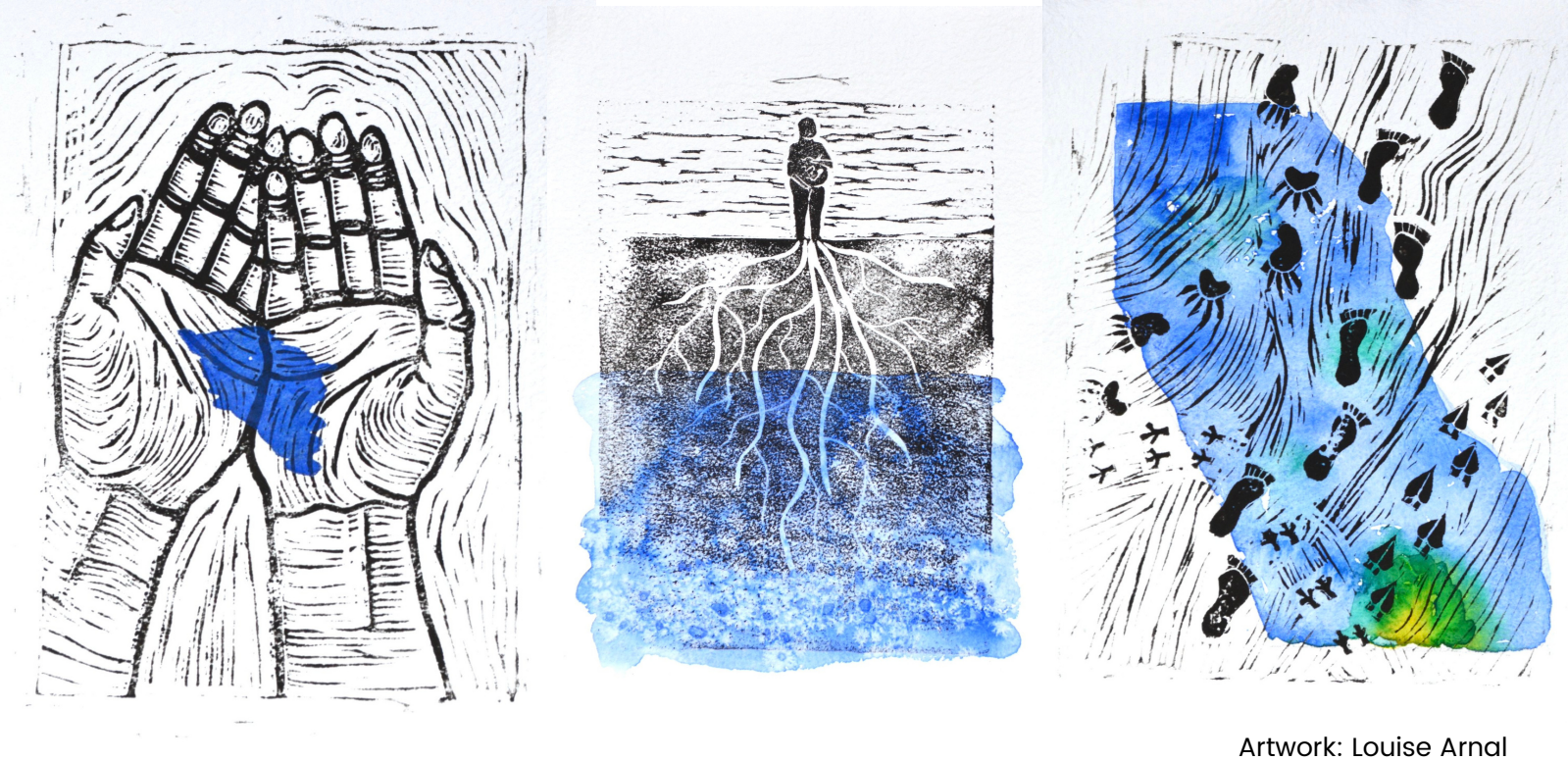

Artwork: Louise Arnal

The Art of Flood Forecasting

Making a difference on the ground

Louise Arnal, Scientist & Artist, Research Associate at the University of Saskatchewan

For years, I have dedicated my work to forecasting river flows and floods months in advance. The information I provide is useful for water management for food, electricity, drinking water, and flood early warning. I am passionate about using science and technology to save lives and protect communities from the devastating effects of floods.

But it was the art exhibit that I created at the end of my PhD where I really saw the potential of art to connect with people on an emotional level and to pique their curiosity to invite them to learn more about flood forecasting.

Throughout my career, there have been discussions with fellow scientists about whether sharing forecasts without much skill is helpful. Some argue that it is better to wait until the forecasts are more accurate, while others, like me, believe that some forecast information is better than none.

Then came the floods of 2021 in Western Europe and in British Columbia. Both places were hit hard, and many lives were lost. But forecasters were able to predict the flood events much further in advance than they could decades ago. Around the time of these floods, I heard from a former colleague who told me that the forecasting system I had been working on throughout my PhD was predicting some floods in Western Europe. She said that forecasters were talking about the evolution of these forecasts as much as two weeks ahead of them happening, around coffee.

Yet, despite the advancements in forecasting, people on the ground didn't know how to prepare for these floods. My family, living near the Rhine River, contacted me to seek advice on what to do if their house flooded. Many people were caught off guard and were impacted.

I knew that the forecasts would continue to improve, but something had to change. There needed to be a bridge between the science and what happened on the ground. In conversations with my PhD supervisor, I realized that creativity could help give people the tools to imagine potential impacts of floods and be more equipped to act. This led me to create an immersive art installation about flood forecasting, called “Gambling with Floods?”, as part of my scientific PhD thesis.

More recently, I worked with local artists who created thought-provoking art pieces in conversation with scientists, that depict the potential devastation that could be caused by water-related challenges like floods. These artworks are part of the Virtual Water Gallery and were exhibited online and in physical galleries, where they could be easily seen and discussed.

People were drawn to the artworks, and they sparked conversations about these water-related challenges and what individuals and the community could do. Thanks to this space for creativity and imagination, people are becoming more aware of the risks and challenges. The forecasts were getting better, but it was the art that was making a difference on the ground.

Find out more:

Arnal, L., Clark, M. P., Dumanski, S., Kosmas, E., Pomeroy, J. W., and Schuster-Wallace, C.: The Virtual Water Gallery: Changing Attitudes through Art, EGU General Assembly 2023, Vienna, Austria, 24–28 Apr 2023, EGU23-8658, https://doi.org/10.5194/egusphere-egu23-8658, 2023.

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