

What does climate change mean for your environment?

What is the climate forecast for, let's say, the next five to ten years? What consequences will extreme heat or rainfall have in your environment? The Environmental Sciences department of the Open Universiteit in the Netherlands, together with eighteen European institutions, is developing apps that make climate data transparent and usable for laymen. 'This is not only important for policymakers and professionals, but also for citizens.'

Can I wear shorts or not? Do I take the bike or the car? Oh no, it's not going to storm while we're camping! Millions of Dutch people consult the weather site Buienradar to check what the weather will do in the coming hours and days. But what about the long-term climate forecast? Wouldn't it be useful if you could also consult an app about the consequences of climate change in your immediate vicinity?

A climate app for every mobile

Environmental expert and Open Universiteit lecturer Ruben Hage thinks so. 'You have to see it like this: Buienradar helps people to make small decisions. Climate data can provide answers to bigger questions. What, for example, is the risk of flooding in a particular area? Is it wise to buy a house by the river Meuse? How much warmer will the summers get in the city where you live? What can you do to prevent heat stress?'. A climate app for every mobile phone is still in the future. However, in the European project EIFFEL, researchers from the Open Universiteit are already working on apps that make climate data accessible and usable for professionals. Satellite data of the earth and thus the climate are widely available via the European GEOSS portal. 'These data are difficult to read and interpret for people without an environmental background. In EIFFEL we are going to structure and model these data with the aid of artificial intelligence.'

Pilots in five countries

The Environmental Sciences department is one of the eighteen European participants in EIFFEL. Hage: 'Our research provides insight into who the potential users of a climate app are and what information they need. The answer differs per app. But you can think of farmers, tree growers, policymakers or water and nature managers.' Pilots for the development and implementation of climate apps are now running in five countries. One of the first steps is to map out the information that future users will need. Hage: 'We are doing this in the Belgian-Dutch Brabantse Aa and Weerij's stream valley, the Attica region in Greece, the Balearic Islands, Finland and Lithuania.'

Where can we best place our solar panels?

‘Because the five regions are very different, the information needs are very diverse. In the city of Athens, for example, the city council wants to install more solar panels. With an app, you can map out where the potential for solar energy is greatest and decide what the best place is for placing new panels. In our own stream valley Brabantse Aa and Weerijds future users want to see the effects of natural solutions against drought. Wetlands retain water and absorb CO2. What are the consequences of this exactly? On the Balearic Islands we monitor the emissions of ships in the harbours. What happens if you include the emissions of tourist buses that bring passengers to the boat? The outcome is important for port authorities, administrators and local residents.’

Awareness

The EIFFEL project researchers expect to have the first apps for the European pilots ready in the course of 2022. Will they eventually be available for download to the general public? Hage: ‘I think they should be. The EU is funding this project and in doing so is showing how important it considers environmental data to be accessible to interested parties. Since citizens have an interest in this kind of data, I think it is logical that they are also seen as potential users. Climate data helps citizens to assess risks and raise awareness. If people can see in an app that their city will become warmer if everyone tiled their garden, they might opt for more cooling greenery.’

Climate change is one of the themes in the Earth and Sustainability focus programme. The three courses cover the basics of environmental sciences and the relationship between humans, the earth and the environment.

For more information about the EIFFEL project, please contact dr. ing. [Angelique Lansu](#).