

Embracing the Crowd

Crowdsourcing could be very helpful in surveying the seas and therefore a big help in the gigantic task that lies ahead for the hydrographic community. Immense amounts of the waters of the world are uncharted and of those parts of the world's seas that have been charted, much of the sounding data used is very old – for instance, more than 50% of the data used in NOAA charts is pre-1940 - and it has now been publicly acknowledged that ENCs have many anomalies. All possible help would be welcome, one would guess. But that's too easy. Crowdsourced data to fill gaps that professional hydrographic surveyors have not been able to fill yet, need to be reliable and accurate. For HO's producing nautical charts it is a difficult, maybe even threatening, development. Years ago, the HO's carried out all the survey work 'in-house', with parts later being outsourced to commercial parties and now we are on the verge of inviting the crowd – in this specific case the crews of commercial vessels from smaller freight barges to huge cruise liners, owners of sailing yachts and fishermen - to become involved in laying the base for more trustworthy nautical charts, while having no hydrographic education or background; a tricky paradox.

The same discussion is ongoing in the field of terrestrial surveying. Here as well there is a need for large amounts of data, specifically in Africa and parts of Asia, where cadastral systems are still in development, meaning that land rights for many citizens are not guaranteed through accurate and reliable surveys laid down in a secure system of land rights. The same threat possibly felt by HO's, is felt by national cadastres and land administration organisations. There is no need, as long as the institutionalised organisations dare to combine and let in other streams of data into their products. I want the parcel of land I own titled by a government organisation that is embedded and secured in the system, instead of being mapped by neighbours and passers-by who film using their smart phones and then upload it to an open-source map, as much as I want to be able to sail using trusted charts, coming from reliable institutes, guaranteeing that the bathymetry shown is correct. There will always be a place for authoritative mapping agencies – both on land and at sea – to provide the community with trustworthy products on which the members can base mortgages, build shipping companies, reduce legal risks, etc.

The techniques are there to offer the crowd possibilities in helping to acquire data for the professional community. It would be silly not to welcome this help; the stakes are too high to wave them off. The big challenge lies in reliability and accuracy of the data, maintaining trustworthiness of the end products, combined with acquisition by crowds who do not have a clue; they simply need to know how to push the button. Who thinks that an ENC built using pre-World War II data is more accurate than a chart built using data sourced by the crowd with the help of the latest techniques? Read the article Crowdsourcing for Hydrographic Data on page 14 in this issue of Hydro International by Maxim van Norden and John Hersey. The authors show that there are possibilities to guarantee reliability and accuracy and at the same time embrace the crowd!