Creating a smart personalised carbon dashboard to connect carbon footprints to actions

Jiangying Zhao

About the projects

With the goal of reducing a given person's carbon footprint by 10–20 per cent, Dr. Jiaying Zhao — of UBC's Department of Psychology and the Institute for Resources, Environment and Sustainability — aims to create a new personalised carbon dashboard.

Existing personal carbon calculators are not user friendly and usually end by giving the user their carbon footprint without offering clear actions that one could take to reduce individual greenhouse gas emissions. "There are a few carbon dashboards that give the user some actions that they could take, but these actions are generic," says Zhao. "We are using behavioral insights to translate footprint information into climate actions. We want to simplify the calculator and we want to link your carbon footprint to actions right away. After you've done your carbon calculation, our dashboard will offer some recommended actions for you to take based on your lifestyle and your circumstance." After receiving a list of recommended actions, the dashboard will prompt the user to set personal goals and a plan to follow through with the goals. Additionally, Zhao would like to implement a way for the dashboard to follow up with participants over a few months to see if they have actually reduced their carbon footprint.

Zhao's academic team will be supported by industry organisations who have submitted letters of support for the new carbon dashboard. All the collaborators agree that insight into human behavior and behavior change is what will set this dashboard apart from the rest because developers of existing calculators are usually climate engineers and climate scientists. The climate experts' goal is to educate people about their carbon footprint, and they assume that if you simply tell people about carbon information, that they will act on the information.

"But that assumption is wrong. That's where we come in as behavior scientists," says Zhao. "Increasingly over the years I've had more and more people emailing me, calling me, reaching out to me, asking for advice as to what they can do to address climate change. These are folks from the public, experts and leaders from different fields."

"We are using behavioral insights to translate footprint information into climate actions."

"People need to know what the most effective actions they can take to address climate change. That's where we come in as behavior scientists."
- Dr. Jiaying Zhao

Clearly, there is need and enthusiasm for a personalised carbon dashboard that will show users the most effective actions they can take to decrease the carbon footprint, and Zhao's team is leading the way.

Project Highlight:

A new carbon dashboard, designed by UBC researchers, will provide personalised guidance to help users reduce their carbon footprint

The Team:

- Jiaying Zhao, Professor, IRES and Pyschology
- Yu Luo, PhD student in Psychology
- Hadi Dowlatabadi, Professor, IRES
- Navin Ramankutty, Professor, SPPGA and IRES
- Milind Kandlikar, Professor, IRES and SPPGA
- Elizabeth Dunn, Professor, Psychology
- David Hardisty, Associate Professor, Sauder School of Business