NitroPortugal

Strenghthening Portuguese research and innovation capacities in the field of excessive reactive nitrogen

H2020-TWINN-2015

Coordination & support action

Project n° 692331

Partners of NitroPortugal

University of Lisbon

U LISBOA | UNIVERSIDADE DE LISBOA

- Interdisciplinary high education and scientific research organization;
- 18 Faculties and Institutes;
- A total of 46 989 students, matriculated in 423 undergraduate, masters, and PhD courses;
- ~ 4000 permanent staff in teaching and research.

School of Agronomy

- Agriculture, Forestry and Natural Resources Engineering, Food Science and Engineering, Animal Production Engineering, Environmental Engineering, Biology, and Landscape Architecture;
- ~ 1850 undergraduate, master and PhD students;
- 124 professors and 24 researchers

Objectives of twinning

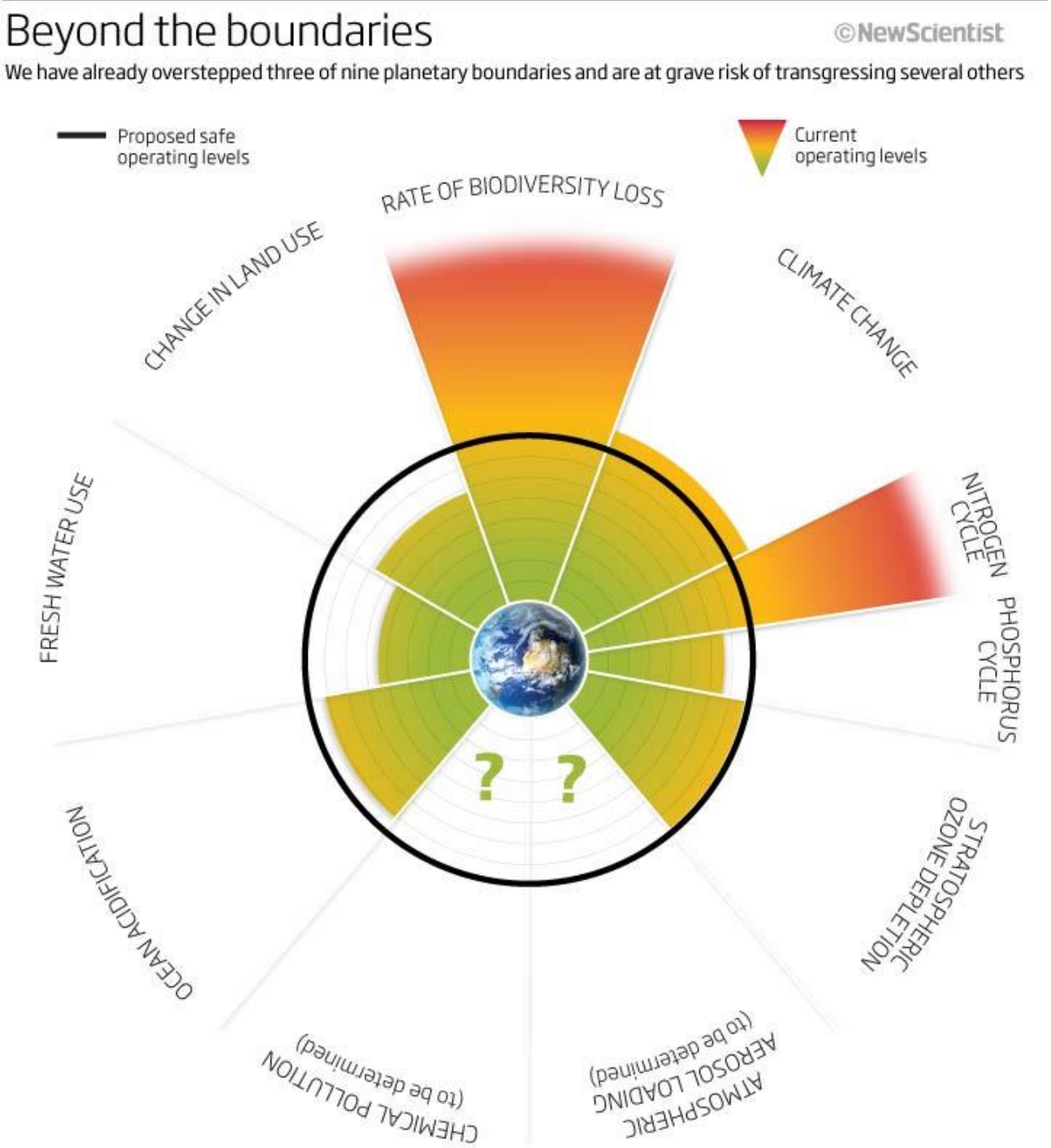
- **Stimulate scientific excellence and innovation capacity on the multiple threats and benefits of nitrogen in Portugal**
- The twinning exercise in NitroPortugal will provide the basis for a national scale assessment of all the effects of nitrogen, from the analysis and coordination of the scientific expertise and existing data on many different aspects of nitrogen.

Why Nitrogen?

