esri UK

Data Collaboration Platform Transforms Charity's Volunteer Engagement

Amphibian & Reptile Conservation

The Challenge

- Create a central hub for data collection and secure data sharing, report generation and the presentation of sensitive data outputs for different stakeholders.

The Benefits

- Optimised data security
- Increase in digital surveys undertaken
- Better conservation
- Improved protection of high-risk species

Leading national wildlife charity Amphibian & Reptile Conservation (ARC) relies on its army of volunteers to survey endangered species in the field, to support its research into and monitoring of a range of wildlife from frogs to lizards. ArcGIS Hub Premium gives the charity a powerful engagement and collaboration platform and, with highly intuitive digital data collection tools, is helping ARC to drive new insights from data collected and influence future wildlife legislation.

The Challenge

Many conservation organisations are dependent on data collected by the general public to help them to monitor and protect wildlife. One such charity is Amphibian & Reptile Conservation (ARC), a nationwide charitable trust dedicated to the conservation of the UK's native amphibians, reptiles and their habitats. Responsible for managing over eighty nature reserves, the organisation engages and collaborates with a comprehensive community of volunteer and professional citizen scientists, schools, landowners, data partners and other stakeholders who collect geospatial data in the field.

Approximately one third of UK native amphibians and reptiles are currently under threat of extinction. In order to understand and monitor these threatened species, ARC has developed the National Amphibian and Reptile Monitoring Programme, comprising different surveys and projects designed to generate, analyse and understand data on these species. At any one time, ARC runs multiple surveys in the field, all which support species status assessments.

Collecting data can be incredibly time intensive; it takes extensive human effort and time in the field. Data quality must be consistent and needs to be easily shared among a wide variety of user groups and assimilated into succinct, easy to generate reports. Careful attention to data protection and data security is also vital; external volunteers cannot have access to internally held data and only specific user groups can be given access to certain records.

The bar was set high. ARC needed a customisable community engagement software platform that would enhance its capacity to engage, train and support its varied cohort of surveyors in the field. Furthermore, its capabilities had to include streamlined reporting and the secure sharing of data across its broad church of stakeholders. To find out more visit https://monitoring.arc-trust.org/.

The Solution

ARC leveraged Esri ArcGIS Hub Premium to solve these challenges and built the 'ARC Survey Hub' which is now transforming the way in which it engages and collaborates with its staff and stakeholders.

ARC Survey Hub is a series of ArcGIS Hub based sites, each set up to allow different user groups the secure access they need to submit data, access resources and view information. ARC's community of volunteers use community user accounts and logins to access different ArcGIS Hub sites. Dependent on the projects they are involved in, volunteers can submit features relevant to those initiatives.

For example a volunteer participating in the National Amphibian Survey can record their survey sites, the ponds they are planning to survey and their wildlife sightings as a result of those surveys. Within project areas they can view their submissions and, in some cases, enjoy access to restricted data not shared with the general public.

Learn more at: esriuk.com

> "The ARC Survey Hub, built using ArcGIS Hub Premium, has transformed engagement with our many different stakeholders and data collection has become much simpler, and more efficient, for our brilliant volunteers."
>
> Dr Robert Ward, Senior GIS & Data Officer, Amphibian & Reptile Conservation

Image of an endangered reptile, taken by Pete Minting

Members of the public have access to ARC's public content and can learn about its different survey programmes, as well as submit features such as wildlife sightings through a public web form. Results can be seen on a public dashboard and public users can interact with the findings.

Landowners are provided with access to a separate area where they can submit their own features such as an area they have identified to survey. They map it and ARC makes it available to the relevant pool of volunteers as an option to survey. Data surveyed and submitted can be downloaded separately by landowners, for use with their own land management and conservation purposes.

Field data collection for all surveyors has been transformed with the introduction of ArcGIS Survey123 and ArcGIS Field Maps. Paper-based data collection is being replaced with these digital solutions which volunteers can use even when offline. The ARC team can quickly spin up customised surveys with easy-to-fill answer fields, allowing surveyors to embed audio and images and have access to guidance on lone working and health and safety policies.

Findings are now reported and presented to stakeholders and volunteers in simple, easy-to-understand formats through Dashboards, StoryMaps and Experiences.

The Benefits

Optimised data security
ArcGIS Hub Premium capabilities enable ARC to set up separate working environments for different stakeholders, alleviating any data security concerns. Volunteers from the general public only have sight of specific, gated data while other stakeholders, such as landowners, have their own working areas through which they submit data, and have access to further reports.

Increase in digital surveys undertaken
The ease of use field apps including Survey123 has made surveying more straightforward, easier and quicker for volunteers. Thousands of surveys are now being undertaken in Survey123 giving ARC's surveyor community a greater sense of ownership of their data. 90 percent of respondents to a recent survey, rated the overall quality of resources provided to them by the ARC Survey Hub as good, very good or excellent.

Better conservation
Species status is now more efficiently monitored and, where ARC sees perhaps biases in the data or gaps in recording, it can reassess its survey and sampling design. Overall this delivers insights that will support better conservation programmes.

Improved protection of high-risk species
Data collected contributes towards species status assessments which highlight the location of threatened species, and habitats that are changing. This enhanced detail of reporting is better informing policy making, wildlife legislation and land management, and supporting reintroduction programmes of those species in danger.

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