

## THE CHALLENGES OF NUCLEAR WASTE DISPOSAL – INTERNATIONAL ENVIRONMENTAL LAW PERSPECTIVE<sup>1</sup>

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**ABSTRACT:** *Nuclear energy is a central part of European and worldwide energy production since it is a component in the energy mix of 13 EU Member States, accounting for almost 26% of the electricity produced in the European sphere. Also, it provides about 10% of the world's electricity from about 440 power reactors. Nuclear energy also fits the plan of a climate-neutral European continent because the direct CO<sub>2</sub> emission is significantly lower than in the case of fossil fuels. On the other hand, there is a significant concern about nuclear energy production and nuclear technologies in general – radioactive (nuclear waste). Since the beginning of the first experiments with fissile materials, radioactive waste disposal has been an unsolved problem. Especially high-level radioactive waste and spent fuel causing severe issues for the international community. This article focuses on radioactive waste disposal from an environmental point of view, includes the main categorisation of radioactive waste, and provides an informative description of disposal solutions. The Fukushima accident also unavoidable because it highly influenced some countries energy policy and decisions concerning nuclear energy in general. Nuclear energy always has been a “grey” area of energy production, in the centre of opposing benefits and great threats. The paper aims to answer whether nuclear energy remained a dream that never lived up to the expectations or just the benefits shadowed by the harsh reality of unsolved nuclear waste disposal.*

**KEYWORDS:** *nuclear waste; challenges; environmental law; multinational storage; spent fuel.*

**JEL Code:** K32

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<sup>1</sup> This research was supported by the project nr. EFOP-3.6.2-16-2017-00007, titled *Aspects on the development of intelligent, sustainable and inclusive society: social, technological, innovation networks in employment and digital economy. The project has been supported by the European Union, co-financed by the European Social Fund and the budget of Hungary.*

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