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Japanese Science and Technology Agency – JST, Japanese International Cooperation Agency - JICA Institute of Environmental Radioactivity, Fukushima University, Japan (IER) University of Tsukuba, Japan (UT) State Agency of Ukraine of Exclusion Zone Management- SAUEZM National Academy of Sciences of Ukraine- NASU National Centre for Nuclear Research, Poland (NCBJ), TVIS POLSKA, LLC

International Seminar

Environmental Radioactivity Risks in Ukraine: Results of pre-war research and contemporary challenges

Conference Center of the Hotel "ibis Warszawa Centrum", Al. Solidarności 165, Wola, Warsaw, Poland

AGENDA

5 October 2022

Registration in the lobby of "ibis Warszawa Centrum"

8:30-9:00

Pre-register for those not on the agenda by emailing the Organizing Committee Secretariat: <u>errusecretariat@gmail.com</u> - please send your name and affiliation.

Opening Session

Convenors: K.Nanba, M.Shevchuk, G. Krzysztoszek

9:00- 9:03	0.1	Greetings from Institute of Environmental Radioactivity, Fukushima University, Japan	K.Nanba, <i>IER</i>
9:04- 9:07	0.2	Greetings from University of Tsukuba	Y.Onda, UT
9:08- 9:11	0.3	Greetings from State Agency of Ukraine of Exclusion Zone Management	M.Shevchuk, SAUEZM
9:12- 9:16	0.4	Greetings from National Centre for Nuclear Research	G.Krzysztoszek, <i>NCBJ</i>
9:17- 9:20	0.5	Greetings from National Academy of Sciences of Ukraine	A.Nosovsky, ISP NPP NASU
9:20- 9:35	0.6	Consequences of the occupation of the Chornobyl Exclusion Zone and the planed steps to continue renovation of the monitoring network and to establish state-of-the art measures to ensure more effective Zone's management	M.Shevchuk, O.Nasvit, V.Solodka <i>SAUEZM</i>
9:35 - 9:50	0.7	Scientific problems to be solved on the way of transforming the "Shelter" structure of Chornobyl Nuclear Power Plant into an ecologically safe system	A. Nosovsky ISP NPP
9:50- 10:05	0.8	Overview of the SATREPS Project "Strengthening of the environmental radiation control and legislative basis in Ukraine for the environmental remediation of radioactively contaminated sites"	K.Nanba, <i>IER</i> Y. Onda, <i>UT</i>
1 <u>0:05</u> - 10:20	0.9	Overview of research projects of UK Radiation and the Environment (RATE) programme in Chornobyl Exclusion Zone and surrounding areas during the last decade	J. Smith, Portsmouth University
10:20- 10:35	0.10	Risks of nuclear accidents during the invasion of Ukraine by Russian troops	A. Nosovsky <i>ISP NPP</i> , T.Kutuzova, <i>SNRIU</i>

10:35- 10:50	Coffee Break	

Session 1 : Results of research in modeling and measurements in Chornobyl Exclusion Zone

Convenors: Y.Onda, J.Smith

SUB- PROJECT 1: Cooling Pond and its vicinity			
		Radiochemistry of the Cooling Pond	
10:50-11:05	1.1	Chemical analysis of radionuclide in Chornobyl Cooling Pond	T Kanasashi, I. M. M. Rahman <i>IER</i> A.Sakaguchi S. Yamasaki <i>UT</i>
11:05-11:20	1.2	⁹⁰ Sr and ¹³⁷ Cs concentration in bottom and dried territories of the former bottom: dynamics during the drawdown	V Protsak, V.Kanivets <i>UHMI</i>
11:20-11:35	1.3	⁹⁰ Sr and ¹³⁷ Cs concentration in water of new water bodies created during the CP drawdown	D.Veremenko, S.Kireev <i>Ecocentre</i>
		Aquatic Radiobiology and Radioecology - CP & nearby water boo	dies
11:35-11:50	1.4	⁹⁰ Sr and ¹³⁷ Cs dynamics in the hydrobionts of the Cooling Ponds	D. Gudkov <i>IGB</i> (remotely)
11:50-12:05	1.5	¹³⁷ Cs in fish and predator-prey relationship	T Kanasashi. T.Wada <i>IER</i>
12:05-12:20	1.6	Model experiments to support field observations on uptake and excretion of ¹³⁷ Cs and ⁹⁰ Sr from the silver Prussian carp (Carassius gibelio)	P. Pavlenko NUBIP UIAR
12:20-12:35	1.7	Clean feed and Prussian Blue application as a countermeasure to reduce the ⁹⁰ Sr and ¹³⁷ Cs levels in fish from contaminated lakes	V. Kashparov NUBIP UIAR
		CP surface water modeling	
12:35-12:50	1.8	Modeling and forecasting of radionuclide dynamics in the CP	R.Bezhenar <i>IMMSP</i> (remotely) M Zheleznyak
		Radiobiology and Radioecology -CP nearby territories	
12:50 13:05	1.9	Radioecological research newly formed Rodents population on the Cooling Pond under the decommissioning	D.Vishnevsky T.Melnychuk K.Korepanova <i>CherReserve</i>
13:05- 13:20 13:20-14:15	1.10	Radiobiological research newly formed Rodents population on the Cooling Pond under the decommissioning	O. Burdo <i>INR</i> H Ishiniwa <i>IER</i> (remotely)

