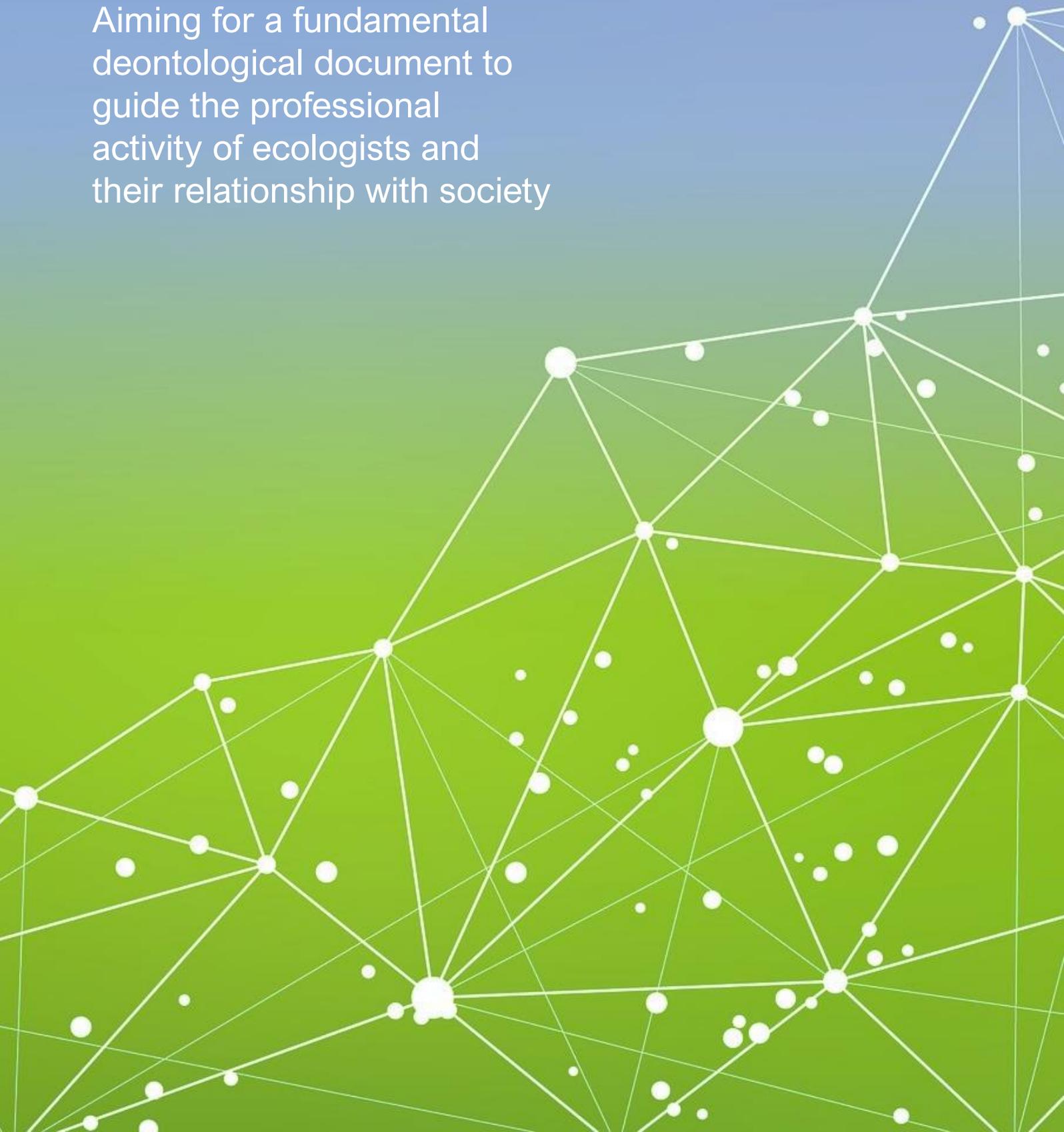


# The Responsibility of Ecologists

Aiming for a fundamental deontological document to guide the professional activity of ecologists and their relationship with society



This document was written as a summing up of the debate held during the 15th European Ecological Federation Congress, which took place in Lisbon from July 29<sup>th</sup> to August 2<sup>nd</sup> 2019, under the title “Embedding Ecology in Sustainable Development Goals”.

