

Abstract submission form

Speaker or corresponding author

First name	Liutsko
Name	Liudmila
Organisation	ISGlobal
Country	Spain
Email address	Liudmila.Liutsko@ISGlobal.org

Abstract information

Presentation type [1]	oral
Select one or more topic [2]	1) Disaster management and resilience in communities 2) Preparedness for a sustainable recovery: including non radiological consequences and effects
Subject of the presentation	Getting people involved: Recommendations on mobile apps use (doses & health) for a better recovery after nuclear accidents
Participation NERIS Young Scientist Award [3]	No
Proceedings of the Workshop 2020 [4]	Yes

[1] Copy paste:

Oral

Poster

Both (The programme committee will choose oral or poster)

[2] Copy paste one or more subject(s):

Operational aspects: from theory to practice

Disaster management and resilience in communities

Preparedness for a sustainable recovery: including non radiological consequences and effects

Updating handbooks, guidelines and recommendations to support decision making

Future research needs

Other

[3] To promote young researchers, the NERIS platform awards a free participation to the 7th NERIS Workshop (2021) and diploma to the winner of the prize. To participate you must be under 35 years old in May 2020. **Answer: yes / no.**

[4] You can publish a full paper in the proceedings of the Workshop 2020 to be published by the end of 2020. The full paper deadline is 31st July 2020. If you're not sure yet, tell us and we'll come back at

you on this after the Workshop. **Answer: yes / no / maybe.**

⚠ The abstract submission must respect the following template and must not exceed 1 page. The completed abstract submission form has to be sent by email to the NERIS secretariat (sec@eu-neris.net) by **January 31st, 2020**. Please name your file with an easily identifiable prefix: FirstName_NAME_subject_... etc.

Getting people involved: Recommendations on mobile apps use (doses & health) for a better recovery after nuclear accidents

Liudmila Liutsko^{1,3}; Paola Fattibene⁴; Sara Della Monaca⁴; Cinzia De Angelis⁴; Sonia Brescianini⁴; Cristina Nuccetelli⁴; Takashi Ohba⁵; Aya Goto⁵; Yuliya Lyamzina⁵; Koichi Tanigawa^{5,14}; Deborah Oughton⁶; Yevgeniya Tomkiv⁶; Dominique Laurier⁷; Jean François Bottollier-Depois⁷; Sylvie Charron⁷; Pascal Croûail⁸; Thierry Shneider⁸; Mélanie Maître⁸; Philippe Pirard⁹; An Van Nieuwenhuysse¹⁰; Natallia Novikava¹¹; Vadim Chumak¹²; Joan Francesc Barquiner¹³; Adelaida Sarukhan¹ and Elisabeth Cardis^{1,3}; SHAMISEN SINGS Consortium

¹ ISGlobal – The Barcelona Institute for Global Health, Spain

² UPF – Universitat Pompeu i Fabra, Spain

³ CIBERESP – Consorcio de Investigación Biomédica en Red de Epidemiología y Salud Pública, Spain

⁴ ISS – Istituto Superiore di Sanità, Italy

⁵ FMU – Fukushima Medical University, Japan

⁶ NMBU – Norwegian University of Life Sciences, Norway

⁷ IRSN- Institute of Radiation Protection and Nuclear Safety, France.

⁸ CEPN – Nuclear Protection Evaluation Centre, France

⁹ SpFrance, Santé publique France, France

¹⁰ LSN – Laboratoire National de Santé, Luxembourg

¹¹ ISEI-BSU – International Sakharov Environmental Institute of Belarusian State University, Belarus

¹² NRCRM – National Research Center for Radiation Medicine NAMS, Ukraine

¹³ UAB – Universitat Autònoma de Barcelona, Spain

¹⁴ FMC – Futaba Medical Center, Japan

Abstract

Intro: SHAMISEN (Nuclear Emergency Situations - Improvement of Dosimetric, Medical And Health Surveillance) - Stakeholder INvolvement in Generating Science (SINGS), built upon the recommendations of the SHAMISEN project, and aimed to enhance Citizen Participation in preparedness and response to a radiation accident through novel tools and apps to support data collection on radiation measurements, health and well-being indicators.

Methods: During the project, the methodologies used were: on-line anonymous survey in different countries and group discussions during dedicated workshops. The stakeholder' feedbacks (including general public) were gathered from more than 400 participants from 28 countries. Quantitative and qualitative analysis was carried out on needs, awareness, experiences and willingness to use mobile apps for dose, and measurements of health/well-being indicators collected. Interaction with stakeholders took place throughout the project, from its very beginning until the Final stakeholder meeting on the 9th March 2020.

Results: Dose measurements from various available mobile apps were evaluated and compared with those obtained using professional equipment. The results served to describe the possible benefits of these apps (individual and societal benefits and improve environmental and public health monitoring); the requirements they must meet to be informative; the procedures needed to reduce measurement errors; and their limitations (physical and environmental). This could also contribute to improve decision-making processes in the recovery processes after an accident. Related ethical issues

were also discussed. Infographics¹ for general public ("How to use your mobile phone to measure radiation") were created in 5 languages: [English](#), [French](#), [Spanish](#), [Russian](#) and [Japanese](#) and a short video tutorial to accompany the infographics will be available in spring 2020.

In parallel, apps for health and welfare monitoring as well as questionnaires currently used in various countries, and in particular in the regions of Fukushima most affected by the nuclear accident, were reviewed critically. The results were used to develop recommendations for information to be collected in the case of an accident and for means to engage affected individuals and provide them with the required information and communication channels.

The summarized final results of the SHAMISEN SINGS project can be found in the booklet "[*Mobile apps for monitoring radiation doses, health and welfare in the context of a nuclear or radiological accident: Guidelines and recommendations for users, developers and public authorities*](#)"¹, a pdf version can be downloaded and printed.

Conclusions: The SHAMISEN SINGS project contributes to strengthening the role of social sciences and humanities in radiation protection research and illustrates their practical application, by engaging more stakeholders (including citizens) in preparedness and response to a nuclear/radiological accident.

Acknowledgments: SHAMISEN-SINGS is part of CONCERT. This project has received funding from the Euratom research and training programme 2014-2018 under grant agreement No 662287.

¹ These versions will be up-dated after the final stakeholder meeting 9th of March 2020 in Barcelona.