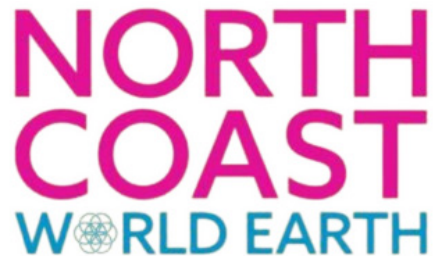


Engaging local communities to protect the environment



The environmental campaign and action group North Coast World Earth has adopted ArcGIS to help it raise awareness of litter and collect evidence to inspire change in Northern Ireland. Volunteers use an ArcGIS app on their mobile phones to record the litter they collect, as well as record issues such as overflowing bins. All this data is then displayed on public and private dashboards, helping the organisation to engage with communities, raise awareness of the scale of the litter problem and build a better case for action to prevent litter pollution.

What started as a local initiative to reduce litter pollution has developed into a highly successful environmental awareness action group that is engaging communities and changing attitudes in Northern Ireland. Called North Coast World Earth, the group has recently deployed Esri's ArcGIS Hub, Survey123 app and Dashboards to help it gather accurate data about the litter it collects so that it can evidence the need for new measures to reduce pollution.

The story begins in March 2020 when a small group of environmentalists in Portrush, including members of the local community, sub aqua club, yacht club and primary schools, got together for the first time to discuss the issue of litter and set up North Coast World Earth. The group set out to raise awareness about the issues affecting our environment and to encourage people to take responsibility for our planet. Gavin Wallace, chairperson of the group observes that the initiative "spiralled from there." More and more people, businesses, groups and schools wanted to get involved and, before long, the group had expanded to cover the whole of the Causeway Coast and Glens Borough Council region of Northern Ireland, an area of nearly 2,000 km².

Within months, the number of people who had registered as litter picking volunteers had reached 300, and it was abundantly clear that the group's manual administrative and reporting processes were not sustainable. The North Coast World Earth committee had to transfer large volumes of information from emails to spreadsheets and then from spreadsheets to reports. Volunteers posted pictures of the litter they collected on a private Facebook page, from where committee members extracted the data to collate information about how much litter was being collected and where. It was simply too much for the team to maintain, particularly given that they are volunteers devoting their spare time to this cause.

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Despite the workload, the North Coast World Earth committee had a clear vision for the group. “We didn’t want to be simply a litter picking group. We wanted to combine short-term fixes with long-term solutions,” Wallace says. In order to drive this change, the committee knew that it was important to be able to see where, how much and what types of litter was being collected by its volunteers. The committee members especially wanted to gather further information about litter hot spots, volumes of litter that could be potentially recycled, locations where bins were overflowing, instances of fly tipping and the impact of litter pollution in protected areas.

When North Coast World Earth became aware of the Esri UK & Ireland Nonprofit Programme, it discovered that geographic information system (GIS) technology could resolve many of the group’s challenges, relatively easily.

Now, individuals, families, community groups, businesses and schools can all register as members via the group’s website (www.northcoastworldearth.org), significantly reducing administration time for the North Coast World Earth committee. From there, members then download a custom Litter Survey, developed with Esri’s ArcGIS Survey123 solution, and enter information about the litter they collect, along with photographs, from their mobile phones. Amongst other things the app records details about the locations, types and quantities of all litter collected.

All this data is then visible in near real time on an interactive map and dashboard on the North Coast World Earth website. Powered by ArcGIS Hub, the website provides headline statistics, maps and charts that allow people to visualise, at a glance, the volume, location and other details of the litter that has been collected.

“ In order to provide a solution, you must firstly identify and quantify the extent of the issue with verified data – and that’s the beauty of our ArcGIS Maps & Dashboards,
Gavin Wallace, chairperson of North Coast World Earth

“ ArcGIS provides evidence of the amount of litter members are collecting and helps people understand the scale of the problem not only across the borough but within their localities via personalised dashboards. ”
Gavin Wallace, chairperson of North Coast World Earth

North Coast World Earth encourages its members to raise awareness, promote creativity and develop the arts in nature. The group is at the forefront of sand art in Northern Ireland and creates large, attractive displays on beaches throughout the area that send out strong messages about the need to protect the local environment. Now, however, the organisation can also raise awareness through its website. All the data on the website is open and transparent, so the group hopes it will be a vital resource used by local and central government, as well as businesses and organisations responsible for conservation, the environment and tourism in the region.

North Coast World Earth has only been using ArcGIS for a few months, but already it has seen over a tonne of litter collected and accurately recorded with the ArcGIS Survey123 app, and the interactive maps show litter collection activities across more than 200 miles. The new ArcGIS-driven approach has not only freed up time for North Coast World Earth committee members, but also created a sustainable platform that will support the group's activities long into the future. "There are no limits to the amount of data that members can put into ArcGIS," Wallace says. "It's just phenomenal."

The group is confident that the use of ArcGIS will enable North Coast World Earth to make real, sustainable change. "Providing more bins isn't a solution to the world's environmental crisis," Wallace says. "We require everyone to take responsibility for our planet. By simply taking action and by working together can we see through the long lasting changes we all wish to see."

Critically, North Coast World Earth believes that ArcGIS will give its members a stronger voice in their community, helping them to build a better case for action to prevent littering. "As a group we continue to create awareness about the impact we are all having on the local environment and people are taking notice," he says. "In the months and years ahead, ArcGIS will provide evidence of the amount of litter members are collecting and help create further awareness about the issues facing our environment. ArcGIS is a vital tool that we can use to influence the change that we all desperately want to see."