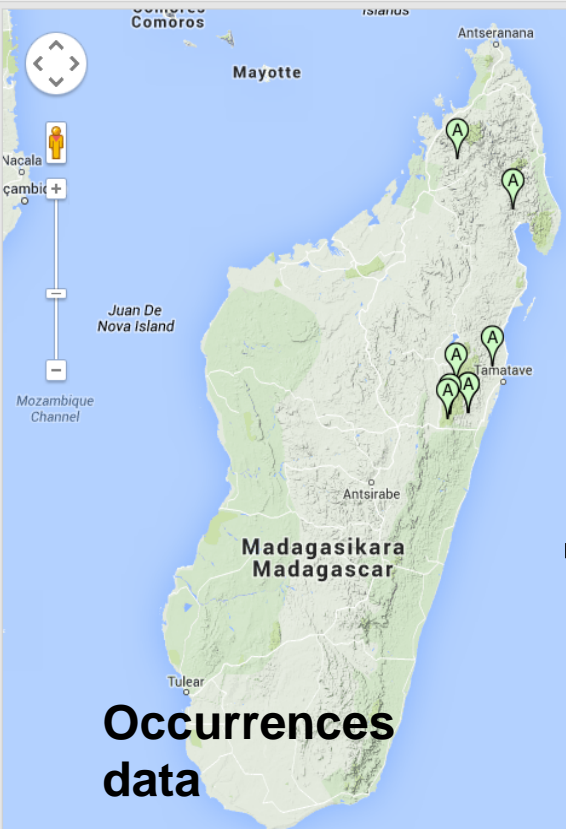


occurrences Species explorer Data dashboard User Profiles

Search All Occurrences Public and private for taxon **Boophis madagascariensis** Search Advanced Search | Shape file

Upload List Activities **1 - 8 of 8** 10 CSV

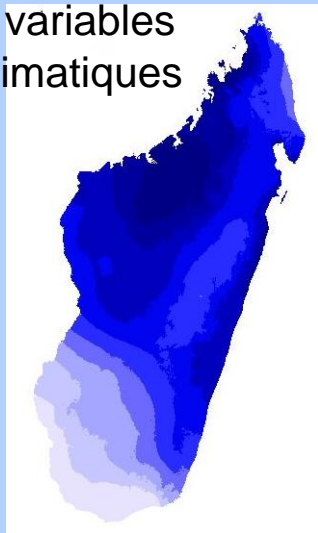
- 115332 - Accepted Species - Boophis madagascariensis
- 222327 - Accepted Species - Boophis madagascariensis
- 233457 - Accepted Species - Boophis madagascariensis
- 261278 - Accepted Species - Boophis madagascariensis
- 261324 - Accepted Species - Boophis madagascariensis
- 261368 - Accepted Species - Boophis madagascariensis
- 261406 - Accepted Species - Boophis madagascariensis
- 261497 - Accepted Species - Boophis madagascariensis



