

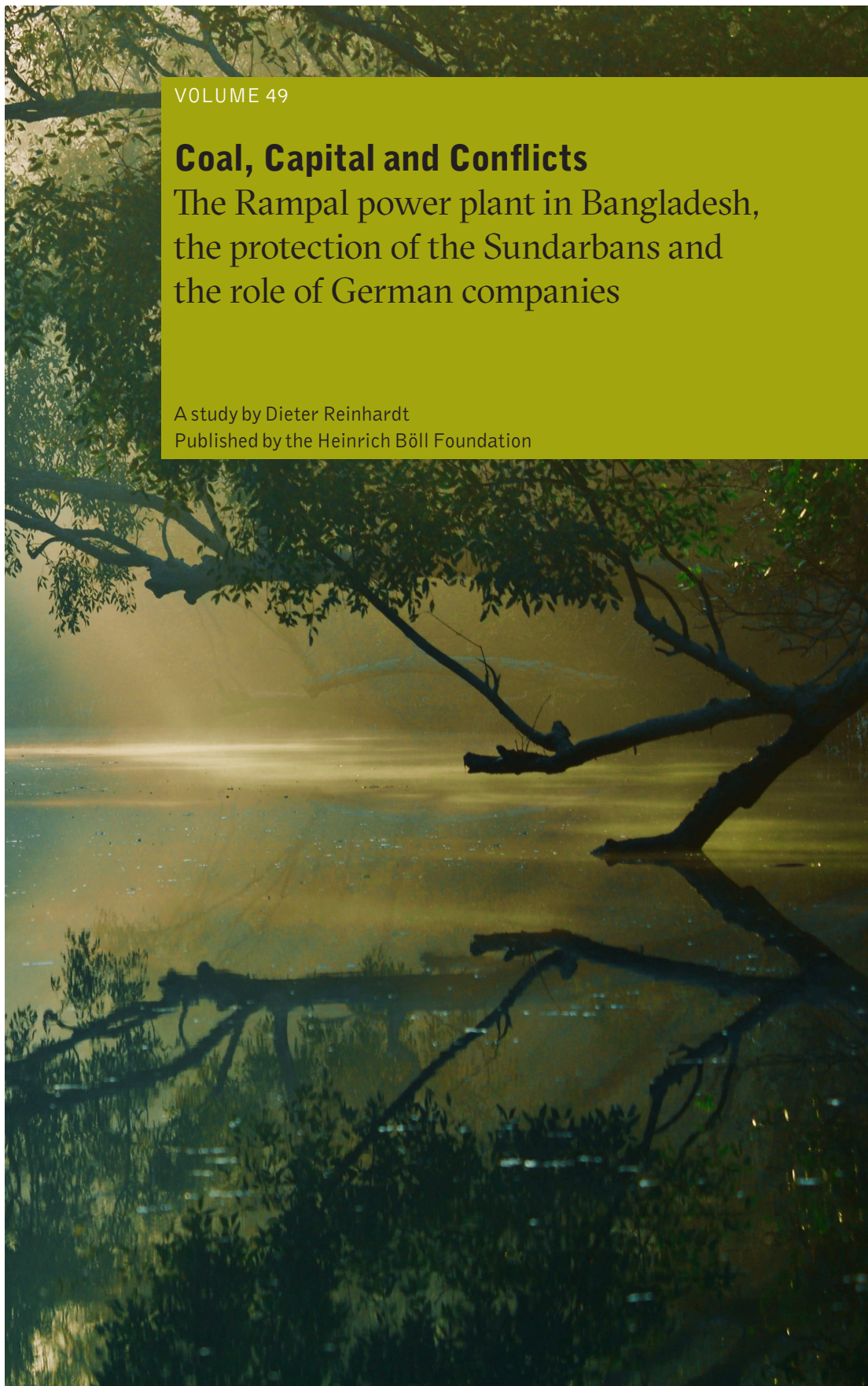
VOLUME 49

Coal, Capital and Conflicts

The Rampal power plant in Bangladesh,
the protection of the Sundarbans and
the role of German companies

A study by Dieter Reinhardt

Published by the Heinrich Böll Foundation



COAL, CAPITAL AND CONFLICTS

**HEINRICH BÖLL STIFTUNG
PUBLICATION SERIES ON ECOLOGY
VOLUME 49**

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Volume 49 of the Publication Series on Ecology

Published by the Heinrich Böll Foundation, February 2022

Layout: feinkost Designnetzwerk, S. Langer (based on drafts by State Design)

Translation: John Hayduska

Cover image: © Mamun Srizon (– unsplash) Subject: Sundarbans, Bagerhat, Bangladesh

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FOREWORD

The Sundarbans are the largest contiguous mangrove forest area in the world. They are a UNESCO Natural World Heritage Site and cover around one sixth of the coast of Bangladesh and a part of the coast of India. However, this unique ecosystem faces a serious threat. Just a few kilometers north of the protected area in Bangladesh, Rampal, a large, new coal power plant, is due to go online soon. In the future, around 200 container ships will pass through the mangroves every year to supply the plant with nearly four million tons of imported coal. Waste heat and the anticipated solid waste and pollutants further threaten the regional ecosystem and the local people who depend on it for their livelihoods.

Rampal is an anachronism in two senses: Firstly, major fossil-fuel projects are simply no longer in keeping with the times because of the climate crisis. Many developing and emerging countries have recognized this and now primarily opt for renewables when building new generating capacities to cover their increasing energy requirements. By contrast, the government of Bangladesh continues to rely almost exclusively on the expansion of fossil power generation to promote growth and industrialization, and this despite the fact that the country has vast potential for renewable energies.

Secondly, mangrove conservation amounts to coastal protection. Mangroves provide an effective natural barrier to the storm surges and floods that regularly plague Bangladesh because of its geographical situation. These events are becoming more common and intensifying due to climate change. Coastal protection is therefore absolutely essential for Bangladesh.

So why is Bangladesh's government sticking to the fossil path? Who is advising the politicians, offering up a mixed bag of fossil «solutions,» including the project in Rampal? Researcher Dieter Reinhardt lists a whole range of internationally active investors and banks, as well as energy, engineering and consulting firms whose business models are based in varying degrees on staying in the fossil fuel era, and who are involved in fossil fuel infrastructure projects in Bangladesh. Among them is a company from Stuttgart, Germany: Fichtner Group.

Against this background, the author describes Fichtner as a prime example of a German global player that profits from fossil-fueled, nature-destroying activities abroad while touting sustainability at home.

With climate change and the global extinction crisis, the devastating consequences of the unchecked exploitation of the biosphere are increasingly being felt in the global North and are threatening to become unmanageable overall. Policymakers must therefore abandon their previous patterns and finally create a framework that transforms and sets limits for economic activities in a socio-ecological way. Corporate global responsibility should no longer be based on voluntary action. Analogous

to supply chain laws and sustainability clauses in trade agreements, binding and sanctionable rules are needed here as well. Business areas should also be subject to greater transparency requirements in order to prevent greenwashing by companies. Options for legal action by injured parties should be strengthened and expanded. In addition, there is a need for ambitious climate foreign policy that aims to ensure that as many countries as possible abandon – or better yet, leapfrog – the fossil-fueled growth trajectory, preserve carbon sinks, and protect existing natural climate impact buffers such as the Sundarbans mangrove forest instead of blindly sacrificing them for short-term growth.

It was industrialized nations like Germany that set out on the path to fossil-fueled capitalist modernity 200 years ago. Many countries, including Bangladesh, are still emulating their example in fast-forward, with all of the well-known consequences. This gives rise to the historical responsibility to show that there are alternatives to this path, and that sustainable prosperity is possible today in a way that is both climate-neutral and does not fall back on nuclear power. An important key to this is a swift and comprehensive energy transition. Industrialized nations like Germany have both the technological expertise and the financial resources to pursue this new path. It's high time to hit the ground running!

Berlin, Germany, January 2022

Felix Speidel

Asia Division of the Heinrich Böll Foundation

Introduction

Cutting back on fossil fuels while expanding renewable energy sources is a crucial element in mitigating climate change. The seventh of the 17 UN Sustainable Development Goals outlined in the 2030 Agenda for Sustainable Development calls for the following to be achieved by 2030: «Ensure access to affordable, reliable, sustainable and modern energy for all ... increase substantially the share of renewable energy in the global energy mix ... double the global rate of improvement in energy efficiency.» However, the global share of fossil fuels (coal, oil, gas) remains very high. For example, the consistently high level of economic growth in the «Next Eleven» (N11) group of countries – consisting of «new» countries such as Bangladesh and Vietnam that are expected to join the group of «old» emerging countries in the medium term – is associated with the rapid expansion of fossil fuels. This expansion is largely based on foreign direct investment and loans from private banks as well as state and multilateral development banks. In particular, these include companies and banks from industrialized or emerging countries such as Japan, China, India, the EU countries, Australia, South Korea and the United States. While the companies and banks in these countries compete for licenses or permits from governments to invest in fossil-fuel power plants, they also cooperate closely on certain construction projects.

The power generation capacity of Bangladesh, with a population of around 165 million people, nearly quadrupled between 2008 and 2018 (Baxter 2020, Chowdhury 2018, Hossain 2018). The government plans to triple the 2018 capacity by 2041 by building coal and gas power plants and a nuclear power plant (Government of Bangladesh 2016a, Energy Bangla 2016). The Rampal coal power plant (hereinafter: «Rampal») is part of this plan. National and international critics of the plant argue that it will have a particularly negative impact on the vast mangrove forest known as the Sundarbans («beautiful forest» in Bengali), which is part of a UNESCO Natural World Heritage Site. The Bangladeshi government's 2016 announcement on the expansion of electricity generation capacity by means of more than 20 new coal power plants in particular has sparked strong political and scientific controversy. Critics of this energy mix policy point out that there is vast and as yet untapped potential for renewable energy sources in the country (Islam 2021, Simon 2021, The Daily Star 2018, Shirai-shi/Shirley/et al. 2018, NCBD 2017, IEEFA 2016). The government then announced in 2020 that it would reconsider the construction of coal power plants that had not yet been granted final approval but coal power plants that had already been approved and are under construction were expressly excluded from this review. These include Rampal, in the construction of which the German company Fichtner GmbH & Co – hereinafter «Fichtner Group» – is significantly involved as the chief engineering consultancy firm. Fichtner Group is one of Germany's largest engineering and consulting

companies. It is also heavily involved in the development of Mongla Port, through which all of the coal for Rampal will be delivered, and is responsible for the «environmental management» of the coal transport through the Sundarbans to this port. All of the coal needed for Rampal will be imported. The plant is scheduled to be completed and go into operation in the course of 2022. Two German banks – Deutsche Bank and DZ Bank (Deutsche Zentral-Genossenschaftsbank) – as well as the German insurance company Allianz Group, were indirectly involved in financing Rampal (IEEFA 2016: 3, 5, 55).

