Environmental Engineering in Pristine Iceland

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Abstract

Iceland is a small island situated in the Atlantic Ocean just under the Arctic Circle. With only 300 thousand inhabitants, the country is blessed with vast natural resources, including pristine surface and groundwaters, as well as diverse renewable energy sources, including hydro-, geothermal and wind power. Reknown for its beautiful, untouched and diverse nature, the country is often nicknamed after its volcanoes and glaciers as the land of “fire and ice”.

This talk will present highlights of research activities conducted at the Environmental Engineering Program in Iceland in the past ten years and environmental topics currently debated locally. Results from the research program on subarctic limnology, a field that is receiving increasing international interest in the era of global warming, will be presented. The environmental quality in the urban area of Reykjavik will be discussed addressing topics such as urban runoff management and air quality concerns associated with traffic, volcanic eruptions and geothermal power harnessing. Lastly, we will look at some of the activities in terms of improving rural drinking water supplies as well as protecting sensitive receiving waters from wastewater pollution, in light of increasing tourism.

Bio. Originally a Civil Engineer from the University of Iceland, Dr. Andradóttir pursued her Masters and PhD in Civil and Environmental Engineering at Massachusetts Institute of Technology under the supervision of Prof. Heidi Nepf. She worked as a management consultant in Connecticut before joining the Civil and Environmental Engineering Faculty at the University of Iceland in 2006. Dr. Andradottir’s research interest is the transport and fate of pollutants in the environment. She has contributed to the fields of physical limnology, urban runoff, air and groundwater pollution applying diverse techniques, including field work, analytical and numerical modeling. Dr. Andradóttir has held many academic and professional appointments, such as the Chair of School of Engineering and Natural Sciences Environmental Committee, and the President of the Water and Wastewater Association of Iceland (http://www.vafri.hi.is/).

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