Occurrences data

## Environmental data

9 variables climatiques



PFC 2000

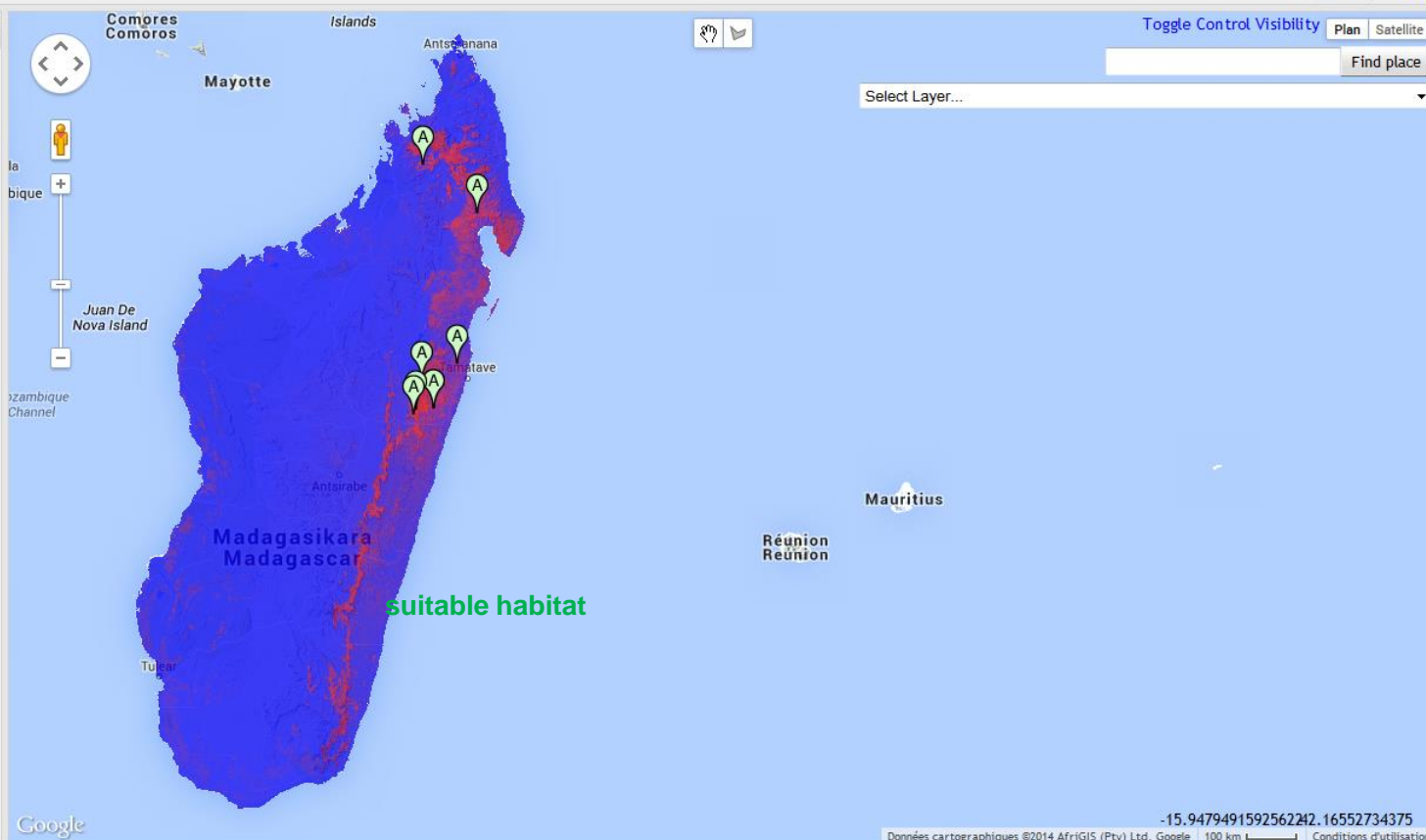


+

+

Models

- 1 - 1 of 1
- 2100\_a2a Download
  - 2100\_b2a Download
  - current** Download





# Données (terrestres et marines)

	<b>Privée</b>	<b>Publique</b>	<b>Total</b>	
Espèces	2 082	4 848	<b>6 930</b>	
Marine	1 289	1 293	<b>2 582</b>	<b>37%</b>

<b>Données</b>	<b>Privées</b>	<b>Publiques</b>	<b>Total</b>
Occurrences	67 046	146 066	<b>213 112</b>
	32%	68%	
Certifiées	51 880	112 940	<b>164 820</b>
			<b>77%</b>

Septembre 2015



# Communauté d'experts (TRB)

## Statistiques sur les TRB

- ⦿ Terrestre:
  - Flore: 16 experts
  - Faune: 17 experts
- ⦿ Marine:
  - 06 experts



