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Citizen Science Projects (MOOC) 2.15

Woods, Mel; Coulson, Saskia; Ajates, Raquel; Amditis, Angelos ; Cobley, Andy; Domian, Dahlia

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Script	Visuals
[Music]	FutureLearn opening animation
[Music]	WeObserve logo | University of Dundee logo
DAHLIA DOMIAN: For over 10 years, we at the International Institute for Applied Systems Analysis have been using different technologies and tools to crowdsource data. In 2009, we developed Geo-Wiki, our first tool. Geo-Wiki aimed at involving the crowd in interpreting very high resolution satellite imagery for land cover and land use. This kind of imagery makes it possible to see details like individual trees and cars. Here's an example of our Geo-Wiki platform, which we use to run crowdsourcing campaigns. In each campaign, we send our volunteers to random locations on Earth, virtually, of course. Our volunteers participate in these campaigns from home looking at satellite images from their own computers.	
In each campaign, we typically ask volunteers to look at satellite imagery and answer questions about images they see inside a coloured box. We ask specific questions related to the theme and research question of the campaign. We often offer co-authorship on scientific papers to the top 10 or 20 contributors. In our experience, co-authorship has turned out to be one of the most successful incentives. Some of our volunteers have even read draft papers and provided useful feedback. We think this is a great example of citizen science.	
Let me give you an idea of the research questions we're interested in. In the past, we asked the crowd to help us map wilderness globally. Specifically, we ask them to identify the level of human impact visible from satellite images rather than signs of wilderness itself.	

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So this is quite a different approach to how wilderness is normally mapped. And the result was the map shown here. More recently, we asked the crowd to help us quantify the size of agricultural fields globally. The results showed that small and very small agricultural fields make up around 40% of all fields globally. These kinds of fields are prevalent in Africa and Asia where subsistence farming is common.	
But 40% is considerably higher than what was previously estimated from national statistics. We were able to demonstrate that crowdsourcing can be a credible, scientific way to make better statistical estimates. Geo-Wiki is up and running, so go check it out. Maybe you'll find a campaign that interests you.	
We have also developed several mobile apps for crowdsourcing on the ground and on the go. Our Photo Quest Go app guides volunteers to specific outdoor locations and asks them to take photographs of the location itself and then the four cardinal directions. Volunteers then select the land cover type and land use of the location following a simple visual decision tree within the app. More recently, we developed the City Oasis app with the city of Vienna as part of the LandSense project. This app allows users to tag places they like in the city and give their reasons.	
Using a large set of icons, a bit like emojis, you can tell someone else that this park is good for dog walking or running after work. In this way, the city of Vienna can learn about how citizens are using public spaces, while tourists and visitors can benefit from knowing the best places to go depending on their interests. I've given you a flavour of how we crowdsource land-related data using different technologies from web-based applications to mobile	

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devices. The key for us is to give volunteers interesting tasks where the scientific advances are evident and meaningful.	
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