This publication first looks at the background and scope of the planned massive expansion of the fossil energy sector in Bangladesh and the importance of the so-called industrial development of southwestern Bangladesh, where the Sundarbans are located. Tokyo Electric Power Company Holdings Inc. (TEPCO), owner of the Fukushima nuclear power plant – the scene of a nuclear disaster in 2011 – is the government's chief energy adviser in this expansion. But loans and investments from banks and companies and the services of consulting firms from India, China, the United Kingdom and Germany also play an important role in Bangladesh's fossil and nuclear energy sector. In addition to Fichtner Group, Thyssenkrupp AG, Siemens AG and a German container shipping company, Lübeck-based Oldendorff Carriers GmbH & Co. KG, are also involved in the expansion. STEAG Germany and its subsidiary STEAG India are involved in the construction of power plants south of Chattogram (previously known as Chittagong until 2018), the second largest city in Bangladesh after the capital Dhaka (Khan/Byron 2015). Next, this study describes the Rampal power plant itself and its expected impacts on the Sundarbans. After a brief outline of the business areas of Fichtner Group, the company's functions during the construction of the power plant are explained. However, it is only possible to provide a limited amount of detail, because up to the time of writing (January 2022) and with the exception of a very short statement of just a few sentences in an article in *Süddeutsche Zeitung* in July 2020 (Mayr/Perras 2020), the company has not commented publicly on its role or responded to the criticism of the power plant from within Bangladesh and abroad. This is followed by statements by UN representatives and resolutions by UN organizations relating to Rampal and criticism of the power plant by US policymakers. After a description of the controversies surrounding Rampal in Bangladesh follows an account of the related debate in Germany.

Finally, the study states the reasons why the transnational civil-society environmental and human rights movements did not succeed in stopping the plant's construction. The strengths and weaknesses of these movements can be illustrated effectively using Rampal as an example. The very late start to the debate about the power plant and the involvement of Fichtner Group in Germany – particularly in Stuttgart, the capital of Baden-Württemberg and home of the company – is one of these weaknesses. The urge not to foul one's own nest – the dilemma faced by local actors when highlighting local issues – is one of the reasons for this late reaction at home.

1 The case of Bangladesh

On the one hand, Bangladesh – like all low-lying countries with large river delta systems and island countries – is already severely affected by climate change-induced sea-level rise and the increasing frequency and intensity of hurricanes and floods. On the other, it contributes very little to climate change compared to industrialized and emerging countries, both in terms of CO₂ production per capita and the total volume of CO₂ produced (see table). While Bangladesh produced 0.6 tons of CO₂ per capita in 2019, the United States produced 16 tons, China 7.1 tons, and India 1.9 tons; the worldwide average was 4.7 tons per capita (see table). Even an increase in CO₂ production in Bangladesh over the next few years will do little to reduce this gap.

Table: CO₂ emissions (coal, oil, gas, cement) and population in 2019

	Per capita CO ₂ emissions in tons	CO ₂ emissions in millions of tons	Population (in millions)
Bangladesh	0.6	102	163
India	1.9	2,616	1,366
United Kingdom	5.5	370	68
China	7.1	10,175	1,434
Germany	8.4	702	83
Russian Federation	12.0	1,678	146
United States	16.0	5,285	329
World	4.7	36,411	7,713

Sources: Global Carbon Atlas (2019) and UN (2019). Numbers rounded.

Bangladesh is included in what Goldman Sachs calls the «Next Eleven» (N11) group of countries, which the investment banking firm predicts will follow the BRICS countries – a grouping also defined by Goldman Sachs – in terms of GDP growth and industrialization (DFDL 2018: 2). The rapid expansion of power generation capacity is seen as an important prerequisite for Bangladesh's steady GDP growth of over six percent over the past decade (Robinson 2019). Generation capacity almost quadrupled between 2008 and 2018, from 5.2 gigawatts (GW) to 20 GW; between 2009 and 2018, the length of transmission lines increased from 8,000 to 10,680 km (Chowdhury 2018, Hossain 2018). In 2020, about 97 percent of the country's electricity was generated by oil-fired

power plants (Hossain 2021), and until that year, there was only one operational coal power plant in Bangladesh with a very small capacity. China and Japan are playing a significant role in providing financial support to Bangladesh for the expansion of its fossil energy sector.

The foundation of the Bangladeshi government's plans for expanding power generation capacity is its Power Sector Master Plan (PSMP) of 2016, which is based on the original PSMP of 2010. The 2016 PSMP envisages increasing the country's capacity from 20 GW in 2018 to 24 GW in 2021, to 30 GW in 2030 and to almost 60 GW in 2041 (Government of Bangladesh 2016a, Chowdhury 2018, Rahman 2019, Imam 2020). The plan calls for 35 percent of the energy mix in 2041 to be based on coal power, with the remainder supplied by a nuclear power plant already under construction, several planned liquefied natural gas (LNG) power plants, and a very small amount of renewable energy development, i.e., solar, wind, and biogas power (Imam 2020, Chowdhury 2016, Rahman 2019).

More than twenty new coal power projects were either under construction, had received a construction permit from the government, or were about to receive such a permit in 2019 and 2020 (Siddique 2020, Rahman 2019, Sufi 2019, Nicholas 2018, Moazzem/Ali 2019). Nearly all of these power plant projects are financed or constructed through joint ventures between a Bangladeshi company and one or more international companies from China, South Korea, India, Russia, the United States, Singapore, Malaysia or Germany, among others (Sufi 2019). In 2020, the government of Bangladesh announced that it would reduce the number of coal power plants significantly and instead build more LNG power plants (Siddique 2020, Roy 2020).

Controversy over energy mix policy, ambivalence and rapid policy change

In Bangladesh, the expansion of coal power is highly controversial for a variety of reasons. Civil society organizations and environmental experts in Bangladesh and elsewhere argue that construction permits for fossil-fuel power plants are based on flawed environmental and social impact assessments, and that neither the legal requirements for consultation and participation of local people in planning processes, nor the amount of compensation paid to owners of land used for construction projects are being respected. They are calling for the vast, yet untapped potential of renewable energy to be developed instead of fossil fuels.

A second thread of discussion relates to the financing of new fossil-fuel power plants, which is almost entirely through loans from foreign (development) banks (Sufi 2019). It is argued that these loans put Bangladesh into a «debt trap» that leaves the government vulnerable to political and economic blackmail (Hu 2019). Many critics of government energy policy are therefore calling – for economic and environmental reasons – for a gradual or even abrupt shift away from fossil fuels in favor of the rapid expansion of renewable energy sources (Simon 2021, The Daily Star 2018, Chakma 2018, Shiraishi/Shirley/et al. 2018, USAID/National Renewable Energy Laboratory

2018, Nurunnabi/Roy/Pota 2018, Urgewald 2018, NCBD 2017, IEEFA 2016, Gunatilake/Roland-Holst 2016).

The Bangladeshi government's energy policy is characterized by ambivalence, rapid policy changes and open contradictions. In 2016, for example, the government announced the construction of more than 20 coal power plants in its PSMP (Hu 2019, Sufi 2019), yet in the same year, Bangladesh and nearly 50 other member countries of the Climate Vulnerable Forum declared that by 2050 at the latest, their power supply would be based on 100 percent renewable energy (Climate Vulnerable Forum 2016). Bangladesh was one of the founders of this forum in 2009. In 2020, the government again questioned the construction of nearly all planned coal power plants and announced a comprehensive review of almost all plans for coal projects and increased construction of liquefied natural gas power plants; only Rampal and a few other coal power plants were not to be reviewed but completed.

These ambivalences are indicative of the strong differences on energy policy within the government administration and within Bangladesh's largest party, the Awami League, which supports it. Sheikh Hasina Wazed, the leader of this party, was prime minister of the country between 1996 and 2001 and again since 2009. A number of other actors – with varying degrees of intensity and different interests – also have influence on energy policy. In Bangladesh, these include construction companies, entrepreneurs who depend on improved energy supplies, the media, academia, the local population at power plant sites and environmental protection organizations, as well as foreign banks, companies and governments, such as those of Japan, China, and Russia in particular, which are providing the Bangladeshi government with substantial loans for coal and natural gas power plants and a nuclear power plant and which participate directly in and profit from construction projects themselves.

Japan's influence on the government of Bangladesh and the Fukushima nuclear disaster

The full title of the government of Bangladesh's 2016 PSMP mentioned above is: «Power Sector Master Plan 2016, Final Report, Summary, Supported by Japan International Cooperation Agency (JICA), Tokyo Electric Power Services Co. Ltd. (TEPSCO), and Tokyo Electric Power Company Holdings Inc. (TEPCO)» (Government of Bangladesh 2016a). TEPSCO is a subsidiary of the Japanese company TEPCO, which owns the Fukushima nuclear power plant that melted down in 2011. After the Fukushima disaster, the Japanese government drastically reduced the share of nuclear energy and increased the share of coal power plants in Japan's energy mix. In 2016, Japan's nearly 100 coal power plants provided more than 30 percent of total electricity, gas power plants accounted for more than 40 percent, and nuclear power plants provided just under two percent (Tanaka 2018). Since 2011, TEPCO and other Japanese energy companies and banks have intensified their investments in the fossil-fuel power plant sector, granting loans for this purpose both within Japan and abroad. In 2016, the government, corporations and banks of Japan also successfully lobbied the government of Bangladesh to expand coal power (Sugiura/Okutus 2018). Five years after the

Fukushima disaster, TEPCO became the main energy consultant to the Bangladeshi government and continues to play an important role in Bangladesh's fossil-fuel sector. TEPCO's involvement in Bangladesh includes the construction of the Matarbari coal power plant south of Chattogram, the second largest city in Bangladesh.

The energy sector and Bangladesh's relations with China

Chinese banks and companies have been involved in the planning, financing and construction of more than ten coal power plants and several LNG power plants in recent years. China was thus even more involved in the planning and construction of coal power plants in Bangladesh than Japan (Dhaka Tribune 2019b, Vox Markets 2018).

China has been Bangladesh's largest trading partner and foreign direct investor for several years now, especially in the infrastructure and energy sectors (Pitman 2020, Siddique 2016). This momentum remains unchanged despite the fact that the Bangladesh-China-India-Myanmar (BCIM) Economic Corridor, which was ultimately rejected by India after initial hesitation, is no longer part of the Belt and Road Initiative (BRI). More than 400 Chinese companies operate in Bangladesh; the trade volume between China and Bangladesh was US \$12.4 billion in 2017-2018 and is estimated to have been around \$18 billion in 2021 (Dhaka Tribune 2019b, United News of Bangladesh 2019). Bangladesh has a large trade deficit with China, however. India-Bangladesh (formal) trade volume only amounted to \$7 billion in 2017. In comparison, the trade volumes between China and Myanmar and between India and Myanmar were each significantly lower than those with Bangladesh (Pitman 2020, United News of Bangladesh 2019, Xinhua 2018). The involvement of Chinese companies and Exim Bank of China in the construction and financing of the 6-km Padma Bridge – a road and rail bridge over the Padma River and a highly popular megaproject – has bolstered China's image in Bangladesh. The bridge will cost approximately \$3.6 billion and is set to reduce travel time between Kolkata and Dhaka by about five hours (The Daily Star 2020b, Xinhua 2019b). In contrast, Chinese investments in several coal power plants have been criticized by local communities, civil society organizations, academics and policymakers, negatively impacting China's image among these stakeholders.