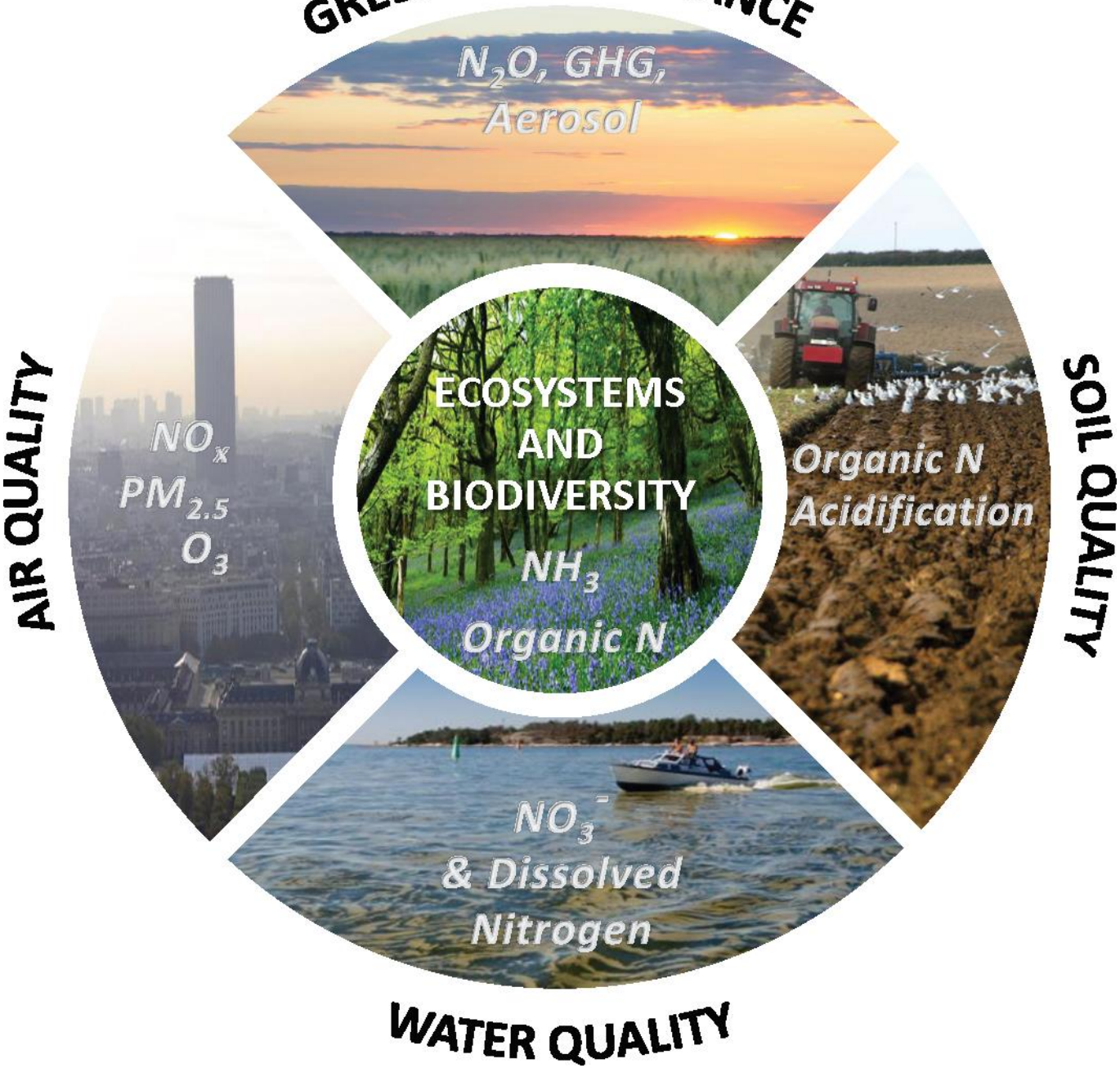
The production of N_r for crops fertilization has made population growth possible

This growth has come with very high environmental and societal costs.

- For nearly a century mankind had caused unprecedented changes to the nitrogen cycle by more than doubling the transformation of non-reactive atmospheric di-nitrogen (N_2) into reactive nitrogen (N_r) forms, which cascade through the environment.



- Reactive N is one of the three "planetary boundaries" that have been exceeded as a result of human activities


GREENHOUSE BALANCE
N_2O, GHG,
Aerosol
AIR QUALITY
NO_x
$PM_{2.5}$
O_3
ECOSYSTEMS
AND
BIODIVERSITY
NH_3
Organic N
SOIL QUALITY
Organic N
Acidification
NO_3^-
& Dissolved
Nitrogen
WATER QUALITY

Holistic approach

Key Training Elements of the project

- **Training in key research areas of the nitrogen cycle** and corresponding scientific production;
- **Training on nitrogen integration and synthesis**, to build the ground for the elaboration of a ***Portuguese Nitrogen Assessment;***
- **Training on science interface to national and international policy development.**

Comments

- A stronger focus to young scientists to build the opportunity to renew the teams.

- The involvement of young scientists should be strengthened.
- Hiring young researcher should be permited

VISIT US AT:

http://www.isa.ulisboa.pt/proj/nitroportugal/

Thank you