

# The Codru Quest: Economic Valuation of the Ecosystem Services of the Codru Protected Area by Using Gamification

Transfer project in the framework of the Klaus Toepfer Fellowship Programme

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## Executive Summary

**The Codru Quest** is the research-and-education project of economic valuation of the ecosystem services in the protected area (PA) 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 on-line gamification platform [MEGA Game](#) to engage and stimulate participants (teams consisting of members of various organizations and companies) for creating as much positive social/environmental impact as possible within a limited timeframe.

The Codru Quest was realized during the period of April – November 2016 with the core education and research activities taking place in September – November 2016. The **key objective** 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 5,175 ha. The area is a habitat for many species of flora and fauna that have the status of endangered / critically endangered on the national level and certain importance and significance on the international one. Examples of such species are the plant **Small-flowered Black Hawthorn** (*Crataegus pentagyna*) and the insect **Stag Beetle** (*Lucanus cervus*). These were the focal 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 gamification. The survey questions and field tasks were transformed into practical “missions” with additional materials, video trainings, and rewards 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 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, **7** trainings and workshops on the value of ecosystem services and biodiversity delivered, **1** pilot research on economic valuation of ecosystem services realized, and **8** “Green Agents” prepared for further actions in biodiversity conservation in Moldova. These outcomes became the basis of certain positive **impact** created by the project. It included: raised awareness about the Codru Nature Reserve among youth, development of a new community forest, e-learning on ecosystem services, and the complete model of choice modeling survey with the first valuation data available for further nation-wide research.

The experience of working on the Codru Quest was rich in **lessons learned**. 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 on-line it needs informative support and efforts on engaging and maintaining respondents throughout the survey. This can be achieved with the use of e-learning and gamification tools, as the project has demonstrated.