Untapped renewable energy sources and the «100% Renewable Energy for Bangladesh» report

One of the most detailed analyses of renewable energy potential is a study published in 2019: «100% Renewable Energy for Bangladesh – Access to renewable energy for all within one generation» (Coastal Development Partnership Bangladesh/Bread for the World/World Future Council, eds., 2019b). It was prepared by the Institute for Sustainable Futures (ISF) at the University of Technology Sydney for the organizations Coastal Development Partnership (Bangladesh), Bread for the World and the World Future Council. An abridged «Summary for Policy Makers» was also published (Coastal Development Partnership Bangladesh/Bread for the World/World Future Council 2019a).

The study develops different scenarios to achieve the goal of 100 percent renewable energy for all Bangladeshis within one generation. It is prefaced by M.A. Mannan, Planning Minister of Bangladesh. He refers to the aforementioned Climate Vulnerable Forum (CVF) of nearly 50 countries that declared in 2016 that their countries should be powered by 100 percent renewable energy by 2050 at the latest (Climate Vulnerable Forum 2016): «I believe that this study opens up the discussion to go for 100% Renewable Energy for Bangladesh and uphold the leadership that was shown in the CVF by Bangladesh ... this study will help the energy-related stakeholders to accelerate a long-term energy transition process through the deployment of the renewable power generation» (Mannan 2019).

The study analyzes the largely untapped potential of biogas, solar and wind energy and presents a comprehensive set of measures, including the expansion of off-grid and grid-connected solutions (Coastal Development Partnership Bangladesh/Bread for the World/World Future Council, eds., 2019a: 12) (see Box 1). Two scenarios were developed, both of which involve a substantial increase in power generation by 2050. The «renewables 1.5°C» scenario for 2050 contains an energy mix based on one quarter each of bioenergy, solar, wind and hydrogen (ibid., p. 6); in the transport sector, hydrogen, synthetic fuels and electric vehicles are to be deployed (ibid., p. 9). The «renewables 2.0°C» scenario contains a less ambitious energy mix, which is also based on about a quarter each of bioenergy, solar, wind and gas, and a very small percentage of nuclear power (ibid., p. 6).

The study also advocates the expansion of the Solar House Systems (SHS) program (ibid., p. 16). Grameen Bank, startups, technology companies and the World Bank are involved in the implementation of SHSs – one of the world's most successful small-scale off-grid solar energy programs – and are lobbying the Bangladesh government to expand it. More than 14 million people, particularly in rural Bangladesh, live in a home with an SHS (World Bank 2021, Yunus 2018: 113ff, Centre for Public Impact/BCG Foundation 2018, Center for Research and Information 2018, Groh 2018, Chakma 2018). While households have to bear the installments to purchase the system, an SHS eliminates the rising cost of kerosene for the minimal lighting provided by kerosene lamps. The installments are generally lower than the kerosene costs otherwise incurred. After about one year, the SHS is fully paid and the property of the household. However, the total national solar generation capacity of these SHSs and a number of installed larger-scale and other solar systems was just under 350 MW in 2018 (Simon 2021, Tachev 2021).

Box 1

100% Renewable Energy for Bangladesh – Access to renewable energy for all within one generation

Source: Coastal Development Partnership (CDP) Bangladesh/Bread for the World Germany/World Future Council Germany (eds.) (2019a). 100% Renewable

Energy for Bangladesh – Access to renewable energy for all within one generation, Summary for Policy Makers, Report prepared by the Institute for Sustainable Futures (ISF) (University of Technology Sydney) (2019), p. 1 (summary by the author)

The measures to be taken by 2050 as proposed by the «100 Percent Renewable Energy in Bangladesh» study are deemed to be technically feasible, economically viable and socially beneficial. Around 200 GW of renewable generation capacity would need to be installed by 2050 to achieve 100 percent renewable energy in Bangladesh.

Photovoltaic systems: Bangladesh, the study notes, has nearly 6,250 sq. km of land for photovoltaic (PV) installations, on which 156 GW of solar energy could be generated by solar farms. 20 percent of these solar farms would be floating installations.

Wind: According to the study's calculations, the total wind power potential is about 150 GW, of which 134 GW could be generated offshore and 16 GW onshore.

Investments: Additional investments – i.e., on top of the \$170 billion estimated by the Bangladesh government's 2016 Power Sector Master Plan – would be required in the order of \$140 billion (under the ambitious 1.5°C scenario) or \$80 billion (under the less ambitious 2.0°C scenario) by 2050 for the transition to a 100 percent renewable energy system. However, according to the study, fuel cost savings of up to \$200 billion (under the 1.5°C scenario) or \$140 billion (under the 2.0°C scenario) would more than offset the additional investment costs.

Infrastructure needs: The study notes that infrastructure expansion will be needed to meet rising energy demand, build new wind and solar power plants and integrate decentralized systems.

Storage: 100 percent renewable energy is deemed possible without extensive storage capacity. Storage demand would be moderate and only be needed to an increasing degree after 2030.

Transportation: By 2050, up to 40 percent of the transportation sector could be electrified. Biofuels and synthetic fuels would complement the increasing share of renewable energy in the transportation sector.

Employment: By 2050, the renewable energy industry could create up to one million more jobs than the fossil fuel industry.

Heat and cooking: By 2050, between 100 percent (in the 1.5°C scenario) and 81 percent (in the 2°C scenario) of Bangladesh's total heat demand could be met by renewable energy.

Climate change: A higher share of renewables would lead to CO₂ emissions of a maximum of 123 million tons as opposed to the 400 million tons accrued in the reference scenario. The study notes that full decarbonization of all sectors is possible if the share of imports of electricity and fuels from renewable sources is increased.

Announcement of a renewed review of planned coal power plant projects

In mid-2020, the Minister of Energy and Mineral Resources of Bangladesh announced that the government would once again review the planned construction of 26 coal power plants that had not yet received final approval. The construction permits of three other coal power plants that are already under construction would not be reviewed again, he said. These are Rampal, the Chinese-backed Payra (also known as Kolapara or Kalapara) plant in Patuakhali district just to the east of the Sundarbans, and the Japanese-backed Matarbari plant (Dhaka Tribune 2020). In a letter to the prime minister, also in mid-2020, the minister advocated completing five more coal plants already under construction in addition to these three. Furthermore, he proposed realizing 13 planned power plants that were originally slated to be coal-fired as LNG power plants instead (Siddique 2020). In November 2020, it was reported that in the review of all coal power and coal mining projects, five coal power projects had been approved, including Rampal and Payra (Roy 2020). As of December 2021, however, this review had not yet been officially completed. Various reasons were given for this review – and for the possible associated reduction in the number of new coal power plants or even the (temporary) suspension of licensing procedures. Looming cost increases of imported coal and the falling world price of gas and renewables are cited as one reason (Dhaka Tribune 2020, Siddique 2020). Due to these factors, the two most important lenders for coal power plants, China and Japan, had expressed their interest to the government in cutting back coal and increasing the number of LNG power plants beyond the five that were planned and in some cases already under construction (Siddique 2020). Another reason cited is the very slow rollout of transmission lines. Payra, for example – the first new coal power plant, which was built and financed to a significant degree by China and has been fully operational since the end of 2020 – is running at partial capacity because transmission lines have not yet been completed (Hossain 2021).