# Portail en live

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data.rebioma.net

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**REBIOMA**

occurrences Species explorer Data dashboard

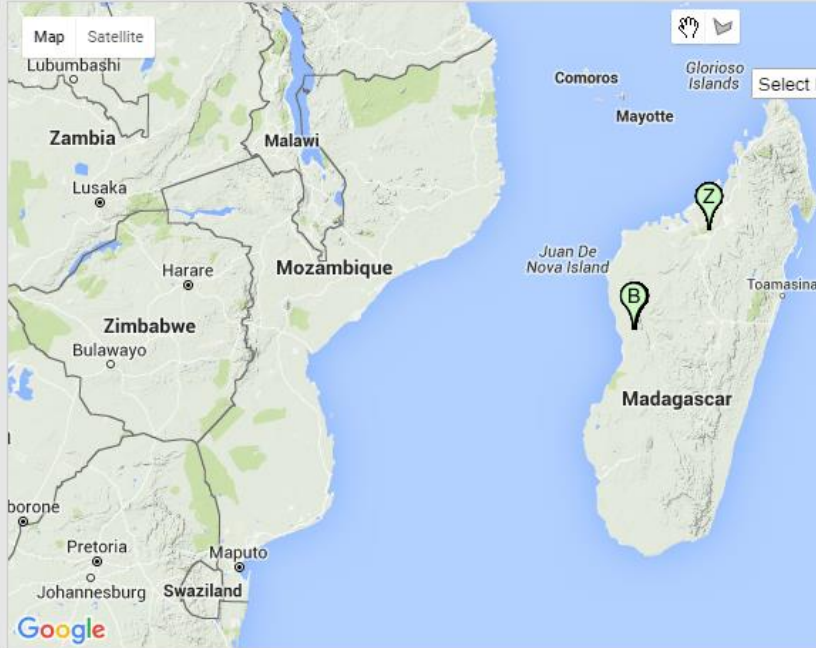
Search All Reliable Reviews for taxon Search Advanced Search | Shapefile List

Select: All None 1 - 100 of 146066 Next Last » 100 CSV

Toggle Control Visibility Find place

Results Models

- 115405 - layer values detail view » Accepted Species - Myrmicine\_genus16 MG04
- 115406 - layer values detail view » Accepted Species - Myrmicine\_genus16 MG04
- 115407 - layer values detail view » Accepted Species - Myrmicine\_genus16 MG04
- 115408 - layer values detail view » Accepted Species - Anochetus grandidieri
- 115409 - layer values detail view » Accepted Species - Monomorium termitobium
- 115410 - layer values detail view » Accepted Species - Plagiolepis alluaudi
- 115411 - layer values detail view » Scientific Name - Monomorium termitobium\_
- 115412 - layer values detail view » Accepted Species - Monomorium versicolor
- 115413 - layer values detail view »



Map Satellite

Lubumbashi

Zambia Malawi

Lusaka Harare Mozambique

Zimbabwe Bulawayo

borone Pretoria Maputo Johannesburg Swaziland

Comoros Mayotte

Glorioso Islands

Juan De Nova Island Toamasina

Madagascar

Mauritius Reunion

Select Layer...

-20.4681892226409529.8388671875

Map data ©2015 AfriGIS (Pty) Ltd, Google, ORION-ME 200 km Terms of Use



occurrences Species explorer Data dashboard

Search All Reliable Reviews for taxon [input] Search [button] List [button]

- All Reliable Reviews
- All Questionable Reviews
- All Awaiting Review
- All Invalidated
- All Occurrences

1 - 100 of 146066 Next > Last >> 100 ▾ CSV [button]

Results	Select:	Layer	Detail
<input checked="" type="checkbox"/>	<input type="checkbox"/>	layer values	detail view >>
115405			
Accepted Species - Myrmicine_genus16 MG04			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	layer values	detail view >>
115406			
Accepted Species - Myrmicine_genus16 MG04			

Map Satellite [hand icon] [arrow icon] Google Control Vis [person icon]

Find place [input]

Google

Map Data 200 km [slider] Terms of Use



# Comment créer un compte?

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**REBIOMA**

register

Register

**First Name:**

**Last Name:**

**Email:**

**Confirm Email:**

**Institution:**



sign in

Forgot Password?

Sign in to your REBIOMA user account.