These conclusions include the views expressed by a panel convened under the title “How is Ecology contributing to the accomplishment of the SDG’s?” that had the participation of:

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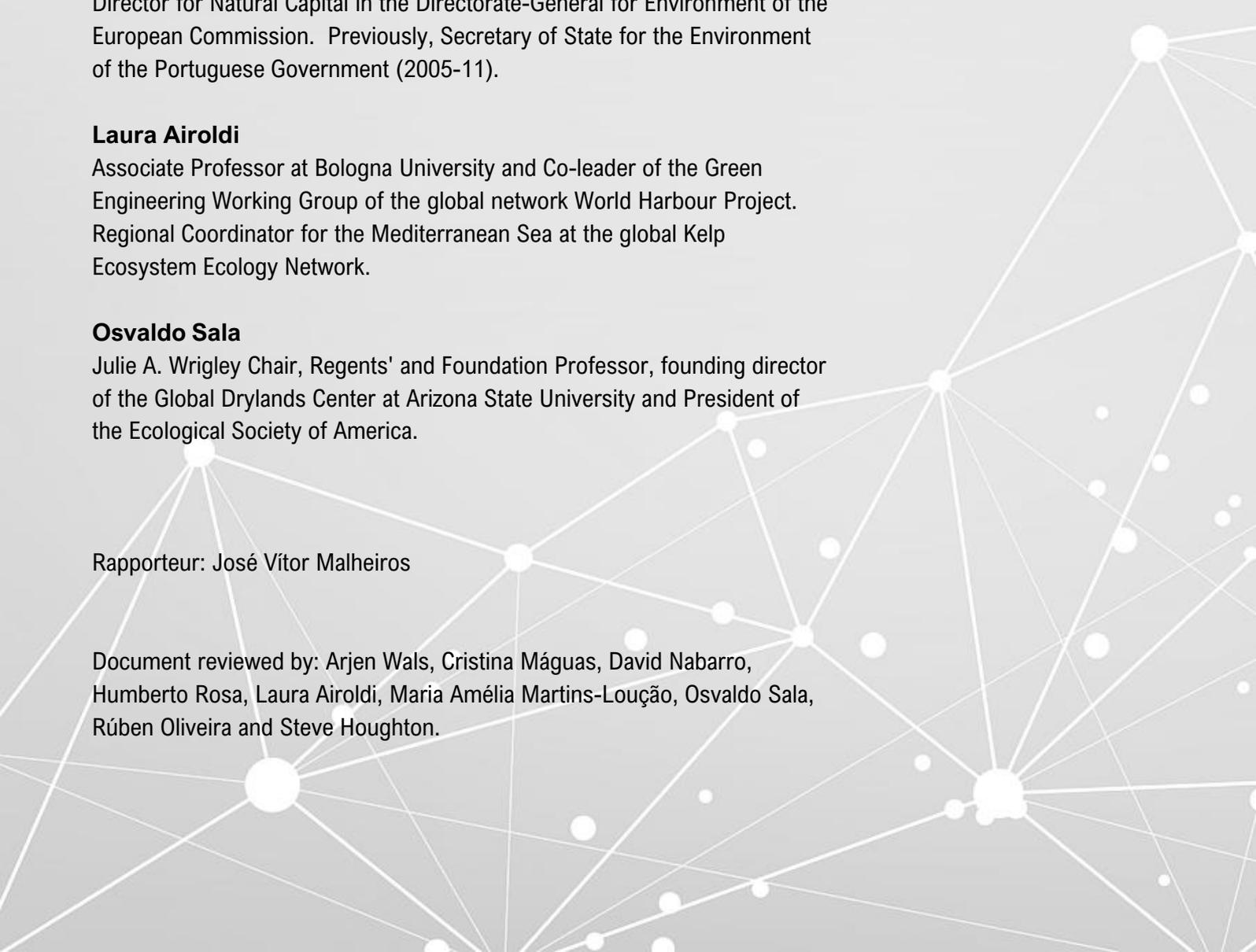
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# Preamble

Science in general, and the scientific domain of Ecology in particular, have helped us understand that the extraordinary development humankind has experienced in recent centuries came at a heavy price to the biosphere: degradation of the atmosphere, land and ocean, climate change, accelerating reduction of biodiversity and extinction of species. We know that since the advent of agriculture, human activities are playing a prominent role, and risk driving one million species to extinction in coming decades.

This path is unsustainable and has to be reversed in the next decade with a sense of urgency and forceful determination.



# The Responsibility of Ecologists



# Ecologists must explain their role to society and underline the usefulness of Sustainable Development Goals

- 1. Ecologists have the responsibility to provide the knowledge to reconcile human development with ecological sustainability. Sustainability cannot be envisaged as separate from human activities, needs and expectations. The ecological perspective is essential when natural systems are changing.**

Ecologists should use the Sustainable Development Goals (SDG's) set by the United Nations General Assembly in 2015 and the 2030 Agenda for Sustainable Development as an important compass for achieving that purpose.

The 17 SDG's constitute a coherent and interdependent set of goals (based on 5 basic principles translated into 169 targets monitored through 232 indicators) that must be pursued in a global and harmonious manner.