2 The energy investments of China, Germany, the United Kingdom and Russia in Bangladesh

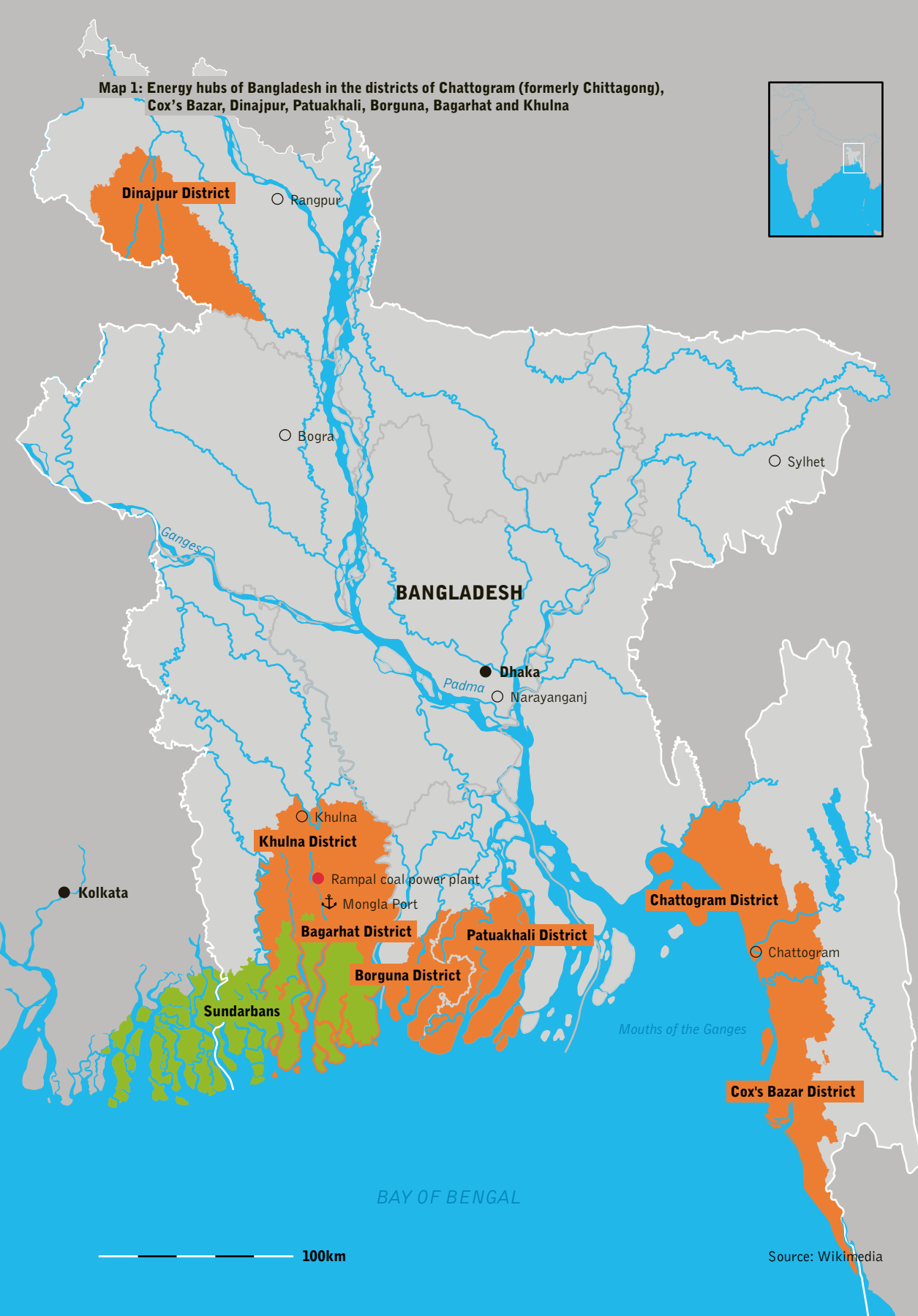
Regional energy hubs

Three regional energy hubs have been put in place in Bangladesh to promote industrial development and ensure the supply of power to the population (see Map 1). Special economic zones (SEZs), which offer low taxes to new investors, are also being established at these hubs, where new (coal, gas, diesel and other) power plants are being built and infrastructure such as roads, bridges, transmission lines and grids is being expanded. In the future, these hubs will be linked by transmission lines. Two of the hubs will each be provided with a new deep-water port facility for importing coal and other goods, and an LNG terminal for ships. One energy hub is located in the neighboring districts of Chattogram and Cox's Bazar in the southeast of the country, the second is in the northeast in the district of Dinajpur, and the third is located on the southwestern coast in close proximity to the Sundarbans mangrove forests in the three districts of Patuakhali, Borguna and Khulna (Jahangir 2018, Sarwaruddin 2018, Khan/Byron 2015). Loans or investments from Chinese, Japanese and Indian banks and companies are particularly important for the construction of these three hubs.

The following German companies are involved in the expansion of Bangladesh's energy sector: Fichtner Group, based in Stuttgart, the container shipping company Oldendorff Carriers GmbH & Co. KG, based in Lübeck, and Lahmeyer International GmbH, known as Tractebel Engineering GmbH since 2015, are involved in the construction and operation of several coal power plants. Siemens AG is involved in the construction of an LNG power plant and Thyssenkrupp in the construction of Bangladesh's first nuclear power plant.

In the first energy hub in the southeast of the country, several coal power plants, an LNG power plant and terminal, as well as a deep-water port are already being built or are in the planning stage. A number of projects are financed by loans from the Japanese International Cooperation Agency (JICA) and being built by the Japanese company TEPSCO/TEPCO and companies from Singapore, among others (Imam 2020, Market Forces 2020, Sarwaruddin 2018, Khan/Byron 2015). During demonstrations by villagers against a coal power plant financed by a Chinese bank in Banshkhali in Chattogram district, four protesters were shot and killed by security forces in April 2016

Map 1: Energy hubs of Bangladesh in the districts of Chattogram (formerly Chittagong), Cox's Bazar, Dinajpur, Patuakhali, Borguna, Bagarhat and Khulna



100km

Source: Wikimedia

(The Peninsula 2016, BBC 2016). The protesters were speaking out against planned expropriations and the purchase of land on which the power plant is being built. The second hub is located in northeast Bangladesh, in the district of Dinajpur. Central to it is the large-scale Barapukuria coal mine and the coal power plant of the same name. This was the only such plant in operation in Bangladesh before Payra came online in late 2020. A British and a Chinese company signed a joint venture agreement in January 2019 to develop the Phulbari open-pit coal mine, which is very close to the Barapukuria mine, and to build a further coal power plant immediately adjacent to the Phulbari mine that would burn its coal (GCM/PowerChina 2019, Cuddihy 2018, Bashar 2017).

The third hub in southwestern Bangladesh, on the same coast as the Sundarbans mangrove forests, centers around Rampal and its associated Mongla Port, both of which lie to the north of the Sundarbans. The hub also encompasses two coal power plants located east of the Sundarbans, Taltoli (or Taltali) and Payra, as well as the Payra LNG power plant. These are to be supplied with imported coal and LNG via Payra Port.

International construction companies and consultancies in Bangladesh's energy sector

The reasons for the increasing relevance of international engineering firms such as Fichtner Group, and consultancies such as Deloitte, McKinsey, KPMG or Price Waterhouse Coopers (pwc) in the global energy sector and other industries are manifold. The industrialization process and the rise of modern state administrations are associated with a growing number of regulations and standards in all sectors. These are developed by governments and international organizations such as the UN, the World Bank, the International Monetary Fund, the Asian Development Bank or the International Organization for Standardization (ISO). Engineering companies and consultancies that operate internationally usually have expertise and experience with these regulations and standards.

Governments and local firms hire such companies to handle planning, oversight, environmental and socioeconomic impact assessments and impact studies for construction projects. However, these reviews and assessments often do not identify the actual negative short, medium and long-term impacts of a project and its true (economic, social and environmental) costs. Clients tend to hire these companies for controversial projects to give them added legitimacy in the public eye. In such cases, engineering companies and consultancies also fulfill a political function.

German companies in the energy sector and partnerships with Chinese and Russian companies

Fichtner Group is the «Chief Engineer» of the Rampal power plant. The company is also one of the engineering firms involved in the construction of the Matarbari coal power plant south of Chattogram, financed mainly by Japanese loans (bdnews24 2015).

Oldendorff Carriers GmbH & Co KG, which is one of the largest container shipping companies in the world, and Lahmeyer International GmbH are involved in the Payra coal power plant and associated Payra deep-water port in the district of Patuakhali, which were largely financed and built by Chinese banks and companies. The facilities were completed east of the Sundarbans in close proximity to several nature reserves in late 2020 (Byron 2020). This power plant is owned by Bangladesh-China Power Company (Pvt) Limited (BCPCL), which is a joint venture of Bangladesh's state-owned North West Power Generation Company Limited (NWPGCL) and China National Machinery Import and Export Corporation (CMC). Oldendorff Carriers GmbH & Co. KG has contracted to handle the transport of coal from Indonesia to the Payra power plant between 2020 and 2025 (Steelmint 2020, Oldendorff Carriers GmbH & KG 2019). Together with other consultancies, Lahmeyer International GmbH prepared a favorable environmental impact assessment (EIA) and social impact assessment (SIA) for the Payra power plant in 2017 (CEGIS 2017).

In November 2017, Siemens AG and North-West Power Generation Company Limited (NWPGCL) signed a memorandum of understanding (MoU) to cooperate on both the construction and organization of financing for the nearly \$3 billion Payra LNG power plant (3,600 MW) in the presence of German ambassador Thomas Prinz (Business Standard 2019, Dhaka Tribune 2017). In November 2019, after a meeting between Prime Minister Sheikh Hasina and then Siemens CEO Joe Kaeser, a contract to this effect was signed in Munich (The Daily Star 2019d), with Siemens AG reportedly planning its «biggest» foreign investment in 2017: «Siemens will gather most of the international funding [for the Payra LNG power plant], making it the biggest investment in any country by the German company» (Business Standard 2019, Dhaka Tribune 2017). This LNG plant will be the second largest power plant in Bangladesh once construction of the country's first nuclear power plant is complete (Siddique 2020, Business Standard 2019, Dhaka Tribune 2017). The LNG plant was completed at the end of 2020 (Hossain 2021).

Thyssenkrupp is involved in the construction of Rooppur (or Ruppur), Bangladesh's first nuclear power plant. It is responsible for stabilizing the sandy construction foundation (Thyssenkrupp GmbH n.d., Georesources 2019). The nuclear power plant, the construction costs of which currently amount to around \$12 billion, will be financed mainly by loans from Russia and built by Russian companies (Nuclear Engineering International 2020).

British-Chinese cooperation on coal mine development and construction of a coal power plant

Bangladesh has several large coal mines, mainly located in the northeast in the district of Dinajpur; however, only one coal mine, Barapukuria, is currently operating. Coal from this mine is used to fuel the small Barapukuria power plant (Risad 2018). The other mines are not in operation because they were stopped by local protests, prohibitive investment costs, or the current lack of a permit to start operations. If all

of Bangladesh's major coal mines were operational, several of the coal power plants planned across the country could run on domestic coal instead of expensive imported coal.

In 2005, the Bangladeshi government granted a provisional permit to the British company Asia Energy to operate another open-pit coal mine, the Phulbari mine, located two kilometers from the Barapukuria mine in a densely populated area (Bengtsson/Roy 2019). A year later, however, the government withdrew this permit following protests by around 50,000 people, during which three protesters were shot and killed by security forces on August 26, 2006. The government has since stated repeatedly that it will not issue a permit for this mine in the future (Nuremowla 2016: 1). The protesters feared that coal mining would harm regional food production and drinking water quality. They also objected to the planned destruction of villages and the resettlement of the affected population. The government and the companies involved did not comment on the exact scope of the planned coal mining operations and resettlement. At the time, civil society organizations, academia and the media considered the relocation of between 40,000 and 470,000 people to be possible (Nuremowla 2016: 1, Hoshour 2012).

After the government withdrew its permit for the development of the Phulbari mine by the British company Asia Energy, the company was renamed GCM Resources and continued to pursue the development of the mine (Global Energy Monitor Wiki 2021b, The Independent 2019). A former Goldman Sachs employee was the majority shareholder of GCM Resources in 2011 (Sourcewatch 2011). GCM Resources finally succeeded in finding a partner for this project: China Gezhouba Group International Engineering Corporation (CGGC), a subsidiary of Power Construction Corporation of China (CEEC) (Global Energy Monitor Wiki 2021b and 2021c). The state-owned CEEC, also known as Power China, is one of the world's largest energy companies.

GCM Resources and CGGC signed a letter of intent in November 2018 and publicly stated that they would form a joint venture in February 2019 and formally apply to the government for approval of the Phulbari Coal and Power Project (CPP), which would entail operating the Phulbari mine and building a power plant to be fueled by coal from that mine (Vox Markets 2018). The project cost was put at nearly \$4 billion, and the planned capacity of the power plant stated as 2,000 MW (Global Energy Monitor Wiki 2021c, Xinhua 2019a). The signing of this letter of intent in November 2018 once again sparked an intense public debate – similar to the one in 2006 – about the pros and cons of the project. Protests against this project have taken place in Bangladesh and abroad, particularly in London, where the headquarters of GCM Resources is located (Global Energy Monitor Wiki 2021b and 2021c, Miller 2018, Phulbari Solidarity Blog 2017).

GCM Resources and CGGC publicly established a joint venture in January 2019 at a hotel in Dhaka (The Independent 2019, Xinhua 2019a). A few weeks later, however, both companies stated that they would not be applying to the Bangladeshi government for formal approval of the project in February 2019, as they had announced in 2018 (Alliance News 2019, Energy Central News 2019, GCM/PowerChina 2019). Presumably, the government had indicated that it would not approve the project. In

November 2020, the Bangladeshi government had decided that of all the pending coal power plant and coal mine plans in Bangladesh that had been reviewed since the summer, very few project plans would receive final approval; the Phulbari Coal and Power Project (CPP) is not among them (Roy 2020).