Email:

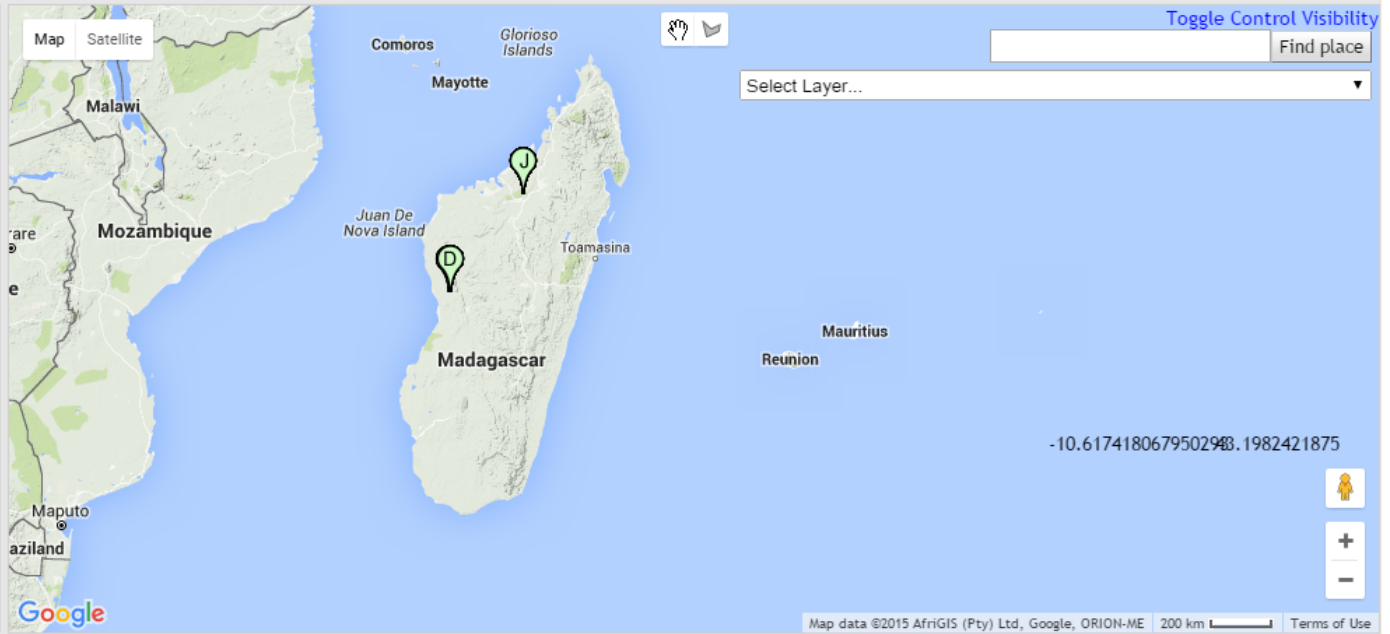
Password:

Submit

Cancel



- Results Models
- A** 115405 - [layer values](#) [detail view](#) » Accepted Species - Myrmicine\_genus16 MG04
  - A** 115406 - [layer values](#) [detail view](#) » Accepted Species - Myrmicine\_genus16 MG04
  - A** 115407 - [layer values](#) [detail view](#) » Accepted Species - Myrmicine\_genus16 MG04
  - B** 115408 - [layer values](#) [detail view](#) » Accepted Species - Anochetus grandidieri
  - C** 115409 - [layer values](#) [detail view](#) » Accepted Species - Monomorium termitobium
  - D** 115410 - [layer values](#) [detail view](#) » Accepted Species - Plagiolepis alluaudi
  - E** 115411 - [layer values](#) [detail view](#) » Scientific Name - Monomorium termitobium\_
  - F** 115412 - [layer values](#) [detail view](#) » Accepted Species - Monomorium versicolor
  - D** 115413 - [layer values](#) [detail view](#) »





Search All Occurrences All shared and unshared for taxon Search Advanced Search | Shapefile

