

Statistical Eco(-toxico)logy

Improving the Utilisation of Data for
Environmental Risk Assessment

Eduard Szöcs

5th January 2017

Statistical Eco(-toxico)logy

2016-11-23

Statistical Eco(-toxico)logy
Improving the Utilisation of Data for
Environmental Risk Assessment

Eduard Szöcs
5th January 2017

1. Environmental Risk Assessment (ERA)

2. Improving Statistics in ERA

3. Exploring Monitoring Data for ERA

4. Solutions for Linking Data in ERA

Environmental Risk Assessment (ERA)

2016-11-23

Statistical Eco(-toxico)logy
└ Environmental Risk Assessment (ERA)

Environmental Risk Assessment
(ERA)

2016-11-23

Statistical Eco(-toxico)logy
└ Improving Statistics in ERA

Improving Statistics in ERA

Improving Statistics in ERA

- Eggs

- Eggs
- Plants

1. Tell joke about plants.
2. Make it short.

- Eggs
- Plants
- Animal

1. foo
2. bar
3. baz
4. foobar

Ecotoxicology is not normal

2016-11-23

Statistical Eco(-toxico)logy

└ Improving Statistics in ERA

└ Ecotoxicology is not normal

A history of GLM (uncomprehensive)

2016-11-23

Statistical Eco(-toxico)logy

└ Improving Statistics in ERA

└ A history of GLM (uncomprehensive)

Statistical Power is unacceptably low

2016-11-23

Statistical Eco(-toxico)logy

└ Improving Statistics in ERA

└ Statistical Power is unacceptably low

Generalized Linear Models (GLM) can do better

2016-11-23

Statistical Eco(-toxico)logy

└ Improving Statistics in ERA

└ Generalized Linear Models (GLM) can do better

What we learned

2016-11-23

Statistical Eco(-toxico)logy

└ Improving Statistics in ERA

└ What we learned

Where are we now?

2016-11-23

Statistical Eco(-toxico)logy

└ Improving Statistics in ERA

└ Where are we now?

2016-11-23

Statistical Eco(-toxico)logy
└ Exploring Monitoring Data for ERA

Exploring Monitoring Data for ERA

Exploring Monitoring Data for ERA

Environmental Monitoring

2016-11-23

Statistical Eco(-toxico)logy

└ Exploring Monitoring Data for ERA

└ Environmental Monitoring

2016-11-23

Statistical Eco(-toxico)logy
└ Exploring Monitoring Data for ERA
└ Thresholds

Statistics with chemical measurements

Statistical Eco(-toxico)logy

└ Exploring Monitoring Data for ERA

└ Statistics with chemical measurements

2016-11-23

Statistical Eco(-toxico)logy

└ Exploring Monitoring Data for ERA

└ Dynamics

2016-11-23

Risks

2016-11-23

Statistical Eco(-toxico)logy

└ Exploring Monitoring Data for ERA

└ Risks

What we learned

2016-11-23

Statistical Eco(-toxico)logy

└ Exploring Monitoring Data for ERA

└ What we learned

2016-11-23

Statistical Eco(-toxico)logy
└ Solutions for Linking Data in ERA

Solutions for Linking Data in ERA

Solutions for Linking Data in ERA

Biologists & Chemists face the same problems

2016-11-23

Statistical Eco(-toxico)logy

└ Solutions for Linking Data in ERA

└ Biologists & Chemists face the same problems

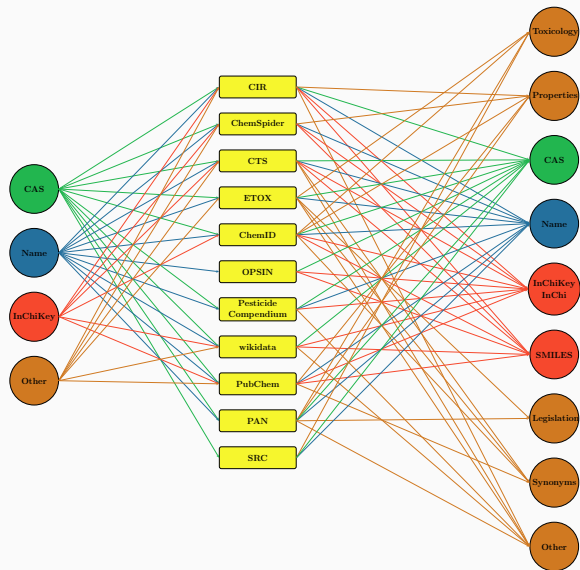
Instead of wasting time...

Statistical Eco(-toxico)logy

└ Solutions for Linking Data in ERA

└ Instead of wasting time...

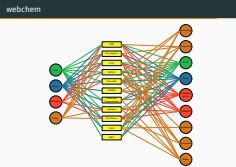
2016-11-23



2016-11-23

Statistical Eco(-toxico)logy
└ Solutions for Linking Data in ERA

└ webchem



Instead of wasting time...

2016-11-23

- Statistical Eco(-toxico)logy
 - └ Solutions for Linking Data in ERA
 - └ Instead of wasting time...

Recap

What we learned

Improving Statistics in ERA

Block content.

Exploring Monitoring Data for ERA

Block content.

Solutions for Linking Data in ERA

Use my R packages to save your time!

Statistical Eco(-toxico)logy

└─Recap

└─What we learned

2016-11-23

What we learned

Improving Statistics in ERA

Block content.

Exploring Monitoring Data for ERA

Block content.

Solutions for Linking Data in ERA


Use my R packages to save your time!


Statistical Ecotoxicology

Improving the Utilisation of Data for
Environmental Risk Assessment

Eduard Szöcs

 <http://edild.github.io/>

 [@EduardSzoecs](https://twitter.com/EduardSzoecs)

 https://github.com/edild/phd_defense



Statistical Eco(-toxico)logy
└─Recap

2016-11-23

Statistical Ecotoxicology

Improving the Utilisation of Data for
Environmental Risk Assessment

Eduard Szöcs

 <http://edild.github.io/>

 [@EduardSzoecs](https://twitter.com/EduardSzoecs)

 https://github.com/edild/phd_defense



Statistics?

Statistical Eco(-toxico)logy

2016-11-23

└ Statistics?

Statistics?

ZAGA what...?

Statistical Eco(-toxico)logy

2016-11-23

└ ZAGA what...?

ZAGA what...?

2016-11-23

└ ecology / biota?