https://doi.org/10.31407/ijees ISSN: 2224-4980

Vol. 12 (2): 575-584 (2022)

## REHABILITATION OF FOREST ECOSYSTEMS TAKING INTO ACCOUNT MODERN INTERNATIONAL ECOLOGICAL TRENDS IN THE CONTEXT OF THE EUROPEAN GREEN DEAL

Oksana Drebot<sup>1</sup>, Iryna Shvydenko<sup>1</sup>, Liudmyla Raichuk<sup>1\*</sup>, Oleg Yaremko<sup>2</sup>, Lyudmyla Symochko<sup>3</sup>, Mariya Vysochanska<sup>1</sup>, Hryhorii Chobotko<sup>1</sup>, Mykola Kuchma<sup>1</sup>

<sup>1\*</sup>Institute of Agroecology and Environmental Management of NAAS, 12 Metrologichna str., 03143 Kyiv, Ukraine; <sup>2</sup>Ternopil Oblast Department of Forestry and Hunting, 5a Bagataya Str., 46008 Ternopil, Ternopil Region, Ukraine; <sup>3</sup>Uzhhorod National University, Voloshyna Str.32, Uzhhorod, Ukraine;

\*Corresponding Author Liudmyla Raichuk, e-mail address: <a href="mailto:edelvice@ukr.net">edelvice@ukr.net</a>;

Received January 2022; Accepted February 2022; Published March 2022;

DOI: <a href="https://doi.org/10.31407/ijees12.231">https://doi.org/10.31407/ijees12.231</a>

## **ABSTRACT**

The forest sector occupies a special place in the 'green' economy. Today, forests are of great importance for biodiversity conservation, climate regulation and water resources. That is, now the forest acts not only as a natural capital that provides society with material resources, but it is also a complex ecosystem capable of generating various ecosystem services. Therefore, our study aimed to outline the scientific and methodological principles of rehabilitation of radioactively contaminated forest ecosystems of Ukrainian Polissia in the context of the EU European Green Deal, taking into account modern environmental and socio-economic features to ensure full integration into the European domain. The article outlines the scientific and methodological principles of rehabilitation of radioactively contaminated forest ecosystems of Ukrainian Polissia in the context of the European Green Deal, taking into account modern environmental and socio-economic features to ensure full integration of the state into the European domain. It was found that the irrational use of forest resources has led to the fact that over the past 40 years there has been a partial loss of forest biodiversity, and broadleaf forests are on the verge of extinction. The Chornobyl accident, which polluted about 3.5 million hectares of Ukraine's forests, has become critical for the country's forestry sector. 1 million 230 thousand ha of the surveyed forested areas had a critical density of radionuclide contamination, 157 thousand ha of which were withdrawn from commercial use due to high 137Cs contamination levels. It was emphasized that deforestation and degradation of forest ecosystems are some of the most pressing environmental problems of our time. The article improves the scientific and methodological principles of rehabilitation of radioactively contaminated forest ecosystems of the Ukrainian Polissia in the context of the European Green Deal taking into account the modern ecological and socio-economic peculiarities to ensure the full integration of the state into the European domain. The revision of the principles and priorities of forest management on the lands affected by the Chornobyl catastrophe and the return of these lands to safe economic use was substantiated taking into account the policies of the EU European Green Deal. It was established that the main actions on rehabilitation of radioactively contaminated forest ecosystems should be focused on the identification of the current radioactive situation in the forests with the aim of the possibility of renewal of forest management activities and production of forest industry products. This will contribute to the improvement of productivity of forest plantations and the renewal of forestry production of the depressed region.

**Keywords:** 'green' economy, sustainable development, ecosystem services, environmental protection, radioactive contamination. Ukrainian Polissia.