University of Dundee

Citizen Science Projects (MOOC) 2.8

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Script	Visuals
[Music]	FutureLearn opening animation
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MEL WOODS: Toolkits and citizen science are increasing, and you can find them both in print and online. Many of these are tailored to people who want to contribute to existing citizen science projects. And there are even some that can help with starting your own citizen observatory. Toolkits are helpful because they often provide tried and tested ways to reach some of the goals in your project, or they provide a ready-made sensing kit or platform for uploading data. This is especially useful if you don't have someone in your project that can build sensors or data platforms. You have and will continue to be introduced to a variety of toolkits and tools in this online course.	
But let's take a look at how some of the observatories in we observe are using toolkits to monitor their local environments. The first example, The Ground Truth Citizen Observatory in Sweden called Vattenfokus has used the Freshwater Watch platform and app to collect data on the causes and driving forces behind local water quality issues. Simple chemical, optical, and visual tests help to collect data on nutrient concentrations, algal blooms, suspended sediment, bank and in-stream vegetation, and hydrological and ecological conditions. There is a mobile app for uploading data, and an online portal where collecting data is visualised in real time.	
In Sweden, one of the most challenging environmental problems is deteriorating quality of water caused by nutrient contamination due to the agricultural use of the soil. The citizens participating in Vattenfokus Observatory use	

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the Freshwater Watch kit and blitz style events, where they collected as much data as possible over the course of a weekend. This data is visualised on the Vattenfokus platform, which brings citizens into collaboration with government, companies, researchers, and civil society organisations. All of whom are working together to improve their living environment and the sustainability of Swedish water resources. Our second example, Scent, has created a toolbox of collaborative technologies that enable citizens to become the eyes of the policymakers by contributing to environmental monitoring during their everyday activities.	
For example, citizens can use Scent Explore and Scent Measure mobile applications to take images of land cover and land use while walking around the city or in the countryside reporting events that may affect floods, monitoring changes in soil conditions, and measuring river parameters, like water level and flow velocity. They can use the apps in a playful way by discovering and collecting little characters hiding in places around them and collecting points. This game has another dimension where players can browse existing images and label them through the Scent Collaborate platform. By doing this, they're helping to improve Scent's automated tools.	
Last, but not least, public authorities and NGOs are giving a user-friendly web-based tool, the Scent Campaign Manager, that helps Scent design and create citizen science campaigns and collect environmental data when and where they need it. Those are some examples of how we observe citizen observatories are using toolkits. If you know of others, please share them in the discussion below.	
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