## Ecologists must make clear to society that their role is essential for the success of the SDG's

- 2. Ecologists should make clear that the SDG's concerning the biosphere (13, 14 and 15) support all the other SDG's. A degraded biosphere will inevitably lead to a degraded society, so the contribution of ecologists is absolutely central to the successful implementation of all SDG's.**

## Ecologists must put ecology at the center of public agendas

- 3. Ecologists must use all possible means to clarify the increasing seriousness of the threat represented by the climate and biodiversity crisis to the general public and to the various stakeholders involved in each specific situation, using clear and objective evidence.**

Ecologists should stress the importance of ecological concerns for climate change and biodiversity at all levels of the political, social and economic agendas across the world.

## Ecologists must place ecology at the center of the public debate

4. **Ecologists should contribute to public debates about the climate and biodiversity crisis positively and rationally, presenting trustworthy and verifiable data and evidence-based scenarios.**

These data and scenarios should cover not only the ecosystem, natural phenomena and the technological opportunities and constraints, but also the social framework, the values at stake, relevant political issues, etc.

## Ecologists must clarify that ecology addresses complex issues with no simple solutions

5. Ecologists must make clear to society that our world is faced with a **profusion of very complex problems of a global nature for which the answers are far from simple and, in some cases, unknown.**

Although in some cases there are known technological solutions and social support to implement them, in many other cases that is not so. There is still a lot that we do not know about the interdependencies of the natural world, about the impact we humans have on our habitats and about how we can or should change our behaviour in order to achieve a sustainable world. However, we need not to allow complexity to become an excuse for non-action. Ecologists should be humble and recognise that many of these problems have no precedent in history.

## Ecologists must make clear that ecology addresses global and interconnected problems

6. Ecologists must show that the extinction crisis and the biodiversity loss are not things that are happening in a world far away from ours. **The whole natural world is globally connected and each one of our gestures as citizens and as consumers has a global impact.**

Nature is not something separate from humans and the rain forest degradation and the livelihood of indigenous people is intimately connected to what is sold in the supermarket around the corner, and how it is marketed.

## Ecologists must make clear that there is no easy technological fix for sustainability problems

7. Ecologists must make clear that **although science and technology are indispensable tools to understand, manage and eventually minimize the ecological crisis, they cannot provide a technological “fix” to all the problems involved.**

The ecological problems we are facing are rooted in our moral values and behaviors as individuals and as a society and these values and behaviors (individualism, consumerism, growth, competition, etc.) should be addressed as part of the problem.

## Ecologists must consider both the natural and social costs of human actions

8. Ecologists must not only quantify the degradation that occurs in natural ecosystems and the losses in biodiversity but **also identify, quantify and bring to people’s attention the social losses** that these events imply.

## Ecologists must accept that it is not up to them to make social choices

9. **Ecologists must make clear that it is not up to them to choose among possible actions for sustainability.**

The role of ecologists is to identify choices and suggest options and to present their costs and benefits to different stakeholders and to society as a whole, and assist in the debate and decision process.

# Ecologists must affirm ecology as a science of transdisciplinarity

**10. Ecologists must remember that ecology is a transdisciplinary science** and a science of collaboration, connections, relations, interdependences and complexities.

Ecologists must work hand in hand with specialists of other disciplines and create bridges and bonds among them. Ecologists must play a central role in clearly identifying sustainability problems and their scale, where they happen, what are their causes, whom and what they impact, define priorities and then collaborate with other disciplines to find solutions to remediate them, negotiate their implementation with all the stakeholders concerned and apply and monitor those solutions.

# Ecologists must engage in transectorial cooperation

**11. Ecologists must acknowledge and make clear to society that the sustainability challenges we face can only be solved through collective action.**

These challenges call for the convergence of various technical disciplines and different kinds of local expertise. Importantly, they also require the cooperation of multiple interest groups and different sectors (academia, NGO's, funding bodies, government, industry) and a social, economic and political approach that goes far beyond the realm of ecology considered in the past.

# Ecologists must include the social sciences in their analyses and approaches

**12. Ecologists must incorporate relevant socio-economic research in their work** and remember that no technical solution will be effective unless it is also socially acceptable and economically feasible.

## Ecologists must make clear that sustainability demands more than decarbonisation

13. Ecologists must make clear that **the decarbonisation of society is absolutely essential, but must also stress that this will not be enough to attain sustainability. The emphasis placed on the decarbonisation of society has failed to adequately address the biodiversity crisis.**

Society must adopt nature-based solutions including preservation of existing forests and reforestation, protection of wetlands and peatlands, restoration of degraded lands and wild environments, and a profound transformation of agriculture and livestock management in order to reform current food production systems, which are already unsustainable. This must be complemented by shifts in governance and financing that prioritize natural systems.