Convenors: O.Nasvit, V.Kashparov

SUB- PROJECT 1: Cooling Pond and its vicinity				
CP groundwater fluxes and contamination				
14:15-	1.11	Overview of the results of the research of the CP groundwaters in the	D.Bugay	
14:30		pre-drawdown period		

14:30- 14:45	1.12	Establishment of new groundwater monitoring sites and groundwater modeling around the Chornobyl Nuclear Power Plant site	H.Sato, <i>UT</i> S.Kireev, D.Veremenko <i>Ecocentre</i> .M.Gusyev <i>IER</i>
14:45- 15:00	1.13	Evaluating radionuclides and groundwater trends change due to cooling pond drainage at the Chornobyl Nuclear Power Plant site	H.Sato <i>, UT</i> M.Gusyev <i>IER</i>
SUB-	PROJEC	CT 2: Radionuclides in watersheds, rivers and reservoirs of the area i Chornobyl accident	mpacted by the
15:00- 15:15	1.14	Radionuclide dynamics on the watershed and in the small rivers of ChEZ	Y.Igarashi, H.Wakiyama <i>IER G.Laptev</i> UHMI S Kireev, D.Veremenko Ecocentre
15:15- 15:30	1.15	Physical chemical transformations of the radionuclides deposited on the watersheds of ChEZ	G Laptev, V.Protsak <i>UHMI</i> A.Konoplev, IER
15:30- 15:45	1.16	Modeling of the radionuclide wash-off from the Pripyat River floodplain upstream ChEZ	S.Kivva, O.Pylypenko, IMMSP M.Zheleznyak <i>IER</i>

Session 2 : Establishment of state-of-the art monitoring capabilities

Convenor: Y.Igarashi

15:45- 16:00	2.1	Laboratory and field monitoring studies of the Ecocentre, Chornobyl: pre-war status and development of new facilities	S.Kireev M Kedranovsky <i>Ecocentre,</i>
16:00- 16:15	2.2	Monitoring equipment delivered with SATREPS after the deliberation of the Chornobyl Exclusion zone (ChEZ)	O Brazhiy BROM LTD
16:15- 16:30	2.3	3D Mapping and Visualization of Radioactive Sources	J.Hecla . K Vetter Dept. Nuclear Engineering Berkley University,USA
16:30- 16:45	2.4	Technical assistance project from Sweden/Norway to address the consequences of military activities and occupation of the Chornobyl Exclusion Zone (CEZ) by Russian invading troops in 2022	E.Howell, AFRY Sweden
16:45- 17:00	2.5	Review of the Polish network for early detection of radioactive contamination	W. Krysinski NAEA. Poland
17:00- 17:15	2.6	The developments in airborne geophysical survey technologies and methodologies their application for assessment of radiological contamination due to military actions.	Y. Zabulonov, B. Burtniak, B. Zlobenko, V. Kovach Institute of Environmental Geochemistry NASU of Ukraine

Session 4 : Assessment of the environmental losses in ChEZ due to the war

Convenor: M.Zheleznyak

17:15 -17:30	4.1	Methods of evaluation of ecological losses caused by war, including areas affected by radiation, which are being developed in Ukraine under coordination of the Operational Headquarters" (OH)	O.Kryvoruchkina (Coordinator of OH, Ukrainian Parliament member),M Talerko (ISP NPP),
17:30 -17:45	4.2	Potential radiological and chemical impacts on groundwater associated with military actions.	E.Howell, R.Avilla, D.Bugai, <i>AFRY</i> <i>Sweden</i>

17:45-	Discussion
18:00	

6 October 2022

Session 1 : Results of research in modeling and measurements in Chornobyl Exclusion Zone (continuation)