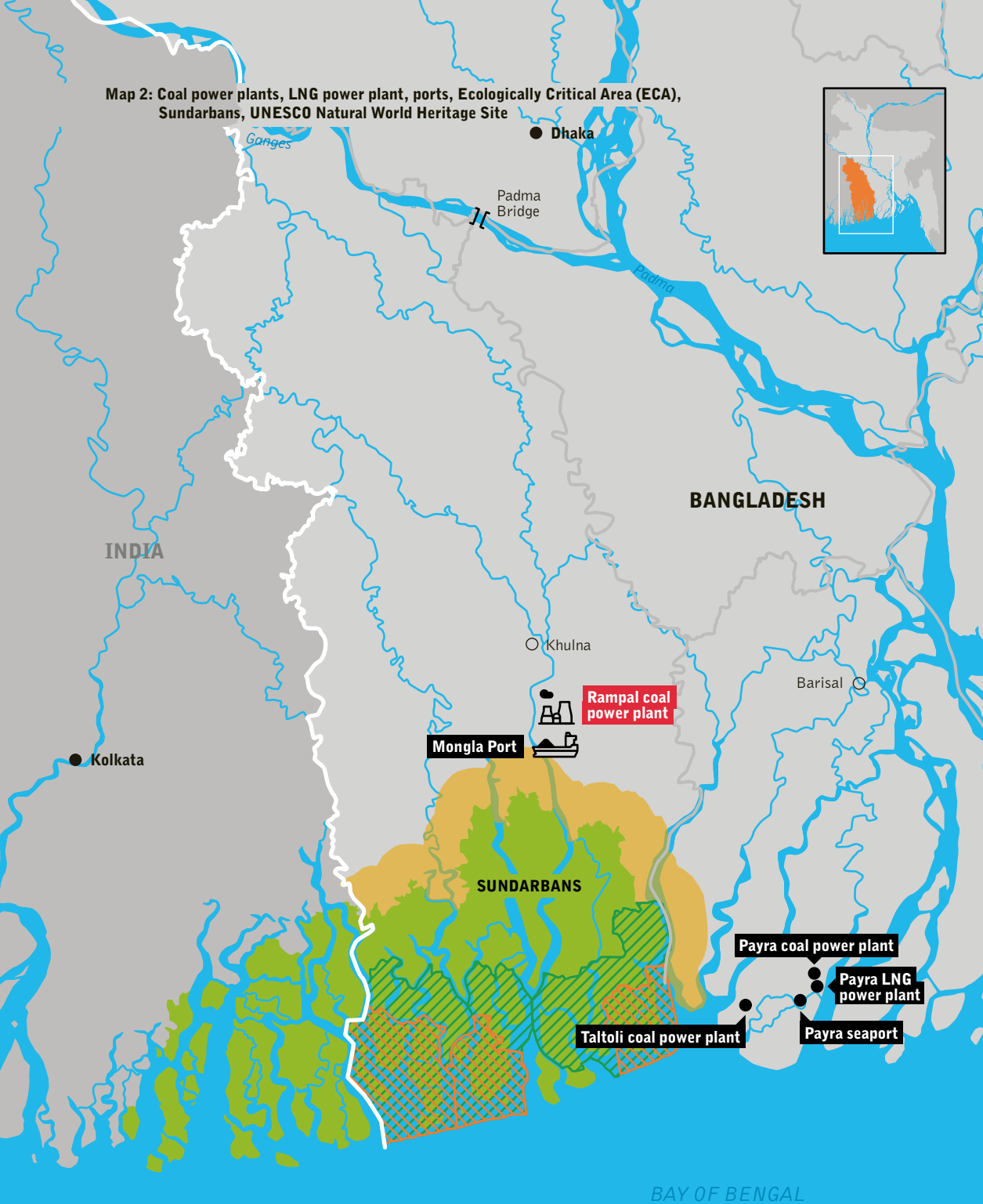
3 The industrialization of Southwest Bangladesh and the Sundarbans UNESCO Natural World Heritage Site

Over the past decade, the Bangladeshi government approved the construction of several coal power plants and other infrastructure projects by manufacturing firms in southwestern Bangladesh, including those being financed or built by Indian and Chinese banks or companies. The world's largest mangrove forest area, the Sundarbans, is located in the south of this region on the Bay of Bengal. Special environmental protection laws apply throughout the Sundarbans, especially in the part that is a UNESCO Natural World Heritage Site. For years, there has been a political, administrative, societal and scientific debate in Bangladesh and in UN agencies about the measures needed to protect the Sundarbans, the conservation of which is also advocated by the Bangladeshi government (Khan, Md Faisal Abedin/Md Saifur Rahman et al. 2020). For several million inhabitants, the Sundarbans are a natural protective barrier against cyclones, which are increasing in frequency and intensity due to the warming water of the Bay of Bengal caused by climate change. The livelihoods of these people depend directly on the Sundarbans ecosystem. The entire mangrove forest is a very rich fishing ground and therefore an important source of food.

The Sundarbans, the world's largest contiguous mangrove forest covering around 10,200 km², straddles the India-Bangladesh border. The western, Indian part of the forest covers about 4,200 km² and the eastern, Bangladeshi part about 6,000 km². Here, the Sundarbans Reserved Forest (SRF) was established as a protected area subject to special conservation laws as early as 1875 (see Maps 2 and 3). In 1997, UNESCO designated nearly a quarter of the SRF as the Sundarbans UNESCO Natural World Heritage Site in Bangladesh (International Water Association 2019: 9,12). It consists of three sections (East, South and West), each located on the coast. In 1999, the Bangladeshi government established the Ecologically Critical Area (ECA), a 10 km wide buffer zone around the SRF, under the Environmental Conservation Act (ECA) (see Maps 2 and 3). Different protection laws apply in the ECA than in the SRF.

The socio-economic structure and infrastructure of southwestern Bangladesh is weak relative to the national average. In its 2016-2020 five-year plan, the Bangladeshi government made the development of infrastructure and industrial structures of this region based on the Southwest Bangladesh Economic Corridor (SWBEC) concept developed by the Asian Development Bank (ADB) a planning priority (ADB 2018).

Map 2: Coal power plants, LNG power plant, ports, Ecologically Critical Area (ECA), Sundarbans, UNESCO Natural World Heritage Site



50km

— International border ■ Ecologically Critical Area (ECA)

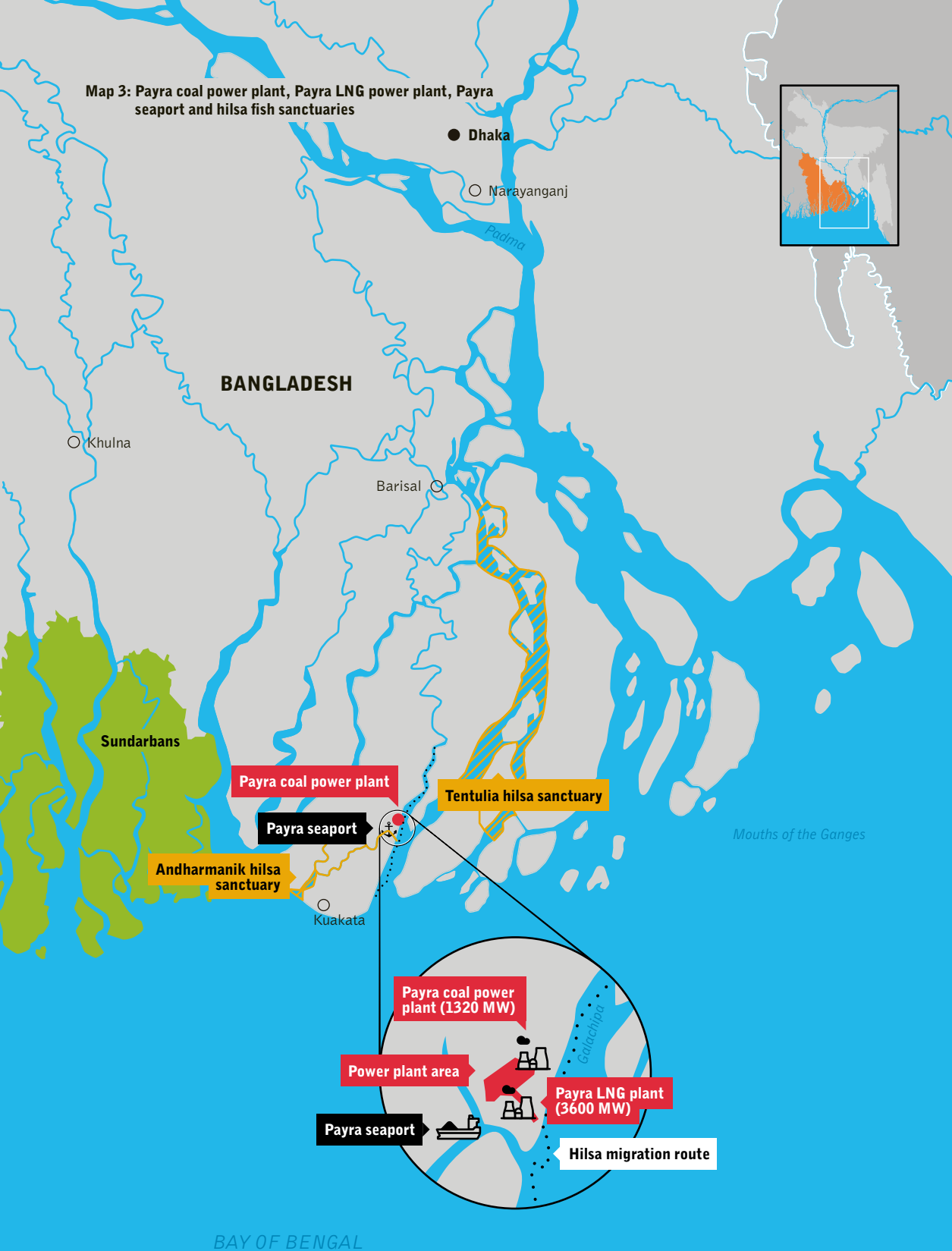
■ Sundarbans ▨ Sundarbans Reserve Forest (SRF)

▩ UNESCO Natural World Heritage Site

Marine Protected Area

Source: Government of Bangladesh (2020)

Map 3: Payra coal power plant, Payra LNG power plant, Payra seaport and hilsa fish sanctuaries



The ADB describes Bangladesh as a «bridge between South Asia and Southeast Asia», in which the southwest of the country has an important function (ADB 2018: 3). In its SWBEC concept, ADB proposes to develop or expand the economic sectors of food processing (including fish and shellfish), textiles, bicycles, car manufacturing, shipbuilding, pharmaceuticals, footwear, leather products, furniture, ceramics, glass, plastic products and the tire industry in the southwest of the country (ADB 2018: 2). Khulna largest regional city in the southwest and the third largest city in the country. It is geographically located midway between Dhaka and Kolkata; Khulna is about 140 km linear distance from each of these two cities and about 40 km from the Sundarbans. Largely financed by China and completed by Chinese companies in late 2020, the 6.15-km Padma Bridge reduces travel time between Dhaka and Khulna from about thirteen to a total of four hours; the construction of the bridge and adjacent infrastructure and river engineering works cost around \$3.6 billion (The Daily Star 2020b).