Upload List Activities

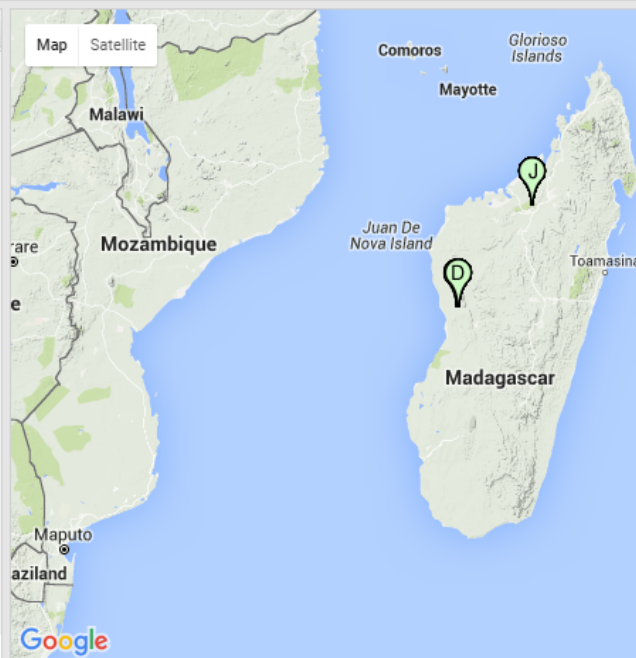
Select: All Reliable Reviews

1 - 100 of 146066 Next Last 100 CSV

Result: All Questionable Reviews

Toggle Control Visibility

- All Awaiting Review
- All Invalidated
- All Occurrences
- My Overall Reliable Occurrences
- My Overall Questionable Occurrences
- My Awaiting Review
- My Invalidated
- My Occurrences
- 115407 - layer values detail view » Accepted Species - Myrmicine\_genus16 MG04
- 115408 - layer values detail view » Accepted Species - Anochetus grandidieri
- 115409 - layer values detail view » Accepted Species - Monomorium termitobium
- 115410 - layer values detail view » Accepted Species - Plagiolepis alluaudi
- 115411 - layer values detail view » Scientific Name - Monomorium termitobium\_
- 115412 - layer values detail view » Accepted Species - Monomorium versicolor
- 115413 - layer values detail view »



Select Layer... Find place

-10.4445977228348633.3544921875

# Species explorer

ReBioMa Data Portal

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**REBIOMA**

occurrences **species explorer** Data dashboard User Profiles

Search All Reliable Reviews All shared and unshared Search Clear all selected

Find Reset Filter

Explorer	Level	Private Occurrences	Public Occurrences
ANIMALIA	Kingdom	62,215	111,500
ANIMALIA > ANNELIDA	Phylum	1	0
ANIMALIA > ARTHROPODA	Phylum	361	76,305
ANIMALIA > BRACHIOPODA	Phylum	0	0
ANIMALIA > BRYOZOA	Phylum	0	0
ANIMALIA > CHORDATA	Phylum	56,122	35,172
ANIMALIA > CNIDARIA	Phylum	3,659	0
ANIMALIA > ECHINODERMATA	Phylum	77	22
ANIMALIA > ECTOPROCTA	Phylum	0	0
ANIMALIA > FORAMINIFERA	Phylum	0	0
ANIMALIA > MOLLUSCA	Phylum	1,995	1
ANIMALIA > PLATYHELMINTHES	Phylum	0	0
ANIMALIA > PORIFERA	Phylum	0	0
CHROMISTA	Kingdom	0	0
CHROMISTA > OCHROPHYTA	Phylum	0	0
PLANTAE	Kingdom	1,166	16,174
PLANTAE > ANTHOCEROTOPHYTA	Phylum	6	0
PLANTAE > CHLOROPHYTA	Phylum	0	0
PLANTAE > MAGNOLIOPHYTA	Phylum	1,067	15,795



# Data dashboard

ReBioMa Data Portal Tsiky

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**REBIOMA**

[occurrences](#) | [species explorer](#) | **[data dashboard](#)** | [User Profiles](#)

### Numbers of occurrences per data manager (owner)

Statistics: Numbers of occurrences per data manager (owner)