Convenors: K.Nanba, O.Nasvit

	SUB- PROJECT 2: Radionuclide dynamics in forest systems				
9:00- 9:20	1.17	Radiological danger of wildland fires for firefighting in heavily contaminated places in the Chornobyl exclusion zone	V. Kashparov NUBIP UIAR		
9:20- 9:35	1.18	Ecological consequences of Russian invasion in forest ecosystems of the Zone	O Borsuk Ch Reserve		
9:35- 9:55	1.19	Drone studies of the forest ecosystems in the ChEZ	D Holiaka (remotely), <i>UIAR</i> Y. Onda, <i>UT</i> V. Kashparov <i>UIAR</i> Y. Igarashi <i>IER</i> V.Yoschenko <i>IER</i> (remotely)		
9:55- 10:10	1.20	Implementation of remote sensing technologies in the ChEZ	O.Yasinsky, TVIS		
		SUB- PROJECT 3: Atmospheric dispersion of aerosols			
10:10- 10:30	1.21	Modeling of forest fires in ChEZ by LEDI Model	M,Talerko <i>ISP</i> NPP		
10:30- 10:45	1.22	Modeling of forest fires in ChEZ by RODOS system	L Tabachnyi <i>UHMC</i>		
10:45- 11:00	1.23	Processing of the satellite monitoring data on the forest fire in ChEZ	Y.Igarashi IER		
11:00- 11:15		Coffee Break			

Session 3 : Development and implementation of the tools to predict and respond to accidents

Convenor: M.Gusyev

11:15- 11:35	3.1	Modeling of the consequences of the potential accidents at ZNPP by JRODOS system in KIT, Germany, and coordination with IER and with the Ukrainian Rodos Centers	D Trybushnyi, <i>KIT</i> L.Tabachnyi. <i>UHMC</i> M.Zheleznyak <i>IER</i>
11:35- 11:50	3.2	Modeling of the consequences of the potential accidents at all Ukrainian NPPs by JRODOS system in Center Prediction Consequences of Radiation Accidents in Ukrainian Hydrometeorological Center of SSES	L.Tabachnyi UHMC
11:50- 12:10	3.3	Implementation of JRODOS system for the assessment of radiation safety for the planned sites of the location of the designed Polish NPP	S.Potempski <i>NCBJ</i>
12:10- 12:30	3.4	GIS- and Modeling-based Assessment of Soil and Groundwater Radioecological Vulnerability in Ukraine	B.Faybishenko, et al.Lawrence Berkeley National Laboratory; M.Zavarin Lawrence Livermore National Laboratory, et al (remotely)
12:30- 12:50	3.5	Optimizing Emergency Response Protection Strategies for Nuclear Accidents	V.Korolevych, L. Lebel Canadian Nuclear Laboratories (remotely)
12:50- 13:00		Discussion on Session 3 presentations	
13:00- 14:00		Lunch Break	<u>.</u>

Session 1 : Results of research in modeling and measurements in Chornobyl Exclusion Zone (continuation)

Convenor: M.Zheleznyak

		SUB- PROJECT 4: Strengthening of the ChEZ management		
14:00- 14:20	1.24	Experience of the environmental management in the zone impacted by the Fukushima Daiichi accident and its implementation within the SATREPS project for the strengthening of the ChEZ's management	K.Nanba, Y.Igarashi, IER O.Nasvit, S <i>AUEZM</i> T.Kutuzova <i>SNRIU</i>	
14:20- 14:40	1.25	Legislative support for the radiation safety and ChEZ management by the National Commission Radiation Protection at Ukrainian Parliament	O.Kopylenko, Head NCRP,UP member	
14:40- 15:00	1.26	Key results of the iClear Project in ChEZ and Narodychi district	J.Smith UP., G.Laptev UHMI	
15:00- 15:20	1.27	Zoning of radioactively contaminated territories after the Chornobyl accident	V. Kashparov UIAR	

Seminar Closing Session

15:20- 16:20	FD	Final Discussion Panel speakers- moderators: K.Nanba, Y.Onda, J.Smith, Y. Igarashi, A.Nosovsky S.Kireev, V Protsak, S.Potempski, V.Kashparov, O.Kryvoruchkina, O.Kopylenko, T.Kutuzova, O.Nasvit, M.Zheleznyak, M.Gusyev., D.Vishnevsky, D.Tabachnyi, J.Hecla, E.Howell
16:20 - 16:30		Closing remarks

16:30 -17:30 Informal discussions (all participants)