S. Balaguru [1], J. Bond [1], T. Prebble [1], J. Waggitt [1],
K. Smith [3], N. Bristow [1], D. Mills [1], P. Evans [2]

1. School of Ocean Sciences, Bangor University, https://www.bangor.ac.uk/oceansciences
2. Sea Watch Foundation , https://www.seawatchfoundation.org.uk
3. Nova Innovation , https://www.novainnovation.com

Sea Watcher Citizen Science App for Marine Mammal Sightings

Sea Watcher App

The Sea Watcher app has been created in a collaboration between the SEACAMS project at Bangor University, the Sea Watch Foundation and Nova Innovation, and is funded by the Welsh European Funding Office. The information generated by the app will be used by researchers from all collaborating bodies to better understand marine mammal distribution, behaviour and conservation status, helping to inform management authorities and for the public to actively contribute to marine mammal research. The app aims to encourage and upskill all users to become confident and regular Sea Watchers.

Bangor University – SEACAMS 2

The SEACAMS (Sustainable Expansion of the Applied Coastal And Marine Sectors) project at Bangor University undertakes collaborative research projects with industry partners to assist the development of opportunities in Low carbon, Energy and Environment in the convergence regions of Wales. SEACAMS is funded through the European Regional Development Fund.

Sea Watch Foundation

Sea Watch Foundation is a national marine conservation research charity whose primary aim is to bring scientists and the public together to monitor populations of whales, dolphins, porpoises and other megafauna in the waters around the British Isles for their better protection.

Nova Innovation

Nova Innovation is a tidal technology company that builds turbines and develops tidal stream energy sites. Nova is looking to develop a small five-turbine project in Bardsey Sound, North Wales. It is interested in how local knowledge and sightings information from the Sea Watcher app could help assess and manage any potential effects on marine wildlife.

Sightings and Surveys

Casual sightings of whales and dolphins reported provide useful information, but their value is greatly enhanced if the amount of time spent observing or area of sea traversed, is recorded. This ensures that sightings are not biased towards a particular time of year (e.g. summer holidays) or particular location due to greater coverage.

Whether walking along the coast path, watching from a clifftop or spotting from a boat, the Sea Watcher app will help you identify what you saw and record all the information that will be useful to help us understand more about all these marine species in the UK.
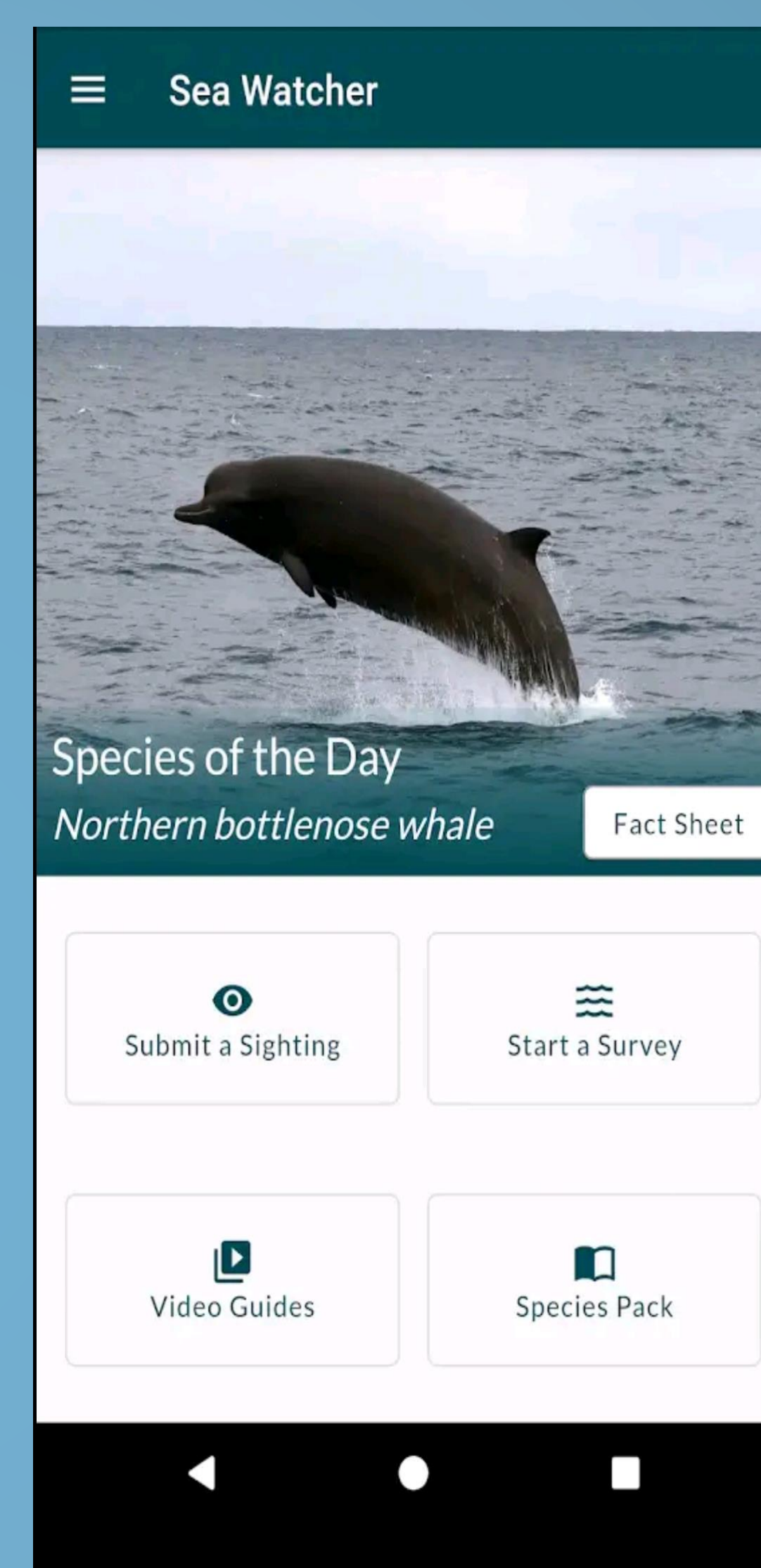