	Private data	Public data	Reliable	Awaiting review	Questionable	Invalidated	All
<input type="checkbox"/> Ainazo Ecole D	37	0	37	0	0	0	37
<input type="checkbox"/> Alison Queen's University Belfast noremacnos...	7	2,357	2,352	0	1	11	2,364
<input type="checkbox"/> Andriafidison DAUDET Madagasikara Voakajy andriafidison@...	0	3,221	777	0	2,259	185	3,221
<input type="checkbox"/> Brian FISHER California Academy of Sciences bfisher...	0	81,909	68,068	0	0	13,841	81,909
<input type="checkbox"/> Chéri Christian TOTONDRABESA EDEN Université de Mahajanga totondr...	802	68	64	751	0	55	870
<input type="checkbox"/> Chrisgolden DATAPORTAL rebioma golden.dataportal@gmail.com	0	300	68	191	0	41	300
<input type="checkbox"/> Compte VAHATRA VAHATRA vahatra.dataportal@gmail.com	0	919	186	626	14	93	919
<input type="checkbox"/> Cyrille CORNU CIRAD ccornu@cirad.fr	45	80	125	0	0	0	125
<input type="checkbox"/> Data REBIOMA REBIOMA datarebioma@rebioma.net	0	1,980	92	290	0	1,598	1,980
<input type="checkbox"/> David LEES INRA/NHM dclees@gmail.com	0	4,412	3,752	0	0	660	4,412
<input type="checkbox"/> David RASOLOFOSON GERP david@gerp-mg.org	46	0	6	40	0	0	46
<input type="checkbox"/> eddie Fanantenana RAKOTONDRA... Madagasikara Voakajy rakotondra...	215	0	0	200	0	15	215

Page 1 of 2 |  |  |

Displaying 1 - 25 of 42

# Mise en ligne des données

The screenshot shows the ReBioMa Data Portal interface. At the top, there is a navigation bar with the ReBioMa logo and several menu items: **occurrences**, **species explorer**, **data dashboard**, and **user profiles**. Below this is a search bar with the text "Search All Occurrences" and a dropdown menu for "All shared and unshared". To the right of the search bar are links for "Advanced Search" and "Shapefile". Further right are icons for "Map", "List", "Upload", and "Activities".

The "Upload" button is highlighted with a red arrow and the number (1). Below the search bar, there is a section for file upload with the text "Choose file to upload" and a red arrow pointing to it with the number (2). Below this is a dropdown menu for "Comma (,)" and "CSV delimiter". There are also checkboxes for "Show email in records?", "Private (Is modeling OK?)", and "Public".

Below the upload section, there is a section for "Data Sharing Agreement (DSA)" with a button "Accept DSA and Upload".

At the bottom of the page, there is a table with the following columns: **First Name**, **Last Name**, and **Institution**. The table is currently empty.



Search All Occurrences

Choose file to upload ...  
Comma (,) CSV delimiter

Show email in records?  
 Private (Is modeling OK?)  
 Public

Choose co  
Select: A  
First

Data Sharing Agreement (DSA)  
Accept DSA and Upload

Ouvrir

« Data\_REBIOMA » Data\_test Rechercher dans : Data\_test

Organiser Nouveau dossier

Nom	Modifié le	Type
Public_Birds.csv	09/05/2014 10:58	Fichier

Nom du fichier : Public\_Birds.csv Tous les fichiers

Ouvrir Annuler

file

Map List Upload Activities



occurrences

species explorer

data dashboard

user profiles

Search All Occurrences All shared and unshared for taxon Search

C:\fakepath\Public\_Birds.csv

Comma (,) CSV delimiter

Comma (,) records?

Private (is modeling OK?)

Public

Choose collaborators with whom to share these records :

Select: All None Select an action No Search Results

First Name	Last Name	Institution
------------	-----------	-------------

Data Sharing Agreement (DSA)

Accept DSA and Upload



- occurrences
- species explorer
- data dashboard
- user profiles

Search All Occurrences

All shared and unshared for taxon  Search

[Advanced Search](#) | [Shapefile](#)

[Map](#) [List](#) [Upload](#) [Activities](#)

C:\fakepath\Public\_Birds.csv

Comma (,) CSV delimiter

- Show email in records?
- Private  Is modeling OK?
- Public

Choose collaborators with whom to share these records :

Select: [All](#) [None](#)  Select an action

First Name	Last Name	Institution
------------	-----------	-------------

No Search Results

Data Sharing Agreement (DSA)

Accept DSA and Upload



## **GBIF et REBIOMA**

- **En cours de discussion avec les « data owners » pour le partage des données Publics dans le portail GBIF**
- **Renforcement de capacité en IPT**
- **Adresse IPT de rebioma : [ipt.rebioma.net](http://ipt.rebioma.net)**



# Misaotra!