An increase in power generation in the southwest is an important prerequisite for the planned development and expansion of the abovementioned economic sectors. In the immediate vicinity of the Sundarbans, the following power plants and ports are under construction or already in operation:

- The Rampal coal power plant, officially called the Maitree Super Thermal Power Project («maitree» is the Bengali word for friendship), and the associated Mongla Port, through which all of the coal for this power plant will be delivered, are both located immediately north of the Sundarbans (Jain 2020). The Mongla Power Pac Economic Zone has been set up in Mongla Port.
- The Rampal power plant is located fourteen km from the Sundarbans Reserve Forest (SRF) and only three km outside the Ecologically Critical Area (ECA), which is ten km wide and runs around the SRF; Mongla Port is located only one km from the SRF and therefore within the ECA (see Map 4).
- The Taltoli and Payra coal power plants and the Payra LNG power plant as well as the associated Payra deep-water port for coal and LNG delivery, which are being financed mainly by loans from the Hong Kong and Shanghai Banking Corporation (HSBC), are located east of the Sundarbans. The Taltoli coal power plant is located 25 km, and the three Payra projects 50 km east of the Sundarbans (Financial Express 2018, Likhon 2018). Taltoli (350 MW) is located in the immediate vicinity of the Tengragiri Wildlife Sanctuary, the Laldia Reserve Forest, and a hilsa (also known as ilish) fish sanctuary. The Payra coal power plant was commissioned in late 2020 (The Daily Star 2020a, Byron 2020). German companies are involved in the construction or operation of the coal power plant (1,320 MW) and the LNG power plant.

The hilsa is the «national fish» of Bangladesh, accounting for around 12 percent of total national fish production (Roy/Hossain 2019). Concerns have been expressed that some hilsa spawning grounds will be destroyed by the warming of river water caused by the Taltoli power plant (Roy/Hossain 2019). The Payra coal power plant, LNG power plant and deep-water port are also expected to severely impact the fish's spawning grounds (UNESCO 2019: 11, Energy Bangla 2019, The New Nation 2018).

4 The Rampal coal power plant and Fichtner Group in Bangladesh

In 2016, Bangladeshi Prime Minister Sheikh Hasina said that the «world famous German firm Fichtner Group has been appointed as the consultant to ensure the highest standard in setting up the plant and hence, there is no scope to raise questions over the quality of work». (Energy Bangla 2016). In 2016, the Bangladeshi government referred to Fichtner Group as an «internationally reputed» consultant in a report prepared for UNESCO on the power plant's impact on the Sundarbans: «BIFPCL [the operating company of the power plant] has appointed an internationally reputed engineering consultant (M/S FICHTNER of Germany) as Owner's Engineer (OE) for engineering, project management and quality control.» (Government of Bangladesh 2016b: 14).

In January 2012, the Bangladesh Power Development Board (BPDB) and the Indian state-owned National Thermal Power Corporation (NTPC) signed an agreement to establish the jointly owned and financed Bangladesh India Friendship Power Company (BIFPC), which is responsible for the construction and operation of the Rampal coal power plant and Mongla Port expansion and owns the power plant. In August 2013, the Bangladeshi government issued a construction permit for the power plant and construction began in early 2017. The power plant is expected to be ready for operation in mid-2022 (The Business Standard 2021, Molla 2020, Abdullah 2019).

On May 15, 2014, the BIFPC and Fichtner Group signed a contract specifying Fichtner Group's tasks, the contents of which were partially published by the BIFPC (BIFPC 2016: 28, Green Watch 2014). In 2016, the BIFPC reported that Fichtner Group's work is being remunerated with almost €18 million (BIFPC 2016: 28). According to the BIFPC, Fichtner Group will not only supervise the scheduled technical implementation of all construction measures for the power plant and Mongla Port and for occupational safety on the construction sites, it is also jointly responsible for organizing the transport of coal from mines abroad to Mongla, including the «environmental management» of these shipments (BIFPC 2018b: 11-2/11-5). Finally, under the «grievance redress mechanism», Fichtner Group is in charge of organizing compensation for individuals and communities in Bangladesh who suffer damages arising from the transport (BIFPC 2018b: 11-6, Khan 2015). In May 2017, the US company General Electric was awarded a contract worth \$40 million to ensure steam generation at the Rampal power plant (Kabir 2020). In 2019, the Bangladeshi journal Energy & Power stated that BIFPC, as the owner of the Rampal power plant, has been «contributing significantly for the social development in Rampal upazila of Bagerhat district. Under

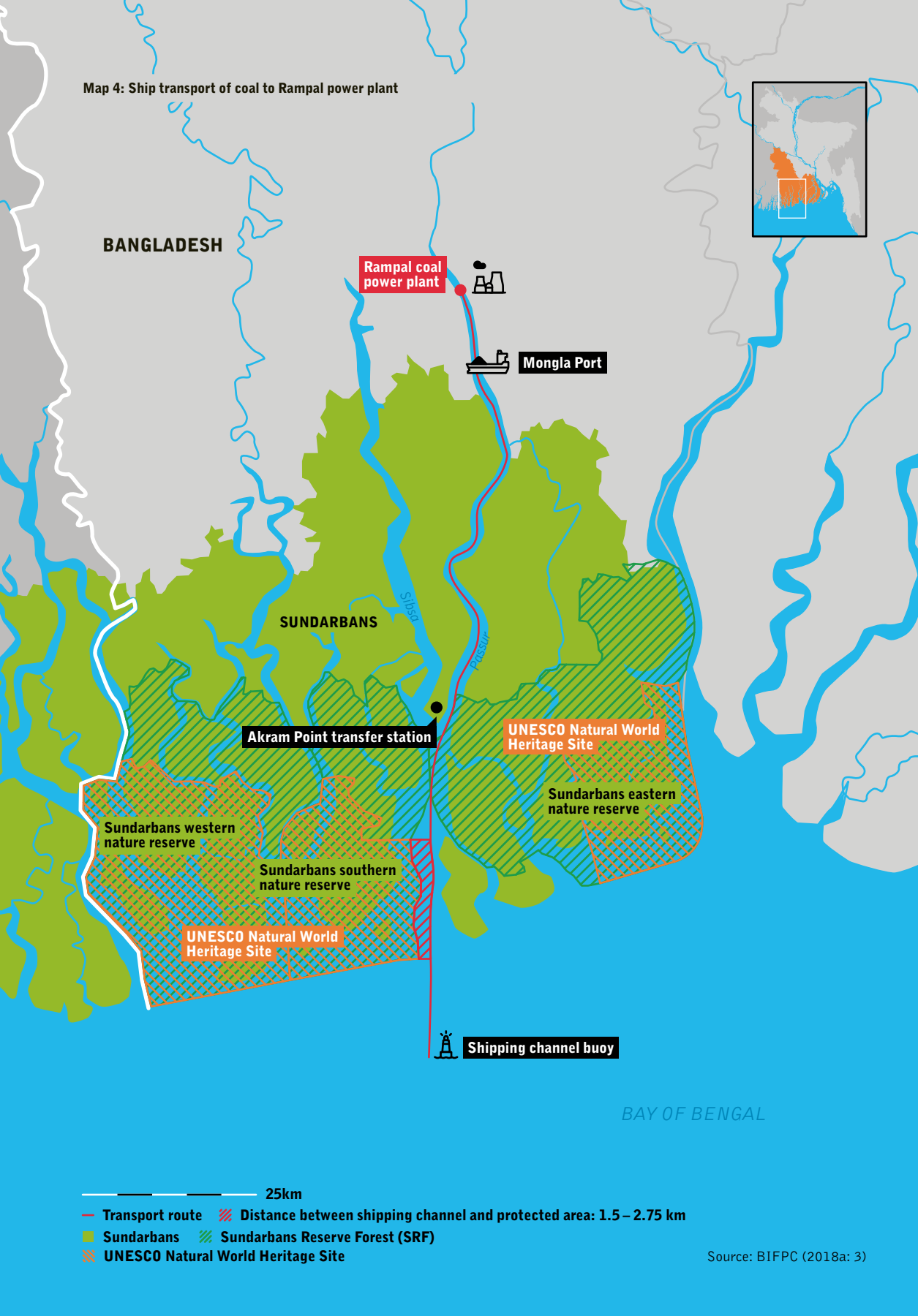
its community development initiatives, the company distributed 76 water filters to 15 Schools and 4 Colleges of Rampal upazila and 35 Wheel Chairs to physically challenged people of nearby villages of the project site» (Energy & Power 2019). «A free medical camp for the villagers was also organized by the company» (Energy Bangla 2018). In March 2019, four workers died in industrial accidents at the Rampal power plant construction site (The Daily Star 2019b and c). In 2016, the Indian Export-Import (EXIM) Bank extended a \$1.6 billion loan to BIFCP for the construction of the power plant, the total original cost of which was approximately \$2 billion (Kabir 2020, Satish 2019). Two German banks – Deutsche Bank and DZ Bank (Deutsche Zentral-Genossenschaftsbank) – as well as the German insurance company Allianz Group, were three of EXIM India's «top 25 bondholders» (IEEFA ed. 2016: 55). The Mongla Port expansion is being financed with a \$730 million line of credit from the Indian government and another loan from the Chinese government (New Age 2018, Dhaka Tribune, 2019a).

The operation of the Rampal power plant depends entirely on imported coal, which is to be delivered exclusively through Mongla Port. Before construction began, coal imports from South Africa, Indonesia or Australia were planned (IEEFA 2016: 47). However, in July 2021, several thousand tons of coal for the power plant were imported from India for the first time (IndraStra Global 2021). Coal is transported from India or other countries by ship, initially using larger transport vessels that sail from the Bay of Bengal into the Passur River. Their cargo is transferred onto smaller vessels at Akram Point, about 50 km from the coast, and then transported about 70 km further upriver to Mongla Port for unloading. The navigation channel between the coast and this transfer station directly borders the southern component of the Sundarbans UNESCO Natural World Heritage Site for a distance of 25 km (see Map 3). Much of the navigation channel between the transfer station and Mongla Port will need to be expanded to accommodate the ships (BIFPC 2018a, b, and c). For the full operation of the Rampal power plant, a planned annual number of about 60 larger shiploads will be transferred at Akram Point to more than 200 smaller shiploads, which will then continue to Mongla Port (Wahiduzzaman/Salamr 2013). The annual coal consumption of the power plant will be about 3.8 million tons. Except for a few kilometers, the entire navigation channel from the coast to Mongla Port lies within the Sundarbans Reserve Forest (SRF) (see Map 1).

