

# »» Project Information

## Integrated Water Transport – India

### Ferries for Kochi

As in most developing countries, India's infrastructure cannot keep pace with the needs of rapid population growth and economic development, especially in urban areas. Medium-sized cities, with 1 – 3 million inhabitants, have the largest potential to positively influence growth by expanding the existing infrastructure. Integrated public transport systems can remedy the endless traffic jams and greenhouse gas and other emissions that are harmful to the environment and health while also giving the disadvantaged section of the population easier access to jobs and public facilities.

Due to Kochi's particular geography, inland waterways have traditionally played an important role in urban transport. However, as part of the public transport system, this mode of transport has been neglected over the last few decades and has thereby been undergoing a steep decline in ridership and infrastructure.

Within the Programme for Climate-Friendly Urban Mobility, KfW is financing an Integrated Water Transport System, providing better connectivity by ferryboats within the metropolitan area. Old and dilapidated boats will be replaced and the fleet will be expanded by new energy-efficient passenger ferries; the route network will be considerably increased and timetables will be optimized. This reduces resource consumption, greenhouse gas emissions and other environmental pollution and enables faster, safer, socially inclusive and more comfortable mobility. It is also part of a bigger concept of seamless integration for the city.

### Context

Over the last few decades more and more people moved from rural regions to the urban centers of India at an ever increasing rate. With 30% urban population, India is still at the beginning of the urbanisation boom, a 50% share is expected before 2050. India's cities are regarded as economic powerhouses, accounting for about 60% of GDP. The promise of prosperity has far-reaching consequences for urbanisation and leads to growing pressure on the cities and their infrastructure. In recent years, the motorisation rate has grown about 5 times faster than the population. Already today, non-motorised traffic has decreased in favor of individual traffic. The outdated, overloaded public transport system offers no alternative. This not only worsens conges-

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<b>Commissioned by</b>	Federal Ministry for Economic Cooperation and Development (BMZ)
<b>Country/Region</b>	Republic of India/Kerala
<b>Lead executing agency</b>	Kochi Metro Rail Limited





Integrated Water Transport – Perfect Solution for Kochi.  
Source: KfW Group, photographer: Stephanie Rieger

tion, but also burdens the environment and is an obstacle to further economic development. 13 out of 20 cities of the G20 countries with the highest air pollution are located in India. Especially for mid-sized cities this threat to the existing infrastructure can also be seen as an opportunity to strengthen resilience and to positively influence economic growth by expanding the existing infrastructure. This also holds true for Kochi, a major port city on the south west coast of the Indian Peninsula.

The metropolitan region of Kochi, which comprises many small offshore islands, is characterised by largely water-based economic activities along channels through the city. Thus, Kochi's inhabitants depend on fast and safe water transport. Especially for the rapidly growing suburbs, a reliable and integrated connection between the mainland and the numerous peninsulas and islands is required.

Women in particular are dependent on local public transport as private vehicle ownership is rather the exception. Nevertheless, the few existing ferry services are hardly used, as ferries are considered to be slow, insecure and dilapidated. While there were once about 60 operational jetties connecting island communities with the mainland, only 21 remain today. The few connections thus further reduce the attractiveness of waterborne modes of transport.

### Project approach

Within the Programme for Climate-Friendly Urban Mobility, KfW is financing on behalf of the German Government, represented by the Federal Ministry for Economic Cooperation and Development (BMZ), the rehabilitation and extension of an integrated water transport system in Kochi. The project focuses not only on the

integration of ferry services into other modes of public transport systems such as the metro and bus network, but also on resource-saving and efficient transport of the general public. Multimodal integration and seamless ticketing are intended to shorten travel times and routes and thus turn public transport into an efficient and affordable alternative to individual motorized traffic. Inefficient sporadic point-to-point connections will be replaced by scheduled services with additional stops. By 2022, 78 new hybrid-ferries will connect 38 jetties on 15 new lines and carry up to 40,000 people a day. Time savings are estimated to be 30% on average. By replacing old diesel-powered ferries with hybrid ferries, up to 40% oil can be saved, reducing the life cycle CO<sup>2</sup> emission by about 158,000 tons. In order to address the security needs of women, jetties, access roads and passenger terminals will be illuminated and monitored.

### Impact

The people in Kochi live with and next to the water. The revitalisation of the ferry system integrates all residents of Kochi into one central efficient and comfortable multimodal transportation system and thus provides affordable and time-efficient access to social infrastructure and new employment opportunities. Up to 100,000 people are expected to directly benefit from the project. The energy-saving hybrid ferries are fast, safe and comfortable and contribute to the overall attractiveness of the regional public transport system. Health-threatening air pollution and excessive noise get reduced, which allows for a better quality of life in the Kochi region while stimulating the economy at the same time. Low-income households and women in particular will benefit from this economic upturn, as tickets are affordable and monitoring promises safety and comfort.



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