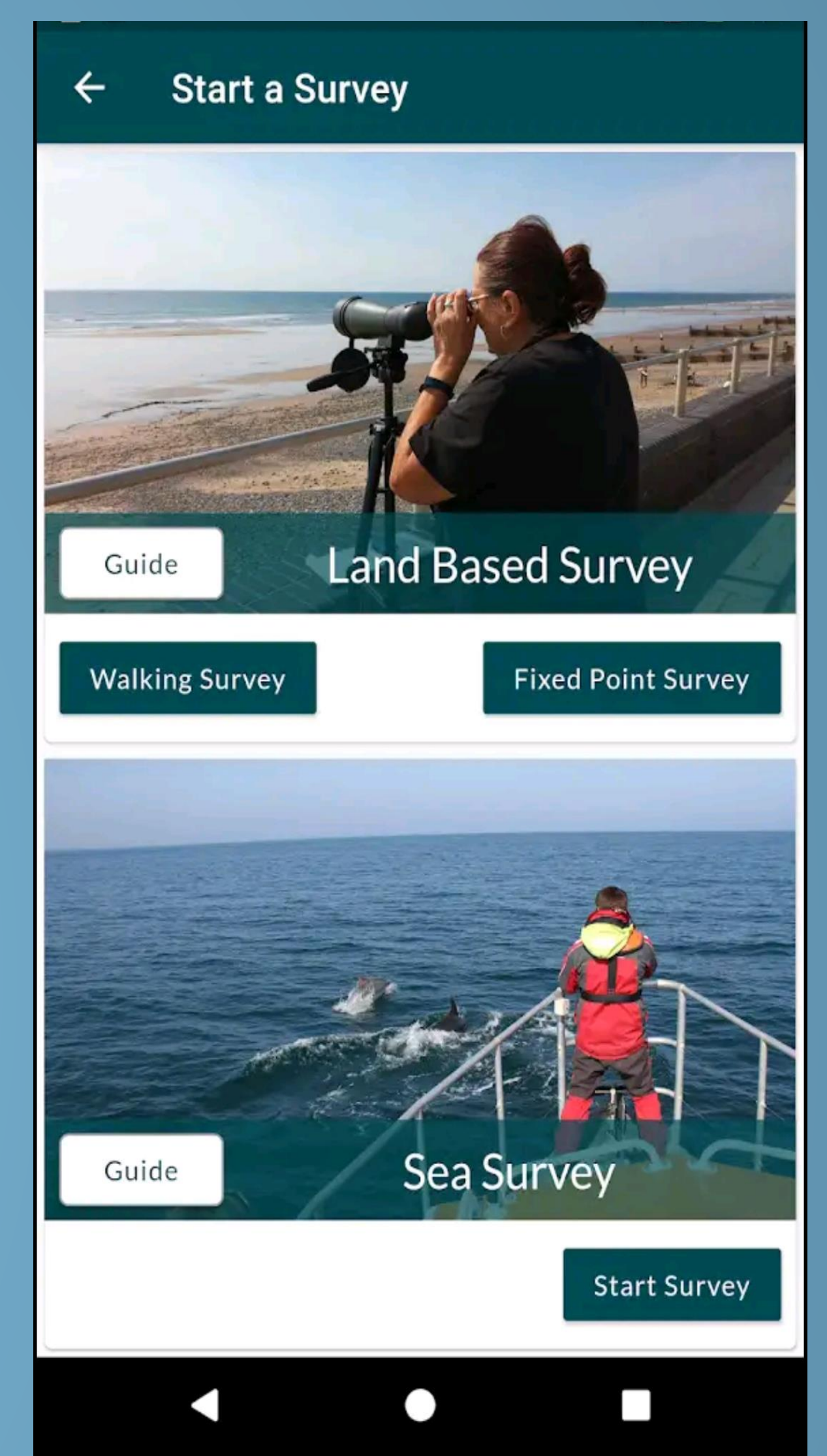**Fig 1**. Home screen to start sightings or surveys or watch species information

