



НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ
БІОРЕСУРСІВ І ПРИРОДОКОРИСТУВАННЯ
УКРАЇНИ



We hereby certify that

Volodymyr Illienko

attended in a training course:

«EXPERIMENTAL RADIOECOLOGY AND RADIOBIOLOGY»

June, 18 – 28, 2017

at

**Ukrainian Institute of Agricultural Radiology (UIAR),
National University of Life and Environmental Sciences of Ukraine (NUBiP of Ukraine)**
in cooperation with
**Centre for Environmental Radioactivity (CERAD),
Norwegian University of Life Sciences (NMBU)**

funded by

CPEA-2015/10108

Joint Ukrainian-Norwegian education programme in Environmental Radioactivity

Course content

Lectures	hours	Field and laboratory exercises	hours
The Chernobyl accident. Overview	2	Water sampling	2
Field sampling and statistics in radioecology	2	Water fractionation	2
Contamination of the 30 km Chernobyl exclusion zone	2	Fish sampling and dissecting Biota sampling	2
Distribution, main fluxes and deposits of biologically active radionuclides (^{137}Cs and ^{90}Sr) in forest ecosystems.	2	Soil sampling and sample preparation	4
ERICA tool in radioecological studies+Dosimetry of RO	2	Particle hunting in soil and sediments	2
Particularities of radionuclide contamination measurements	2	Sequential extractions	2
Biological effects of ionizing radiation: mechanisms of toxicity and detoxification (damage and recovery)	6	Forest biota sampling	6
Relevance of radionuclide speciation and the impact of radioactive particles	2	Measurements of radionuclides	4
Environmental impact and risk assessments - factors contributing to the overall uncertainties	2	COMET assay in radioecological studies	2
Atmosphere transfer Estimation of radionuclides resuspensions. Aerosols.	2	Arabidopsis morphometry	4
Individual/group work	10	Report preparation	70

Course leaders:

Valeriy Kashparov

Brit Salbu

Ole Christian Lind

Olena Pareniuk

Kyiv-Chornobyl, Ukraine