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GIST undergraduate student publishes results in an international journal through GIST-UN University internship

▫ GIST (Gwangju Institute of Science and Technology, President Kiseon Kim) undergraduate student authored a paper during a GIST-University (GIST-UNU) intership program with the International Environmental Research Institute (IERI, Director Kyoung-Woong Kim) that was published by ELSEVIER* in the international journal *Progress in Disaster Science*.

* ELSEVIER: an international multimedia publishing company that provides 20,000 products to educational and professional scientific fields and medical communities worldwide

▫ GIST College graduate Jiseon Lee interned at the United Nations University Institute for Water, Environment and Health (UNU-INWEH)* from January to July 2019 and studied and analyzed trends in the occurrence of water disasters and human health effects under the guidance of Dr. Duminda Perera.

* UNU-INWEH (United Nations University-Institute for Water, Environment and Health)

◦ During this internship, the occurrence of water disasters and their impact on human health were analyzed ("Water-related disasters and their health

impacts: A global review"). As a result, policy directions were presented to overcome gaps with sustainable development goal (SDGs) indicators.

- The GIST-UNU internship program is supported by the International Environmental Research Institute for GIST undergraduate students to promote cooperation with UN Universities and international organizations. Since 2016, three undergraduates have been sent as interns to Canada's UNU-INWEH, and the program has expanded its partnership with UNU-FLORES* in Dresden, Germany, as well as UNU-INWEH.

  * UNU-FLORES (United Nations University-Integrated Management of Material Fluxes and of Resources)

  - Undergraduate Jiseon Lee said, "As I experienced environmental policy research through the internship program, I realized again the importance of science and technology as well as policy in the environmental field. This experience seems to be a positive driving force for future research activities."

- GIST International Environmental Research Institute Director Kyoung-Woong Kim said, "The GIST-UNU Internship Program aims to assist GIST undergraduate students who are dreaming of a bright future going forward. When the coronavirus situation improves, we will make continuous efforts in various activities to resolve global environmental problems through cooperation with the UN University and other international organizations located around the world."

  - Since its establishment in 2001 with the aim of establishing a UN University Research Center, GIST International Environmental Research Institute has been contributing greatly to international research and development cooperation, training environmental experts, and strengthening capabilities to solve environmental problems in developing countries. Since 2014, it has been actively engaged in international development cooperation activities in the water sector through the Korea-UNDP project, and, recently, through the United Nations Framework Convention on Climate Change (UNFCCC) technology mechanism, it has been actively participating in international climate technology cooperation and response to climate change.

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Review Article

Water-related disasters and their health impacts: A global review

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ABSTRACT

While the frequency and intensity of floods and droughts have dramatically increased over the past century, there is limited epidemiological evidence on the health impacts of these disasters. The paper examines the global trends and main health impacts of these events based on databases and case studies, identifies gaps in the Sustainable Development Goals (SDGs) indicator framework for monitoring health impacts of disasters and suggests recommendations to address these gaps. Natural disaster data and 38 case studies published from 2008 to 2018 were reviewed, and measures of association (Risk Ratio, Odds Ratio, and Incidence Rate Ratio) were extracted from the case studies for quantitative analysis. The findings of the review indicate that the SDGs lack of multifactorial disease and mental health risk factors, as well as water-borne disease indicators, misses critical health-associated impacts of floods and droughts. In particular, the narrow focus on suicide as an indicator of mental health overlooks how anxiety disorders or post-traumatic stress disorder (PTSD) can also have severe consequences for those affected by disasters. Health must be included in resilience-building initiatives at the individual, community, and national levels. The findings of the study suggest that further implementation research of the Sendai Framework and disaster risk reduction (DRR) efforts can contribute to the development of the broadly framed concept of health resilience to meet the needs of people at risk in disasters.

case studies reviewed from Asia and former French and Portuguese colonies. Furthermore, our paper might reflect the selected case study authors' bias for studying specific health impacts.

While consensus surrounding the necessity of including health in resilience-building initiatives grows in the disaster sector, there need to be corollary interventions that work towards this objective, including, inter alia, the strengthening of health systems and development of organizational resilience, social connectedness, and psychological resilience, as well as the meeting of needs for at-risk individuals [83]. To foster resilience at the community and individual levels and incorporate

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▲ [Photo 1]: Jiseon Lee as the first-author of "Water-related disasters and their health impacts: A global review"

▲ [Photo 2]: GIST College graduate Jiseon Lee