

BOOK REVIEW

P. Kareiva, Talls H., Ricketts T. H., Daily G. C., Polasky S. (Eds.): NATURAL CAPITAL. THEORY AND PRACTICE OF MAPPING ECOSYSTEM SERVICES. – Oxford University Press, Oxford – New York etc., Paperback, 2011, 365 p., ISBN 978-0-90-958900-5.

Remarkable number of contributors to the book content (56) is introduced, and sounding names, such as Paul R. Ehrlich, Harold Mooney, Peter Kareiva etc., are present within the author's team. The editors declare that thematic construction of the content represents „state of science“ and that is the reason why the extensive covering of topics leads the readers to selective approach to the chapter readings. All the book subject is derived from the outputs of the Natural Capital Project and the roots of the main idea of ecosystem services are in the Millennium Ecosystem Assessment (MA 2005). Background of associated thinking has two sources published in 1997 – (1) book on *The Work of Nature: How the Diversity of Life Sustain Us* (Baskin 1997), and (2) edition of *Nature's Services: Societal Dependence on Natural Ecosystems* (Daily 1997). These publications collected rationale for conserving biological diversity as not only a social responsibility of society but also as a necessity for human prosperity. This philosophy is in harmony with Kareiva's well-known statement that the separation of nature and humans is a human construct (or in parallel idea: Nature is often resilient, not fragile). It is correct to add that opponents view this approach as stressing only the importance of instrumentally valuing lands for human benefit but ignoring intrinsic values of organisms, species, or ecosystems (rich literature connects the ethical need to protect nature for its intrinsic values).

However, the main aim of any chapter of the book is to contribute to modeling ecosystem services and connecting them to resource management. In other words, the book wants to give us tools to account wide range of natural ecosystem benefits and information to sensitive management decisions reaching to the horizon of land use.

Generally, 19 chapters are gathered into three sections: Section one: A vision for ecosystem services in decisions, Section two: Multi-tiered models for ecosystem services, Section three: Extensions, applications, and the next generation of ecosystem service assessments.

The first section includes only three chapters: 1. Mainstreaming natural capital into decisions, 2. Interpreting and estimating the value of ecosystem services, and 3. Assessing multiple ecosystem services: An integrated tool for the real world. This part can be briefly announced as historical view on ideas moving from theory to implementation.

The second section is the most extensive (Chapters 4 – 13). The chapters 4. Water supply as an ecosystem service for hydropower and irrigation, 5. Valuing land cover impact on storm peak mitigation, 6. Retention of nutrients and sediment by vegetation, and 7. Terrestrial carbon sequestration and storage, represent the issues of crucial challenge for humanity with its demands on further integrity of the Earth's environmental systems. The chapters 8. The provisioning value of timber and non-timber forest production, 9. Provisioning and regulatory ecosystem service values in agriculture, and 10. Crop pollination – reflect that forestry and agricultural systems are already major forces of global environmental degradation, but responding to these impacts, there is increasing focus on sustainable managements as a means to increase yields on underperforming landscapes while simultaneously decreasing the environmental impacts of agricultural systems. The chapters 11. Nature-based tourism and recreation, 12. Cultural services and non-use values, and 13. Terrestrial biodiversity – resolve the question of how values of nature are ordered now in human mind and how loss of biological diversity will alter the functioning of

ecosystems and their ability to provide society with the goods and services needed to prosper.

The third section highlights the roof phenomenon of our times with its logical consequences: that humanity has never been moving faster nor further from sustainability than it is now. The chapters 14. Putting ecosystem service models to work: Conservation, management and tradeoffs, 15. How much information do managers need? The sensitivity of ecosystem service decisions to model complexity, 16. Poverty and the distribution of ecosystem services, 17. Ecosystem service assessments for marine conservation, 18. Modeling the impacts of climate change on ecosystem services, and 19. Incorporating ecosystem services in decisions – stream to incorporation of the models in application and decision practice.

We can say that the book develops the other previous (in some case pioneer) publications and projects summarizing new approaches to complex natural entities in literature (e. g., Kovář 2012). It quantifies the „business of nature“ and contributes to rational land-use and landscape managing. Its uses are suitable in both ecological and economical student curricula.

Pavel Kovář

REFERENCES

- BASKIN Y., 1997.** *The World of Nature*. How the Diversity of Life Sustains Us. – Island Press, Washington, D. C.
- DAILY G. D. (ED.), 1997.** *Nature's Services, Societal Dependence on Natural Ecosystems*. – Island Press, Washington, D. C.
- KOVÁŘ P., 2012.** R. E. Hester & R. M. Harrison (eds.): *ECOSYSTEM SERVICES*. – RSC Publishing, 2010, 176 p., ISBN 978-1-84973-018-1. - Journal of Landscape Ecology, 5(1): 73-74.
- MA, 2005.** *Millennium Ecosystem Assessment*. Ecosystems and Human Well-being. Synthesis. Island Press, Washington, D. C.

* Charles University in Prague, Faculty of Science, Benátská 2, 128 01 Prague 2, Czech Republic, e-mail: kovar@natur.cuni.cz