Fichtner Group in Bangladesh

In addition to the Rampal power plant, Fichtner Group's activities in Bangladesh include the construction of the Martabari coal power plant, an off-grid PV-diesel hybrid power plant and a state project for river bank protection and flood control supported by the World Bank (Fichtner Group 2021b). Fichtner Group opened an office in Dhaka in September 2018 (Energy and Power 2018, Reinhardt 2019). The opening ceremony was attended by representatives of a bank, universities and the German embassy in Dhaka: Tawfiq Ali (General Representative of Commerzbank), Barrister Omar H. Khan (legal advisor for environmental impact assessment in Bangladesh),

Map 4: Ship transport of coal to Rampal power plant



Shahriar Chowdhury (Director, Center for Energy Research, United International University) and Michael Schultheiss (Deputy Head of Mission, German embassy). Several presentations discussed perspectives on solar and other renewable energy in Bangladesh, as well as small (mini-) grid power plants (Energy and Power 2018). Fichtner Group had already carried out projects in the region before Bangladesh became independent in 1971 (ibid.).

The Matarbari coal power plant (1,200 MW) under construction south of Chattogram has a comparable generating capacity to Rampal (1,320 MW). The state-owned Japan International Cooperation Agency (JICA) is funding the entire Matarbari project with a volume of \$4 billion (The Financial Express 2015). In 2015, the owner of the power plant, CPGCBL Bangladesh, and four consultancies – Fichtner Group, Tokyo Electric Power Services Co. Ltd, Nippon Koei Co. Ltd (Japan), and SMEC International Pty Ltd of Australia – signed a contract for nine years of consulting services. The companies will receive around \$70 million in total for their services (The Financial Express 2015, Hasib 2015). In 2017 and 2018, construction of the power plant was temporarily halted for security reasons in the wake of an Islamist terrorist attack in Dhaka in 2016 in which nearly 30 people, including several Japanese nationals, were killed (Jahangir 2018).

Fichtner Group: corporate philosophy, coal-fired power plants, controversial projects

Fichtner Group is a German family-owned company providing engineering and consulting services in fields including renewable and fossil energy, infrastructure, water and waste management, environmental protection technologies, corporate management and information technology. The Group describes itself on its website as follows:

«With a history of 100 years, Fichtner is a leading, independent engineering and consultancy firm active in the sectors of Energy, Renewable Energies & Environment, Water & Infrastructure as well as Consulting & IT. The Group is a global player and is represented in more than 60 countries with offices and operating sites. Its strength is to handle complex and multidisciplinary projects close to their clients.

- Established in 1922 and family owned ever since
- Germany's leading independent engineering and consultancy enterprise for infrastructure projects
- More than 1.800 employees worldwide – of which over 800 are based in the Stuttgart Head Office
- Project experience in 170 countries
- More than €248 million gross operating revenues in 2021
- Orders received in 2021: More than €376 million – of which more than €38 million is in the sector of renewable energies and environment.»

(Fichtner Group 2021a).

Fichtner Group consists of approximately 60 subsidiaries and individual companies (Borchert 2014, D&B Hoovers 2021). The parent company is called «Fichtner International GmbH & Co. Beteiligungs KG Stuttgart» (Fichtner International GmbH & Co. Beteiligungs KG Stuttgart 2019).

Fichtner Group describes its corporate responsibility (compliance) in the two short documents «Corporate Philosophy» (Fichtner Group 2021e) and «Code of Conduct» (Fichtner Group 2018), both published in 2018. The documents do not explicitly mention corporate social responsibility (CSR), but contain the following statements: «We are committed to sustainability and conservation of resources. We seek solutions that are sustainable and that protect the environment. As far as possible, the solutions proposed should minimize any existential threat to future generations ... In our work, we are committed to compliance with the laws, ordinances, applicable regulations and our internal rules as well as to high standards of ethics and integrity» (Fichtner Group 2021e: 4).

«We respect human rights, laws and regulations as well as the ILO core conventions ... When meeting our social responsibilities on an international level, we are guided by the principles of the UN Global Compact and observe its underlying principles. In providing our services, we give priority to solutions that support the concept of sustainability» (Fichtner Group 2018: 1, 2).

Fichtner Group is a partner of Agora Energiewende (Agora Energiewende 2021a), an energy and environmental policy platform that «develops evidence-based and politically viable strategies to advance the goal of climate neutrality in Germany, Europe, and the rest of the world» (Agora Energiewende 2021b). The company regularly holds semi-public «Fichtnertalks» (Fichtner GmbH 2021) on topics including the energy transition and renewable energy. Participants have included ministers of German states, such as the Minister for the Environment, Climate and Energy of the state government of Baden-Württemberg in 2017 (Fichtnertalks 2017). Hosts have included Georg Fichtner, former Chairman of the Management Board of Fichtner Group (Fichtnertalks 2016, 2017, 2018).

The numerous coal power plants in which Fichtner Group is involved in Europe as well as in Africa, South and Southeast Asia – some of which are described on the Group's project website at www.fichtner.de/en/projects – indicate what an important business area this is for this Group. The Wayback Machine platform documents a number of older Fichtner Group project websites from between 2014 and 2016 about coal power plant project investments (Internet Archive/Wayback Machine 2016a). Fichtner Group's stakes in one coal power plant each in Germany, Botswana, Vietnam and Indonesia and two in Malaysia are described there (ibid.).

Not all of the Group's projects are featured on the Fichtner Group website, and some projects are removed again after a period of time. While the Group's projects in Rampal and Matarbari are not mentioned on the website, two other Fichtner projects in Bangladesh – a river bank protection and flood control program and an off-grid PV-diesel hybrid power plant system – are listed (Fichtner Group 2021b) (as of November 2021). The Fichtner Group website describes two coal power plants in Germany and one each in India, Croatia and Malaysia in which the Group is or was

involved, either in its construction or technical operation (Fichtner Group 2021c) (as of November 2021). The project website of the Group's Indian subsidiary describes more than ten coal power plants in India in which Fichtner Group is involved (Fichtner Group 2021d, Allchin 2016) (as of May 2021).

The Group's restrictive public relations is a major problem for a comprehensive investigation of its interests in power plants in Bangladesh and other countries. Inquiries by German journalists to Fichtner Group regarding its involvement in Rampal have been regularly rejected in the past (Perras 2018, Lessat 2017, Finke 2017, Rahman 2017).

One exception is a July 2020 article in *Süddeutsche Zeitung* (Mayr/Perras 2020), a daily newspaper, in which a spokesperson for Fichtner Group addresses criticism of the Rampal power plant and the company's stake in it in a very brief public statement (see below). However, other sources are available that permit limited descriptions of Fichtner Group projects for which the Group itself does not provide public information.

Experience with controversial projects: corruption case in DR Congo and Malaysia hydropower project

Even before its involvement in the Rampal coal power plant, Fichtner Group was involved in other controversial projects in DR Congo, Malaysia and elsewhere. The Group has thus experienced the impacts that protracted public debates, local protests and transnationally active NGOs working to prevent projects can have, and has learned how to deal with them. These experiences likely factored into the Group's decision to pursue a particular strategy with regard to criticism of the Rampal coal power plant. The relatively successful approach – from the Group's point of view – was to not react to public criticism of the project and not comment on it publicly. In deviation from this strategy, Fichtner Group made its first very brief public statement on Rampal in 2020 in an article in the *Süddeutsche Zeitung* (Mayr/Perras 2020) as mentioned above.

Fichtner Group's project office in DR Congo was implicated in a corruption case in 2016-2017 related to its involvement in the Regional and Domestic Power Markets Development Project (PMEDE), which was funded by the World Bank Group and is part of the Southern African Power Market Project (SAPMP). This incident led to a 15-month exclusion from all World Bank Group, Asian Development Bank, European Bank for Reconstruction and Development, Inter-American Development Bank, and African Development Bank tenders between 2017 and September 2018 (Cassin 2017, World Bank 2017). A key component of the PMEDE/SAPMP is the construction of several hydropower plants at the Inga Falls, which are among the largest waterfalls in the world and are located southwest of Kinshasa, the capital of the DRC (World Bank 2018). Two dams (Inga I and II) are already in operation. The third, Inga III, is currently in its planning stage. It would be one of the largest dams in the world, requiring the resettlement of around 35,000 people (Misser 2018, Rivers Without Borders 2018, Vidal 2016). In 2016, the World Bank temporarily suspended its involvement in

the Inga III project due to corruption in the DRC government (World Bank 2018b). In September 2018, some 40 Congolese civil society organizations called for a planning moratorium until «guarantees of good project governance and protection of the rights of local communities» are secured (Rivers Without Borders 2018).

Ten years ago, Fichtner Group was also involved in a controversial project in Malaysia, the «Sarawak Corridor of Renewable Energy» (SCORE) project on Borneo. SCORE involved the construction of several hydropower plants, including the Baram hydropower plant (Soong 2019, Yong/SACCESS et al. 2014, Hebertson 2013). At that time, Fichtner Group was contracted to prepare a feasibility study for Baram and described its assignment as follows: Under the «Sarawak Corridor of Renewable Energy Program» (SCORE, the author) implementation of five hydropower projects is planned by 2020 in the East Malaysian state of Sarawak on Borneo. With an installed capacity of 1200 MW, the Baram Project is the second biggest hydropower scheme in Sarawak. A 150 m high roller compacted concrete dam is planned to impound the River Baram over a length of 80 km. During the first phase of this study, Fichtner identified and assessed project options and, during a second phase, a detailed investigation was undertaken of the favored options, with assessment of all technical, environmental and economic aspects (Internet Archive/Wayback Machine 2016b). Local protests and lobbying by Malaysian and transnational human rights and environmental organizations against SCORE sparked a heated public debate in Malaysia about the negative socioeconomic and environmental impacts of the project. The Bruno Manser Fund, a Swiss NGO that supports Malaysian environmental organizations, published a study on the project in 2012 (BMF 2012a). This Swiss organization, together with four other NGOs from Switzerland and Germany, published a press release entitled «German engineers plan to flood the rainforest of Borneo; Sarawak's natives demand the pull out of German Fichtner GmbH & Co. KG from controversial dam project in Malaysia» in 2012, calling on Fichtner Group to withdraw from the hydropower project (BMF 2012b). The press release states that the 1,200 megawatt dam in Baram would flood a rainforest area of at least 400 km² and displace 20,000 indigenous inhabitants. The local government of the Sarawak region halted construction of the hydropower plant in 2015, stating that the project must be re-evaluated «by international dam and environmental experts» before it can proceed (Aferia 2016).

