

Royal IHC BRINGING DREDGING EFFICIENCY TO BANGLADESH

| Mayeesha Azhar |

Bangladesh reminds him of home, of the Netherlands, the flat landscape and the water-drenched delta where the rivers empty into the sea, said Kees Derks, the area director of IHC for India, Sri Lanka and Bangladesh. His observation should not come as a surprise to anybody, since fully sixth of the Netherlands' land area is below sea level. The Dutch have a long tradition of dealing with water resources and land reclamation, and it is this expertise that Bangladesh wants and needs. The Netherlands government is collaborating with Bangladesh on a Delta Plan—an expansive, comprehensive, and long-term project to utilize and conserve its water resources. In the short-term, however, the rivers need to be dredged and IHC comes into the picture. It is one of the companies the Dutch Embassy in Bangladesh brings in, said Derks, “for answers to dredging-related questions.”

Siltation in Bangladesh's rivers has become an acute problem. While its formation is part of a natural process, since the past few decades, human interference is also playing a large part. Dikes and dams, the cutting off of flood plains from rivers, the constant pumping of water for irrigation



Kees Derks: IHC South Asia regional manager
purposes, heavy pollution from industries, etc., all wreak havoc on natural flow and volume of water during the different seasons. Climate change, too, has begun to affect the process, as fluctuating levels of rainfall erode riverbeds upstream and add more silt deposits downstream. It is estimated that the Brahmaputra basin annually aggrades nearly 4 centimeters. The combined effects of all this siltation



IHC Beaver 50 Cutter Suction Dredger at work.

means that channels crucial for riverine transport are losing navigability. The Ganges and the Padma together accrue an astounding one billion tons of sediment annually. Bangladesh, struggling with congested highways, is in utmost need of water navigation routes. The numbers are disheartening. Once, the 52 major rivers and their roughly 700 main tributaries that run through Bangladesh had around 24,000 kilometers of waterways. Today, about only 6000 kilometers can be used safely. In dry season it shrinks to about 3800 kilometers.

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The solution is dredging.

IHC is global market leader in design and construction of dredgers and related equipment such as booster stations and workboats. Originating from six family-owned shipyards, the Dutch company has been operating for over three and a half centuries and has three thousand employees, with five hundred working from international sites and offices on every continent. Their annual turnover is one billion Euros. Besides large custom-built



IHC crew aboard a dredger

self-propelled dredgers, IHC builds standard dredgers for stock and can therefore deliver these particular orders quickly. On top of this, each of these standard dredgers can be customized with options like production measurement and navigation software for specific work. On average IHC manufactures 25 dredgers each year which are used worldwide to not only create new land for ports, habitation or even recreation, such as the Palm Islands in Dubai, but also for beach nourishment or maintenance dredging.

It is increasingly playing a crucial role in Bangladesh. The company's history with Bangladesh dates back to the early 1970s, when the Bangladesh Inland Water Transport Authority (BIWTA) bought its first dredgers. Bolstered by the demands of subsequent administrations whose dredging plans need equipment, IHC senses Bangladesh to be a continuing market opportunity. An estimated two-hundred dredgers are needed to keep up with the rate of siltation and thus far barely a quarter of that is in operation.

Dredger fuel costs tend to be exceptionally high, but IHC's dredgers are fuel-efficient. The company has regional offices in Mumbai, Singapore and Dubai. If a dredger in Bangladesh is in need of repair, efficiency and time are saved by stocking spare parts at IHC's regional branches. Support can be sent immediately. Specialized staff inspects dredgers routinely to ensure that they operate to maximum ability. In fact, a success story illustrates the point: two dredgers the Bangladeshi government bought from IHC over 44 years ago were recently refurbished and cleared to operate for at least another decade. Examples like this constitute IHC's lifecycle support, a service quality that beats, say, the company's Chinese competitors. Markedly


higher productivity, reduced operating costs, preventive maintenance, optimal efficiency and minimal downtime gives them an edge in the dredging market by lowering total cost. IHC's Training Institute for Dredging in the Netherlands also offers training to government officials from the BIWTA and the Bangladesh Water Development Board. Their new state-of-the-art simulation center ensures that potential dredge operators achieve the highest production and are as prepared as possible for emergencies.

Today IHC works extensively with both the public and the private sectors. Its government clients include the BWDB under the Ministry of Water Resources and BIWTA under the Ministry of Shipping. Among the 25

or steel cables that frequently obstruct the dredges, the result of indiscriminate industrial pollution and overpopulation. At busy stretches of the rivers, dredgers also have to halt in order to avoid 'traffic' collisions. During peak monsoon season, high currents limit the dredgers' workability. IHC is now on the sixth generation of their standard IHC Beaver® dredger, complete with remote access.

In collaboration with local shipyards, IHC has also started manufacturing parts of, and assembling, dredgers in Bangladesh, again, to save on transport costs. For certain projects, IHC contributes the blueprints, engineers and other specialists while the local shipyard manufactures the steel constructions. Of the three main structures of a Cutter Suction Dredger, only the centre pontoon, being the "heart of the dredger", is sometimes manufactured in the Netherlands. As much as 70 percent of the building cost of a dredger is determined by the critical components, such as the gearbox, diesel engine, hydraulic and electrical installations and are brought in from the Netherlands. The cost of steel varies only negligibly between the Netherlands and Bangladesh. Labor is cheaper locally but constitutes only 15 percent of the total cost of building a dredger.

In an attempt to promote the company and galvanize the sector in Bangladesh, in the years 2010 and 2012 IHC organized seminars on dredging with the participation of all parties involved in it including representatives from the relevant ministries, shipyards, private sector and research organizations. IHC's Customer Finance together with local banks presented mechanisms to finance the purchase of a dredger. The Center for Environmental and Geographic Information Services shared morphological studies on the country's riverbeds. The seminar provided an opportunity to compare dredging technologies and network.

In the future, IHC hopes to connect to more suitable local partners, especially from the private sector. Derks lauded the sustained attention to the dredging and the increased interest businesses are taking in the matter. Since river transport can only take place if proper dredging continually removes silt and restores the navigation routes in Bangladesh's rivers it is encouraging to see that they are keen. 

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units of dredgers IHC sold in Bangladesh, thirteen have been to the public sector. The private sector too is playing an increasingly greater role in this sector. The substantiated need to dredge our riverbeds has led the government to float lucrative tenders, which has aroused interest from local business groups in dredging. The company's expertise in sand mining has drawn the interest of prominent Bangladeshi construction companies who need to forge backward linkages. IHC has supplied dredgers to construction behemoths such as Abdul Monem Ltd, Reza Construction as well as to dedicated dredging companies. Companies such as IHC find that work with the private sector is faster than the evaluation processes in the public sector tenders.

Dredging operations in Bangladesh encounter tremendous problems. One is 'spoil dumping' – the dumping of dredged material on riverbanks and shoals, or any other site. The riverbeds are strewn with debris such as plastic