CO2 Modeller brings climate change and emissions targets within touching distance

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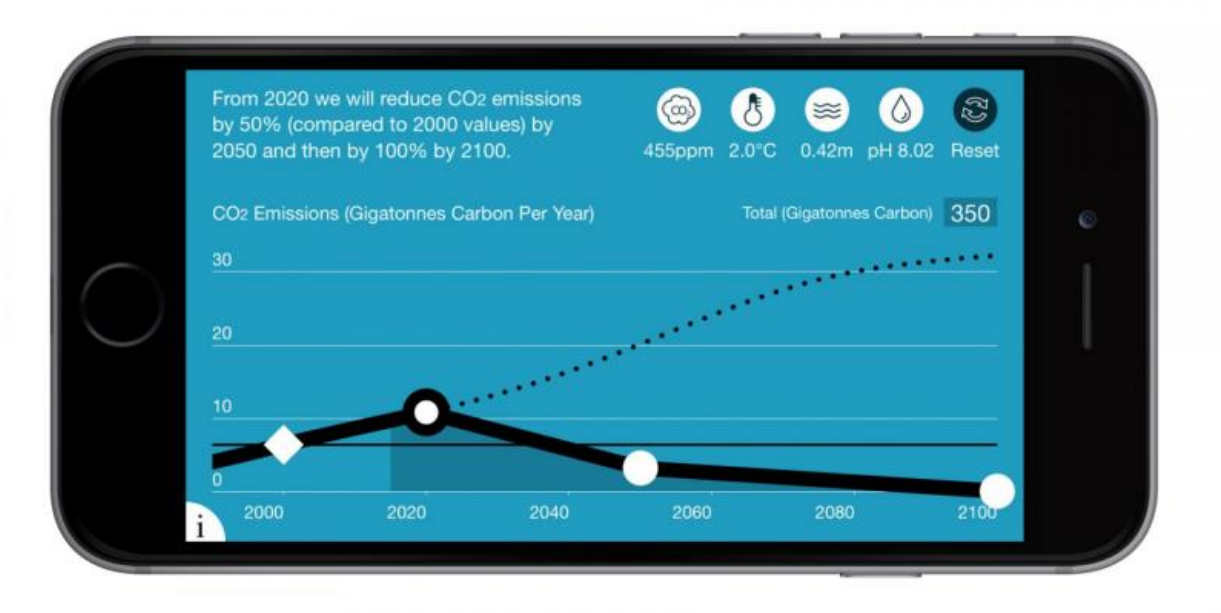

iPhone screenshot of the CO_2 Modeller climate model app developed by the University of Southampton. Credit: University of Southampton

Scientists and computer engineers at the University of Southampton have developed an interactive climate app - CO_2 Modeller - which can fit in your pocket and help you to gauge the future effects of carbon emissions around key sensitivities of the Earth's climate.

The new app, CO_2 Modeller, provides an interactive tool to allow anyone

- from members of the public to policy makers - to explore for themselves the implications of delaying emission reductions on their tablet or smartphone.

Using an easy-to-follow touchscreen, users of the app can review how carbon emission targets and outcomes will impact four key areas of climate change - future global warming, sea level rise, ocean acidification and CO_2 concentration - over the next 85 years.

The app's developers, from Ocean and Earth Science and Electronics and Computing Science, at the University of Southampton, believe that making climate modelling tools so accessible in this way will help us gain a greater understanding of the carbon emission targets and reduction policies proposed at international policy forums, such as the forthcoming COP21 Paris climate talks.

The challenge to developing CO_2 Modeller was to cram a climate model, something often associated with international teams of scientists using supercomputers, into a mobile device.

"The projections offered through CO_2 Modeller are similar to those from state-of-the-art climate models, because we have fed in a range of climate sensitivities calculated by those models into the app," said Dr Philip Goodwin, Lecturer in Ocean and Earth Science at the University of Southampton and one of the App's developers. "But CO_2 Modeller is super-fast thanks to a theoretical breakthrough; once you set your chosen carbon emission target, CO_2 Modeller performs 1,000 independent simulations in around a second and gives you a range of future projections, indicating their uncertainty, allowing you to see how different emissions pathways will lead to different climate outcomes over our lifetime"

Former Southampton electronics researcher Professor Alex Rogers,

another of the App's developers (now at the University of Oxford) , adds "Carbon emissions targets and their likely impact on climate change can seem rather remote and abstract. We hope that CO_2 Modeller will literally make them tangible, allowing the public and policy makers to interactively explore them using the smartphone in their pocket or the tablet at their kitchen table."

CO_2 Modeller is available for iOS and Android devices, for more information and instructions on how to install the app, see http://www.co2modeller.info.

Provided by University of Southampton