Fig 2. Survey Screen to record land and sea type surveys

Results and Significance

The app is currently available on both Android and iOS platforms and has had over 500 downloads. The app's live data will be visualised in Wales' first marine renewable energy exhibition on Anglesey and will be developed further in future projects. Machine Learning algorithms may be applied to the data to predict, or identify the behaviours and habits of marine mammals. The Sea Watcher app offers researchers and stakeholders a valuable source of newly available data on marine mammal occurrence around the UK with significant future opportunities.
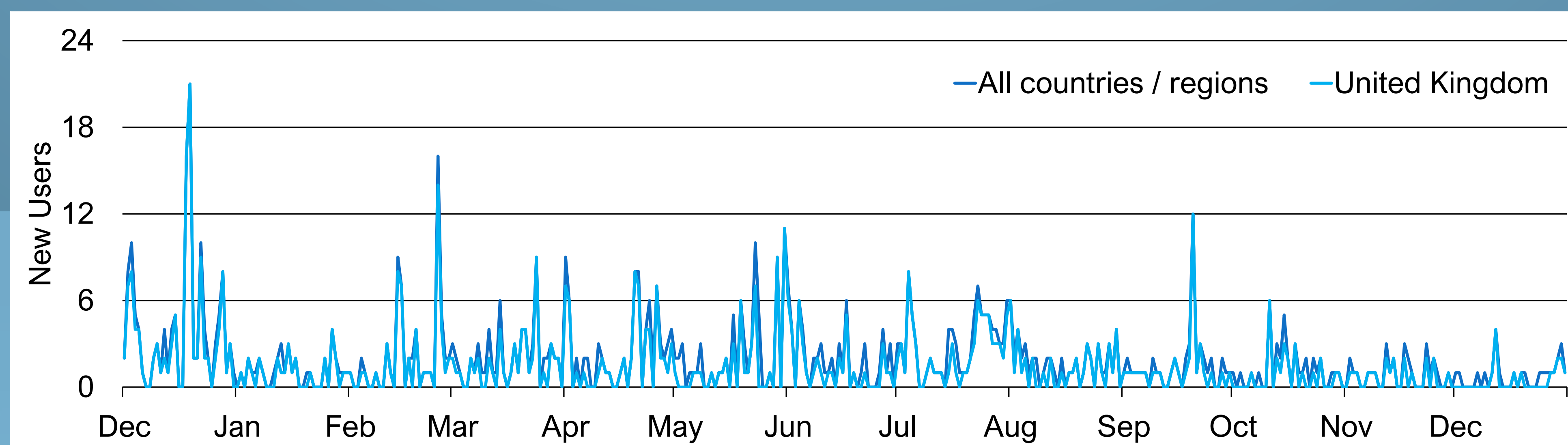

Fig 3. New Users registrations (December 2020 – January 2022)

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