



The Global Water Pathogen Project: Helping to Meet the UN Post-2015 Sustainable Development Goals

By Joan B. Rose, PhD



As nations work to meet the [17 post-2015 United Nations Sustainable Development Goals](#) (SDGs), there is a significant new resource that will help “ensure the availability and sustainable management of water and sanitation for all,” the focus of [SDG #6](#). That resource is the [Global Water Pathogen Project](#) (GWPP), the largest single coordinated effort of scientists to contribute to the 2030 UN agenda.

Led by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and Michigan State University, the GWPP organizes over 100 scientists from around the globe into nine expert teams

to address key fecal pathogen groups and the measures necessary to control those pathogens. The project features an online “open access integration platform” that will be updated regularly by the experts. With access to the Internet, engineers and scientists working anywhere in the world will be empowered to tap into the best available science for controlling human exposure to waterborne pathogens. This ambitious project is funded by the Gates Foundation and the Midland Research Institute for Value Chain Creation. It has also received generous support from the Proctor & Gamble Company and the American Chemistry Council.

The Problems with Multi-purpose Waterbodies

In many communities around the world, the nearest body of water is an important multi-purpose resource, as the diagram above illustrates.¹ That “multi-purpose waterbody” is a source of exposure to fecal pathogens from humans and animals. Unfortunately, in these communities, fecally-contaminated water is used routinely for drinking, bathing, washing and crop irrigation. These uses expose the community to health risks through ingestion or even inhalation of, and skin contact with, contaminated water. The GWPP online platform will help water professionals characterize and optimize treatment methods for the specific pathogens of concern at a given location.

Far-reaching Implications

In addition to directly impacting the water and sanitation SDG, the GWPP will help achieve several other SDGs indirectly. For example, public health and the avoidance of waterborne disease are linked to a community’s economic stability. By identifying the tools needed to provide safe water, the GWPP also will play a role in: ensuring healthy lives and promoting well-being ([SDG #3](#)), ending poverty ([SDG #1](#)), and promoting full and productive employment ([SDG #8](#)).

The organizers and contributors to the GWPP are excited to offer this “evergreen,” online tool for addressing fecal pollution anywhere in the world. We are especially gratified that the tool can be applied within the context of the post-2015 UN SDGs to help address some of the world’s most pressing problems.

The GWPP open access integration platform can be found at: www.waterpathogens.org.

Joan Rose, PhD, is the Homer Nowlin Chair in Water Research at Michigan State University and a member of the Water Quality and Health Council.

¹ The diagram illustrates many, but not all, of the potential sources of fecal pathogen contamination to a surface water body.