



PHOTO: MARLENE GRAHAM

## THE FUTURE AT YOUR FINGERTIPS

“If we are to really make a difference, we need to look at how we communicate the message of climate change. We need to engage people in a way that is meaningful and can motivate them to take action.”



Left to right: Amber Choo, Aleksandra Dulic, Maggie Shirley



Screen shots of game



Imagine if you could see your neighbourhood a century from now. What would it look like? Students from both UBC's Okanagan campus and Vancouver, along with their professor, have developed an interactive program that virtually demonstrates the impact of future climate change on a community.

“Climate change is a global phenomenon but the effects felt are much closer to home. Future Delta is an interactive 3D game that simulates the actual impacts of rising sea levels due to climate change,” says Aleksandra Dulic, Assistant Professor for the Department of Creative Studies. “The game allows people to try different scenarios and see how they would help to mitigate flood damage or find ways to adapt.”

Using the flood-prone neighbourhood of Beach Grove Road in Delta, BC as the model, detailed animation walks the viewer through different scenarios. Based on regional climate modeling, scientific advice and local stakeholder involvement, the game shows users how their choices could impact their environment. Players can select a range of options, such as adding wind turbines to decrease greenhouse gases, and then click to see how this may help reduce flooding levels 20 years from now.

Dulic says research shows us that if people see a virtual environment that models where they live, they will have more emotional attachment and ultimately, more motivation to change their behaviours in the real world after seeing the possible dangers to their own community.

“We can use Future Delta to help local governments and policy makers visually explore the future based on what actions we

take today,” she adds. “The chance to actually see the outcomes is a really positive and meaningful way to communicate about climate change and how we can make a difference.”

Students across three different areas - fine arts, environmental science and computer programming - are collaborating on Future Delta. The interdisciplinary team includes undergraduate and graduate students, researchers and faculty and even an outside architect.

An architect was brought on board as part of the team to help find a design solution for adapting to flooding due to climate change. As a result, Future Delta allows viewers to select an option to build “floating homes” that will accommodate variations in high water levels.

“The experience gained from working on this project is very beneficial for everyone involved, especially in terms of career preparation. We're working on a common goal, bringing together many different skill sets and perspectives,” says Dulic.

“I think the fact that this is an interdisciplinary project was really one of the highlights. It provides the training that is more difficult to do in the classroom,” she adds.

The project may be specific to the community of Delta, but the idea and technology can be applied to anywhere in the world and can help municipalities better plan and build communities to adapt to climate change threats. Dulic is also looking at creating a 3D game simulation for the Okanagan region, an area prone to drought. ●