



**MASHAV INTERNATIONAL TRAINING COURSE  
"ENVIRONMENTAL MANAGEMENT OF NATURE PARKS AND RESERVES"  
(TEL AVIV – KIBBUTZ KETURA – JERUSALEM, ISRAEL)**

**МІЖНАРОДНИЙ НАВЧАЛЬНИЙ КУРС MASHAV  
«ЕКОЛОГІЧНИЙ МЕНЕДЖМЕНТ ПРИРОДНИХ ПАРКІВ ТА ЗАПОВІДНИКІВ»  
(ТЕЛЬ-АВІВ – КІБУЦ КЕТУРА – ЄРУСАЛИМ, ІЗРАЇЛЬ)**

The MASHAV International training course "Environmental Management of Nature Parks and Reserves" brought together 25 middle-career experts in nature conservation from 12 countries of Europe (Ukraine, Albania, Serbia), Africa (Botswana, Ghana, Kenya), Asia (Nepal, Thailand, Vietnam), and South America (Brazil, Colombia, Paraguay). The meeting was hosted by the Arava Institute for Environmental Studies (<http://arava.org/>) under the aegis of MASHAV – Israel's Agency for International Development Cooperation (<http://mfa.gov.il/mfa/mashav>) from November 27 till December 13, 2016 mainly at Kibbutz Ketura, Israel ([www.ketura.org.il](http://www.ketura.org.il)). The place is located in the heart of Israel's Arava desert and has important value for science, environmental education, and international cooperation. Here, the idea that nature knows no political borders is more than a belief.

The main aim of the course was to provide an understanding of the concept of Ecosystem Services, its terminology, division into categories, and its ecological, anthropological and economic aspects.

© M.M. PEREGRYM, M.M. FEDORIAK, N.Yu. POLCHANINOVA,  
Ye.O. VARYVODA, N.L. VERTYPOROKH, O.V. OSYPCHUK, 2016

The participants got acquainted with different approaches to nature conservation in Israel, the peculiarities of structure and functioning of various protected areas. They were provided with the most important principles of agriculture in arid and semi-arid lands. They also obtained basic practical knowledge about the structure and function of arid land ecosystems and various adaptations of living organisms to the harsh conditions in a desert.

The participants have developed various helpful skills which will be used in practice of nature conservation in their native countries. They have also learned how to build a management scheme based on the Ecosystem Services concept and how to engage local communities and other stakeholders.

Ukraine was represented by 6 participants from various regions and organizations of the country: Prof., Dr. Mariia Fedoriak (Yuriy Fedkovych Chernivtsi National University), Dr. Mykyta Peregrym (Taras Shevchenko National University of Kyiv), Dr. Nina Polchaninova (V.N. Karazin Kharkiv National University), Dr. Yevheniia Varyvoda (National University of Civil Protection of Ukraine), Olena Osypchuk (Holosiivsky National Nature Park), and

Nataliia Verlyporokh (Carpathian National Nature Park). All participants were selected by Israel's Agency for International Development Cooperation on the basis of their applications and phone interviews with staff of the Embassy of the State of Israel in Ukraine. Favourable conditions, namely the MASHAV grants covering all expenses for training, accommodation, meals, transfers, etc., facilitated participation of the Ukrainian experts. The participants had to cover their travel costs only.

The training course started in Tel Aviv where staff members greeted us as participants upon our arrival to Israel. We also had some time for sightseeing and preparation for living in rural area. After that we took a 4-hour bus ride to Kibbutz Ketura, which is located in the southern part of Israel, about 50 km north of Eilat. This location became our home for the next two weeks. The scientific and practical parts of the training course started on November 29 with an introduction and overview of the program by Dr. Shmuel Brenner (Director of the Arava Center for Sustainable Development), Dr. Elli Groner (Scientific Director of the Dead Sea & Arava Science Center), and the MASHAV team. All participants were asked to deliver 5-minute presentations about their countries, as well as the state and peculiarities of nature conservation and speak on their professional, educational and social activities, scientific research, expectations from the course, etc. As Ukraine had the largest delegation, it was decided that Prof. Dr. Mariia Fedoriak would present general information about our country and its natural conditions, and subsequent communications of our delegates would be focused on their personal achievements in environmental protection, education and research.

