

FISHING FOR A BETTER FUTURE

Halcrow supports United Nations project to rebuild Sri Lanka's coastal infrastructure

By 10am on any other day the catch would have already been hauled in, sorted and whisked away by truck and rickshaw. Around this time on 26 December 2004, however, people living in Sri Lanka's coastal communities faced an unrelenting wall of water and debris surging inland.

The tsunami's force obliterated everything in its path – levelling buildings, uprooting trees and splintering the fishing boats pulled up along the shore. With two thirds of the country's coastline directly hit, the effect on the fisheries sector – on which much of the population depends – was overwhelming.

More than 75 per cent of Sri Lanka's industrial fishing fleet was wiped

out, along with countless small-scale craft. Ten of its 12 fishing harbours were severely damaged, including breakwaters, shore facilities, buildings, machinery and equipment, as well as other related infrastructure such as ice plants, landing ports, markets and homes in the fishing community.

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Some six years on, while the resilience of the community is clearly evident, much of what was destroyed by the tsunami and Sri Lanka's bloody civil war has yet to be fully rebuilt. Halcrow is supporting a multi-agency project aimed at supporting the small-scale marine fisheries sector. Fish landing centres (FLCs) across the country will be

redeveloped and upgraded based on detailed needs assessments, with ongoing stakeholder engagement. Facilities including net mending halls, fish auction sheds, access roads, engine and ice storage, toilets, electricity and water supply are set to help local fisher people get their stock to market and access

the supply chain as efficiently as possible.

To help meet the project objectives, Halcrow is working with Sri Lanka's Ministry of Fisheries and Aquatic Resources Development (MFARD) and the Ceylon Fisheries Harbours Corporation to develop a national geographical database of all



PROJECT DELIVERY PARTNERS

- Implemented by the Food and Agriculture Organization (FAO) of the United Nations
- Funded by the Canadian International Development Agency
- Executed by the Sri Lanka Ministry of Fisheries and Aquatic Resources Development
- SANDS is being developed within the National Aquatic Resources Agency

Riding the surf out to boats at anchor in Kalmunai on the south-east coast

existing FLCs, accessible to all agencies involved in coastal and fisheries management. Halcrow's shoreline and nearshore data system (SANDS) is being used to compile and analyse pockets of information already held by various organisations, as well as incorporating additional data gathered more recently. The database will hold technical, geographic, infrastructural, socioeconomic and fishing fleet information covering all known fish landing centres, anchorages and fishing ports, providing an integrated, holistic view of Sri Lanka's fisheries.

"This current project builds on an earlier SANDS database we developed in Sri Lanka back in 2000, so we started with a strong information base," said SANDS project manager Michael Stickley, who led a series of training and planning workshops for the project partners. "The participants at our seminars were quick to recognise the benefits – SANDS is both a computational and relational database. Users are able to make links between risks – such as



A river landing site in Polathumodra on the south-west coast. The FAO is building an extension to the jetty at this site to reduce overcrowding



Hauling in a beach seine at Kalametiya on the southern coast involves the whole community

SANDS – how it works and how it can benefit your client

Halcrow's SANDS suite was developed to help shoreline and asset managers, coastal engineers and environmental scientists develop a better understanding of coastal processes and management.

Tailored to suit the needs of specific clients or projects, SANDS is used to capture, analyse and compare

information – geospatial, temporal, weather, shore condition, climatic, environmental and asset data.

Users are able to visualise correlations between a host of different factors, determine the probability of various outcomes and map the results – all of which strengthen asset management

decisions. Authorities responsible for flood defences or beach management, for example, can model a range of flood and erosion scenarios based on different combinations of asset condition and extreme weather events.

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storms – and coastal defences and onshore assets. This relevance has led to SANDS being in hot demand beyond the FLC project and we're currently discussing the potential for supplementary databases."

Further training is in the pipeline and the project is continually evolving – with Halcrow's scope expanding accordingly. Michael is enthusiastic about the direction things are headed: "SANDS is delivering a whole host of benefits beyond the original project parameters, demonstrating its value as a comprehensive

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information management tool," he said. "This is a great example of Halcrow fulfilling its purpose to sustain and improve the quality of people's lives." FAO project manager Simon Diffey added: "MFARD is currently developing a strategic management system. With so much data to manage in such a complex and diverse sector, the Halcrow SANDS database is considered an

extremely valuable tool to support the ministry's objectives. The FLC project is working hard to ensure the SANDS database has a pivotal role to play in the future development and management of the fisheries sector."

As FLC infrastructure takes shape around the coastline, Sri Lanka's resilient fishing community can look forward to a more secure future. 