

# Anthropocene challenges for landscape ecology

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During the first week of July (1<sup>st</sup> to 5<sup>th</sup> July 2019) the University of Milano Bicocca hosted the 10<sup>th</sup> IALE (International Association for Landscape Ecology) World Congress, organized by the Italian chapter of the Association (Siep-IALE, Italian Society for Landscape Ecology). The Congress was dedicated to the contributions that landscape ecology, as a scientific discipline, can give to the challenges faced by the Anthropocene and which solutions can be found for both nature and society.

IALE Congresses take place every four years, each time in a different part of the world and in Italy this was the first time ever. Here, it is a crucial moment for the environmental, social, economic and geopolitical situation. Today, we need to take decisions that guarantee not only the sustainability of human development but also the survival of socio-ecological systems at different levels, and that can ensure human prosperity and biodiversity conservation in a long-term perspective. In fact, Anthropocene is the first geological Era where a single species, the human being, is the main factor causing profound changes in land use, ecosystem functions and climate.

Theme of the meeting was “Nature and society facing the Anthropocene - challenges and perspectives for landscape ecology”. During the five days of the Congress scientists, academics and profession-

als have shown the most recent results and experience in ecological research, in order to give insightful solutions for policy makers that are dealing with impellent environmental and social issues. A core tendency for these important meetings is to bring together the findings of science research and institutional realities which have the task to manage the territory at various degree.

The IALE Congress hosted five keynote speakers, lead scientists of their fields who presented their reports during the Plenary sessions at the auditorium of the University.

On July 1<sup>st</sup> Prof. Harini Nagendra of the Azim Premji University and Prof. Erle Ellis of the University of Maryland had two significant talks about Anthropocene’s problems and they emphasized the impact caused by the climate crisis in driving the most emerging environmental, social and economic problems the world is facing today. Their conclusions were supported by observations and findings of the most relevant research in this field that were presented at the meeting.

Prof. Grahame Shame (Columbia University) and Ed Wall (University of Greenwich) are both eminent urbanists. They developed their speech in the form of a dialog between a ‘teacher’ and a ‘scholar’ who discussed the global and local challenges of urbanisation and how the humanity is living more and more

Nature and society facing the Anthropocene: challenges and perspectives for landscape ecology  
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in urban areas, rather than in rural or semi-natural ones.

Finally, Prof. Gianfranco Pacchioni (University of Milano Bicocca) talked about the relationship between humans and the environment with a different point of view: he showed how new technologies and the new branches of knowledge (such as artificial intelligence and genetic editing) can work together with research in landscape ecology and future developments of human societies.

In addition to the plenary sessions the Congress organized 60 parallel thematic sessions in which gave the possibility to almost thousand landscape ecologists, coming from more than 60 countries throughout the World, to present their studies and discuss the findings. During these sessions the main topics that were discussed were about ecosystem services (from the definition to the implications in land management), the ecological and social transformations linked to the urbanisation of human population, the analysis and monitoring of natural and human landscapes, and the study of biocultural landscapes.

The works of the Congress will be finalized in two important legacies: from one side there is the production of scientific literature, in fact many sessions have organised special issues in prestigious scientific journals that will lead to create a produc-

tive debate with the reference scientific community. On the other side, the Italian society of landscape ecology (Siep-IALE) has the willing to develop an in-depth debate with Italian public administrations and – thanks to the cooperation with other chapter IALE – even with European public administrations, by converting the main outcomes emerged from the Congress in practical recommendations and guidelines for functionaries and policy makers, in a document that will be presented during the next National Congress of IALE, in Autumn 2020 in Milan.