The following weeks we attended interesting lectures by the leading scientists of Israel. Here is a brief overview of some of them. Dr. Elli Groner made an introduction to the Ecosystem Services concept, mentioned the principles, structure and function of deserts as well as Ecological Integrity and Human Well-being. Dr. Daniel Orenstein (The Technion – Israel Institute of Technology) presented two original lectures under the titles “One person's invasive species is another person's lunch: Diversity in Ecosystem Service Assessment” and “Putting the socio in long-term socio-ecological research”. Dr. Tal Polak (Israeli Nature and Parks Authorities) talked about problems and practices

of conservation biology in Israel. Prof. Dr. Uriel Safriel (Hebrew University of Jerusalem) made presentation “Global Stewardship of Environment and Development” having paid special attention to organisation and the role of biosphere reserves. Dr. Alon Lotan, the coordinator of HaMaarag – Israel's National Ecosystem Assessment Program, shared experience and success in realization of the National Program. Dr. David Brand (Chief JNF-KKL Forester) spoke about modern approaches to forestry in Israel in the context of the Ecosystem Services concept. Dr. Elaine Solowey (Director of the Centre for Sustainable Agriculture) focused in her lecture on Sustainable Desert Agriculture. Moreover, she shared her fascinating experience of successful germination of an ancient date palm seed. This modern day miracle has been covered by many reputable scientific journals (“Science”, “National Geographic”, etc.) as well as discussed in mass media ([https://en.wikipedia.org/wiki/Judean\\_date\\_palm](https://en.wikipedia.org/wiki/Judean_date_palm)). The 11-year-old sprout is currently thriving on the territory of Kibbutz Ketura (not far from the guest house the participants of the course stayed at).

It is worth mentioning that Israel, with a population over 8.5 million today, is highly sensitive to environmental concerns. However, it is among the world's leading countries in implementation of the state-of-the-art technologies in environmental protection. It is particularly valuable that all the respected professionals have been ready to share their knowledge and experience with participants of the training course.

We had also several workshops which allowed us to learn the methodology of DPSIR-analysis, stakeholder map analysis, building the problem and objective trees and other modern approaches to mitigation of conflict between wild nature and human society.

The participants of the course had a practical task to develop a project for a specific nature park or reserve. We have gained an invaluable experience working in international teams and searching for compromise solutions to conflict of wildlife and humans. One of the projects, headed by N. Verlyporokh and O. Osypchuk, was devoted to preventing illegal fires in Holiivskyi National Nature Park, raising fire awareness through public information and youth education campaign. Another important output of the project was involving communities in decision-making process of planning a better recreational infrastructure in the surrounding territories. All of these activities were aimed at improving

the environmental management of Holosiivskyi National Nature Park in order to ensure protection and conservation of valuable natural complexes on its territory. Other Ukrainian delegates participated in other projects focused on mitigation of the human- elephants conflict in Kenya, establishing a National Nature Park in Tirana, Albania, based on the modern principles of environmental management, and others.

Beside that, our group toured a variety of nature reserves and parks, including the International Birdwatching and Research Center, the Coral Beach in Eilat, Evrona (site of the 2014 oil spill), Hai-Bar Yotvata, and the Ein Gedi Nature Reserve. We had very knowledgeable guides there, Dr. Omer Polak (Ben-Gurion University), Dr. Tal Polak, and Dr. Elli Groner.

Highlights of the course included: guided snorkelling on the Coral Reef; MASHAV culture night with kibbutz members joining to learn from participants about their cultures; a final ceremony in Jerusalem attended by the Director of MASHAV training programs, Ambassador

Mattanya Cohen, in addition to ambassadors and consulate representatives from the Albania, Botswana and Paraguay embassies in Israel.

Participation in the MASHAV International training course "Environmental Management of Nature Parks and Reserves" was very valuable for all of us. We are now going to start using the Ecosystem Services concept in our practice of nature conservation, environmental education and biodiversity assessment in Ukraine.

The authors of the article are sincerely grateful to the MASHAV – Israel's Agency for International Development Cooperation, the Arava Institute for Environmental Studies and the Embassy of the State of Israel in Ukraine for an amazing opportunity to take part in the training course.

*M.M. PEREGRYM, M.M. FEDORIAK,  
N. Yu. POLCHANINOVA, Ye.O. VARYVODA,  
N.L. VERTYPOROKH, O.V. OSYPCHUK*