

Project Update: December 2016

The Codru Quest is the research and education project of economic valuation of the ecosystem services in the protected area called the Codru Nature Reserve in the Republic of Moldova. It is a scientific component of the MEGA Impact Championship – the annual initiative of the organization MEGA that uses the online gaming platform MEGA Game to engage and stimulate participants (teams consisting of members of various organisations and companies) for creating as much positive social/environmental impact as possible within a limited timeframe.

The key objective of the first phase of the project in 2016 was to engage Moldovan citizens into completing the Codru Quest, sharing knowledge on the value of the Codru forest ecosystem with them, and collect their economic valuation data on the ecosystem services provided by the Codru PA.

The activities of the Codru Quest were done in the Codru Nature Reserve in Moldova, which represents a national PA of approximately 5175 ha. The area is a habitat for many species of flora and fauna that have the status of either threatened or endangered, including such species as the plant small-flowered black hawthorn (*Crataegus pentagyna*) and the insect stag beetle (*Lucanus cervus*). These were the focus species of the project, as they are quite well known, easily identified, and serve as natural symbols of Moldova.

The methodology of conducting research and providing learning to the participants of the Codru Quest included a number of innovative approaches, such as stated preference economic valuation (specifically choice modelling), citizen science, e-learning, and gaming. The survey questions and field tasks were transformed into practical “missions” with additional materials, video training, and rewards that were connected into one logical quest.

The Codru Quest benefitted from significant support from local volunteers, companies, state agencies, and international donors. Its partners were the Rufford Foundation, Danubius Young Scientist Award 2016, Klaus Toepfer Fellowship programme, Spark Research Labs, Ministry of Environment of the Republic of Moldova, Codru Nature Reserve, EcoVisio and Seed It Forward, American Councils in Moldova and ZoomIT.

The outcomes achieved by the first phase of the Codru Quest include 19+ young people engaged into expeditions to the Codru PA and nature conservation activities there, 50+ Moldovan citizens involved in the education and action on reforestation and proper tree planting, 700+ trees planted, five training events and workshops on the value of ecosystem services and biodiversity delivered, one pilot research on economic valuation of ecosystem services realised, and eight “Green Agents” prepared for further actions in biodiversity conservation in Moldova.

The experience of working on the Codru Quest so far was rich of lessons learnt. The main one is that economic valuation of ecosystem services is a long and complex process that requires multiple iterations and testing, and if implemented online it needs informative support and efforts on engaging and maintaining respondents throughout the survey. This

can be achieved with proper use of e-learning and gamification tools, as the project has demonstrated.

Results achieved so far:

Civil Society Engagement into Biodiversity Conservation

The Codru Quest succeeded in engaging a total of 69+ Moldovan citizens aged 18-23 into biodiversity conservation in the Codru Nature Reserve, as well as reforestation activities for increasing the forest ecosystems and their services in Moldova. Out of them, 19 benefitted from a more active programme of engagement into education and valuation of ecosystem services and biodiversity in the Codru PA. Their feedback on the programme is quite positive: 4.87 out of 5.00 is the average score for the content and its relevance, and 4.71 out of 5.00 is the average score for the organisation of the project (from the summary of the on-line post-project evaluation questionnaire). And all of the participants replied that they would like to be informed about future MEGA projects and would be willing to participate in them.

Reforestation and the Basis of a New Community Forest

For one of the missions for the semi-finals of the Codru Quest, we joined the organisations Seed It Forward and Eco-village Moldova and organised a large reforestation activity in the Riscova village to expand the forest ecosystems and their services, as well as to protect and restore the degraded soil threatening the village with possible landslides. The 69+ Moldovan citizens engaged into the project succeeded in learning about proper tree planting and caring from the Seed It Forward specialists and then altogether planted 700+ trees (personally I planted 10+ trees). This became the basis of a new community forest that is expected to grow with further reforestation events. It now has protection against farmers' cattle, and is being cared of by Seed It Forward and Eco-village Moldova. At the same time the participants of this mission now know how to plant and take good care of trees correctly, and are able to organise their own reforestation activities.

Capacity Building and Preparation of Youth Conservationists

During the Codru Quest we delivered five offline and online training events and workshops on the topics of ecosystem services, biodiversity conservation, and reforestation. As a result, 19 young people from Moldova now have the capacity and skills to engage further into these topics. Eight of them, the finalists and winners of the Codru Quest, received the status of "Green Agents", indicating that they possess the resources, contacts, knowledge, skills, and experience to organise and lead other projects on protecting ecosystem services and biodiversity. This is demonstrated by the fact that they successfully completed all missions of the quest.

Upgraded Gamification Platform for Nature Conservation

Due to the Codru Quest our organisation now has an upgraded MEGA Game with additional features, such as social network sign in, better mission screens with integrated HTML editor, administration page, etc. These were already used for the benefit of other projects and services of MEGA that happened at the same time with the Codru Quest, such as the Eco-hackathon and the delivery of game training on ecosystem services in Bishkek for GIZ.

First Data on Economic Valuation of Ecosystem Services

The research component of the Codru Quest also moved forward significantly. We now have initial data on the use of the Codru forest by different categories of people, their attitude towards the PAs in Moldova and the Codru nature Reserve in particular and initial WTP value for the biodiversity and ecosystem services in it. This value is now at about 52500 MDL, or about 2430 EUR per year. It is very low, as this WTP value is obtained from only the Codru Quest participants and only for the recreation services in the Codru forest. However, the result and respondents' feedback on the survey were valuable in designing missions for the larger project MEGA Impact Championship 2016, designing and producing choice sets, and elaborating the complete choice modelling survey, which is going to be used in the next phase of research.

Photos:



Photo 1. First common expedition to the Codru forest. Credit: Cornelia Sirbu, 2016.



Photo 2. Young Green Agents after a research mission. Credit: Iuliana Sipitca, 2016.