Operational Wave and Water Level model
Impact Case Study #9

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What does your work entail?

As Coast and Marine Adviser (SW), my role is to take a strategic view of coastal, erosion access and infrastructure resilience flooding for the National Trust (NT) in the face of ongoing climate change and sea level rise in particular. I am also responsible for providing integrated coastal management advice to NT project teams ranging from habitat creation schemes to new jetties!

How do you use the SWEEP-OWWL forecast and what value does it offer you?

After meeting the SWEEP-OWWL team in September 2021 I was keen to sign up to all the regions covered by their forecast and to be a hub for further dissemination of reports to our NT operational teams in Dorset, Devon, Cornwall and Somerset.

The forecasts arrive directly into my inbox. I check the specific locations at risk, and which of the four levels are being specified, before judging whether or not to forward the details on to the relevant ops team.

I find the OWWL forecasts easy and straightforward to use, and the level and type of data really helpful. Of most value to us is:

- The 3-day in advance time period for warnings which allow the teams plenty of time to prepare for adverse and potentially damaging storm conditions.
- The four levels of warning, and higher degree of specificity of location, as this allow us to judge more accurately when, and how, to deploy/ target our resoucres and take appropriate preparatory action, such as closing a car park or café.

We manage over 300 miles of coastline in the south west and our ops teams are always busy. As such, there is limited capacity at all times so we need, and value, systems such as OWWL that help our teams react to bad weather conditions in a timely fashion. Early warning significantly helps to reduce stress and allows time to make preparations to minimise risk and damage.

I see the OWWL model as an important part of the range of data we use, benefitting our ops teams by providing accurate advanced warning of problematic overtopping and potential coastal flooding.

Looking forward

Due to limited time and the large number of NT sites, I'm only able to transmit the two highest warning levels. I'm keen for local ops teams to sign-up to the email warnings independently so that they can benefit directly from the forecasts.

Although its early days and further engagement is needed on the ground, in my opinion the OWWL forecast has great potential to benefit the National Trust in a variety of ways, including:

- Improved resource targeting, leading to a reduction in business interruption and subsequent cost savings
- Improved public safety due to more informed, and better timed, warning signs for the general public
- Increased resilience of NT coastal infrastructure e.g. access points such as car parks and footpaths; amenity facilities such as cafes; holiday cottages; toilets
- Informing current discussion and policy development in relation to emergency resilience against coastal destruction, and climate change adaption and mitigation – draw on SWEEP's future scenario modelling work.

Over a longer time period (say 3-5 years) I think it will also be possible to build up a clearer picture of just how many interruptions due to storms/overtopping there have been and to identify the most targeted hotspots. In this way, a sharper focus on where to implement comms programmes or even new works may be contemplated.