The goal of putting nature closer to the center of every sustainable solution and every development program has to be embraced first and foremost by the climate community itself, in order to be adopted by society as a whole, including the political, social, economic, financial and cultural actors. This should occur in all societies, while respecting the rights and needs of indigenous peoples and local communities.

## Ecologists have the duty to share their knowledge

14. **Ecologists have a duty not only to produce knowledge but to share it** with the scientific world and with society at large and to foster cooperation among all sectors of society, organizations, cities and countries around the world.

## Ecologists have the duty to promote public debate

15. **Ecologists must communicate with all the different interest groups and with society at large**, exchanging perspectives, exploring uncertainties and promoting discussion of sustainability issues.

Local communities, national and local politicians, businesses, teachers and the media, are some of the most relevant actors who should be approached. Different tools must be used to reach different people (social networks, TV, newspapers, public debates). Communicating does not mean “teaching people about the environment” but, most importantly, listening to what they have to say.

Ecologists should avoid the comfortable “echo chamber” where everybody shares the same values and the same knowledge and engage in conversations with groups of citizens that ignore or dispute their knowledge and opinions. Ecologists should not be dismissive of different competing values, but instead try to understand them, promote their open discussion and try to find a common ground among them.

## Ecologists must use effective ways of communicating

### **16. Ecologists must remember that communication is not only about communicating scientific facts.**

Communicating with the public is not the same as communicating with the scientific community. The most effective way of communicating is to start with open-minded listening, appreciate the values of others and connect with their emotions. Ecologists should be always as accurate as possible, reflecting the scientific consensus without shying away from using an emotive narratives as vehicles for their messages. Ecologists must accept that they are not necessarily the most effective at communicating with every stakeholder group, so it is important to identify and support champions and speakers among these groups, and engage with them on their terms.

## Ecologists must never hide the seriousness of existing problems

### **17. Ecologists should not shy away from conveying information about serious threats, but should be aware that doomsday alerts might create a sense of helplessness or lead to hasty, inappropriate actions.**

The important message is that there are a lot of options for action and that they are waiting to be done by everybody. There is a will to change in society and ecologists should tap into this energy and help it to have greater impact.

## Ecologist should accept (and explain) that there are trade-offs between the different SDG's

### **18. Ecologists play vital roles in actions linked to the 2030 Agenda for Sustainable Development, but they must make clear to society that, important as they are, SDG's are not a totally consensual construct, universally accepted by every social group.**

Different people with different living circumstances have different interests and different sets of values and possess different levels of political power to make them prevail. Ecologists must keep in mind that while some stakeholders may benefit from the implementation of certain SDG's, other groups may have to pay a cost. Even if some SDG's are synergistic (i.e. Clean Water and Good Health), there are also tradeoffs between SDG's (i.e. Zero Hunger vs. Life below Water, Responsible Consumption vs. Economic Growth) that have to be taken into account and duly balanced.

# Ecologists should accept (and explain) that there is room for improving the existing SDG's

## **19. Ecologists should preserve and encourage a healthy critical view of SDG's.**

It is important to understand that in the present state of affairs they are a powerful tool to engage the global community in the current ecological crisis and that they have been instrumental in changing the mindset of politicians concerning sustainability problems, but also that they are the result of a complex international negotiation that had to balance different views and values and could hopefully be improved in the future. One issue that should invite discussion is the fact that the international community has decided to rely solely on the voluntary adoption of SDG's by the various parties, hoping that they could be achieved in this way. The evolution of the situation should be closely monitored and ecologists should be ready to promote the discussion of different and more effective approaches.

# Ecologists must make clear that sustainability is a changing concept

## **20. Ecologists must stress and make clear for society as a whole that the concepts of “sustainability” and “development” are fluid and dynamic and change over space and time, as do the impacts of human activities in different settings.**

These impacts should therefore be studied and discussed at local and national levels, including the concerned populations and all stakeholders. The priorities for action should be the result of open dialogue negotiation, and transparent processes of decision-making.

# Ecologists must make clear that all of humankind must make fundamental changes in their ways of living

## **21. Ecologists acknowledge that many of the sustainability problems we face (massive extinctions, climate change, dramatic weather events, rampant inequality, food crisis) are the symptoms of largely dysfunctional systems that need substantial transformation.**

Responding to these challenges requires that ecologists work with others to prepare for fundamental shifts of mindsets, values and acceptance of vulnerabilities. These are essential prerequisites for contributing to just, equitable, caring and balanced ways for humans to live with other species



# Ecologists are invaluable

## **22. Ecologists have a vital role in securing a just future for people and the planet.**

They make essential contributions that complement those from other sciences who advance more technical solutions. They are well placed to accompany those whose efforts will achieve a fair outcome for people and planet.