5 Protection of the Sundarbans, fossil-fuel power plants, UN organizations and criticism from US policymakers

The Sundarbans are an important natural protective barrier against cyclones. Once Rampal is completed, more than 200 transport vessels a year will traverse the full north-south extent of the Sundarbans to supply Rampal with nearly four million tons of imported coal annually. These transports pose an additional and continuous threat to the Sundarbans throughout the power plant's entire operational life. Critics of the project also warn that the warming of the river water by its use as coolant for the power plant would threaten the fish population and biodiversity of the Sundarbans. They are calling for the Sundarbans Natural World Heritage Site to be listed by UNESCO as World Heritage in Danger and demanding a halt to the construction of Rampal and other industrial projects in close proximity to the Sundarbans. In October 2014, a Bangladeshi law established the country's first marine protected area, which covers 1,738 km² of the Bay of Bengal off the coast of the Sundarbans, and is intended to protect whales, dolphins, sea turtles, sharks and other marine life (IUCN 2014). Potential accidents involving coal ships crossing the protected area would have a negative impact.

In recent years, the UNESCO World Heritage Committee, in which 21 states are represented (UNESCO/WHC 2021a), repeatedly called on the Bangladeshi government to submit a «strategic environmental assessment» (SEA) to document that the planned Rampal, Taltoli and Payra power plants (the latter of which is also referred to as Kolapara or Kalapara in UNESCO documents), the ports at Mongla and Payra, and other existing and planned industrial projects near the Sundarbans will not violate the socio-ecological integrity of the Sundarbans UNESCO Natural World Heritage Site (Dhaka Tribune 2019a, Knox 2018, New Age 2018, The Daily Star 2018, IEEFA ed. 2016). The SEA has not been provided to date. An SEA would contain a detailed and extensive record of existing environmental changes in the greater Sundarbans region and analyze the expected impacts of planned power plants, ports and other industrial projects, as well as of increasing shipping traffic on the ecosystems of this region.

A 2019 study by the UNESCO advisory organization International Union for Conservation of Nature (IUCN) and the UNESCO World Heritage Center (WHC) found that the quality of the ecosystem of the Natural World Heritage Site has been deteriorating steadily, and that the aforementioned power plants, ports and other industrial

projects pose additional threats to the site (UNESCO 2019: 11). In a statement by the IUCN and the WHC published by the UNESCO Secretariat in June 2019 – shortly before the start of the 43rd session of the UNESCO World Heritage Committee, which was held in July 2019 – both organizations advocated including the Sundarbans on the UNESCO list of World Heritage in Danger. The UNESCO Secretariat regularly drafts resolutions for the Committee. Its draft resolution for the 43rd session called for a halt to construction at both the Rampal power plant north of the Sundarbans and the Chinese-funded Taltoli and Payra power plants east of the Sundarbans, and for the Sundarbans to be added to the list. The draft states: «... the continued construction of the Rampal power plant, the construction of two additional power plants on the Payra River and the numerous other industrial projects in different stages of activity, together with their respective associated activities such as dredging and shipping, all taking place in the absence of the SEA (strategic environmental assessment) represent both an ascertained and potential danger to the hydrological and ecological dynamics which underpin the OUV (Outstanding Universal Value) of the property [the Sundarbans UNESCO Natural World Heritage Site]». The draft resolution goes on to say: The UNESCO World Heritage Committee «*decides to inscribe The Sundarbans (Bangladesh) on the List of World Heritage in Danger*» (UNESCO 2019: 11) (emphasis by author).

Immediately after its release, environmental organizations in Bangladesh and elsewhere and other critics of the power plant, port and industrial projects hailed the draft resolution as a success of their own years of lobbying, campaigning and scientific analysis, particularly due its call for the Sundarbans to be added to UNESCO's list of World Heritage in Danger. The Bangladeshi government, which is not represented on the Committee, vehemently opposed the draft resolution. Committee members China, Bosnia and Herzegovina and Cuba prevailed at the 43rd session of the UNESCO World Heritage Committee with their proposal to have a resolution adopted that differed greatly from this draft, successfully representing the interests of the companies of China, Bangladesh, India and Germany involved in the projects and those of the Bangladeshi government (UNESCO/WHC 2019a, The Daily Star 2019b, Kamol 2019, Reinhardt 2019).

The resolution adopted in 2019 postponed the decision on the inclusion of the Sundarbans World Heritage Site on the list of World Heritage in Danger until the next session of the UNESCO World Heritage Committee. Furthermore, the Rampal, Taltoli and Payra power plants are no longer mentioned by name (UNESCO/WHC 2019 a and b, Kamol 2019, The Daily Star 2019a). In its resolution, the Committee expresses only its «grave concern» about «major industrial projects» under construction or planned near the Sundarbans. However, it does refer to a 2017 Committee decision that calls for the preparation of a strategic environmental assessment (SEA) as a prerequisite for the realization of these projects (UNESCO/WHC 2019 a and b, UNESCO/WHC 2017).

As of January 2020, the government had not yet submitted the SEA to the Committee, only its Sundarbans-related «State of Conservation Report by the State Party» (Government of Bangladesh 2020); in 2019, it submitted a report on biodiversity in the Sundarbans aquatic ecosystem to UNDP (Government of Bangladesh 2019). Already

in 2016, the government had answered some of the Committee's questions about Rampal in a brief report (Government of Bangladesh 2016b).

At its 44th session in July 2021, the UNESCO World Heritage Committee again adopted a resolution on the Sundarbans in Bangladesh, but the resolution does not mention the issue of placing the Sundarbans on UNESCO's list of World Heritage in Danger. The resolution only states in general terms «that possible impacts from large-scale industrial developments may result in a high risk for the property's OUV [Outstanding Universal Value] if no further measures are taken based on a comprehensive assessment of existing and possible future negative factors and pressures» (UNESCO/WHC 2021b: 187). In its draft resolution on the Sundarbans for the 44th session, the UNESCO Secretariat had unsuccessfully requested that the Committee decide to address the question of whether to place the Sundarbans on the list of World Heritage in Danger at its next session in 2022 (UNESCO/WHC 2021d: 90-91).

A few months later, in September 2021, the Bangladeshi government finally published – as long requested by the UNESCO World Heritage Committee – a 380-page «Strategic Environmental Assessment (SEA) of the South West Region of Bangladesh for Conserving the Outstanding Universal Value of the Sundarbans Project» - i.e. for the Sundarbans UNESCO World Heritage Site (Government of Bangladesh 2021). However, the SEA refers only to a region that does not include the area of the Tal-toli and Payra coal plants, which are respectively located 25 km and 50 km east of the Sundarbans. It therefore does not systematically consider the impacts of these power plants on the Sundarbans (Government of Bangladesh 2021: XXII). The survey methods and conclusions of the SEA have been heavily criticized by environmental experts (see the section on criticism of the Rampal coal power plant and conflicts within Bangladesh below).

Special Rapporteur of the UN Human Rights Council and Human Rights Watch

John H. Knox, who served as the «Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment» to the UN Human Rights Council from 2015 to 2018, released a statement on the Sundarbans shortly before his term ended in July 2018 (Knox 2018). In it, he criticized the Bangladeshi government's push for «industrialization» of the Sundarbans and the planned construction of coal power plants: «The accelerating industrialization of the Sundarbans threatens not only this unique ecosystem – which hosts Bengal tigers, Ganges river dolphins and other endangered species – but also poses serious risks to the human rights of the 6.5 million people whose lives, health, housing, food and cultural activities depend directly on a safe, healthy and sustainable Sundarbans forest» (Knox 2018).

Despite objections from UNESCO's World Heritage Committee and the International Union for the Conservation of Nature, Bangladesh has approved more than 320 industrial projects in the area, including the massive Rampal coal-fired power plant, bypassing requirements for public participation and environmental impact

assessment (Knox 2018, reported speech). In 2020, Human Rights Watch warned that the Rampal coal power plant was contributing to the destruction of the Sundarbans, which is an important protective barrier against cyclones (Human Rights Watch 2020). The organization noted that the Bangladeshi government nevertheless refuses to stop construction or designate another construction site, and that police have used tear gas and rubber bullets against participants in protests against Rampal, a policy that violates various human rights (ibid.).

Rampal: Prime Minister Sheikh Hasina and US politicians Al Gore and John Kerry

Bangladeshi Prime Minister Sheikh Hasina and former US Vice President Al Gore had a heated exchange over the Rampal power plant during a panel discussion at the World Economic Summit in Davos on January 28, 2017. Al Gore stated that Rampal was unsustainable, uneconomical and harmful to the environment. In her rebuttal, the prime minister argued that this criticism was unfounded because the power plant was well-planned in economic, environmental and social terms and would have an important function in Bangladesh's energy supply. The discussion is documented on YouTube (Hance 2017).

In April 2021, former US Secretary of State John Kerry visited Bangladesh as US President Joe Biden's special climate envoy. In his talks with Bangladeshi Foreign Minister Abdul Momen, Kerry is said to have asked – as reported by Bangladeshi media – why the Bangladeshi government officially claims that it is protecting the Sundarbans while still supporting Rampal, and whether it would be possible to stop the construction of the power plant (Ejaz 2021). Journalist Raheed Ejaz writes: «Several sources present at the meeting [of Bangladesh's foreign minister and Kerry] said that John Kerry raised the Rampal issue again towards the end of the talks. He addressed Abdul Momen, asking, 'Can I ask an outrageous question? Can you stop Rampal?'" (ibid.). The Foreign Minister said that it would not be possible (ibid.).

6 The Rampal coal power plant: Criticism and protests in Bangladesh

Criticism of the Rampal coal power plant

Rampal plays a special role in the controversy within Bangladesh about the construction of coal power plants – a debate that has been going on for more than a decade. Much like the German examples of the Brokdorf nuclear power plant in the 1970s and RWE's planned clearing of the Hambach Forest in connection with the Garzweiler open-pit lignite mine in recent years, the dispute in Bangladesh over this power plant is highly charged, both politically and symbolically. The movement combines criticism of coal power plants in general with objections to the specific location of the power plant near the Sundarbans (Chowdhury 2016). Among the critics is Muhammad Yunus.

The 2006 Nobel Peace Prize winner notes that while the people of Bangladesh appeal to the world to stop the environmental degradation that is harming their country so tremendously, the Bangladeshi government is pursuing two environmentally threatening projects, one of them being the 1,320-megawatt coal power plant in Rampal, in southern Bangladesh. Yunus underlines the future plant's close proximity to the Sundarbans, the largest mangrove forest in the world. The second project referred to is a nuclear power plant that will produce 2,000 MW. He points out that, due to its economic growth, Bangladesh not only has a great need for energy, it also has the power to call for global initiatives to supply clean energy. Yunus believes that Bangladesh needs state-of-the-art technical solutions for green energy production and help in financing such projects. Bangladesh would thus not be forced to resort to dirty energy. (Yunus 2018: 110-112).

The statement of the internationally known Bangladeshi environmental rights expert Sultana Kamal on Rampal, summarized below and published in the World Heritage Watch Report 2020, is a good overview of other frequently voiced criticisms of the power plant. She also assesses the UNESCO World Heritage Committee's decisions regarding the power plant and the Bangladeshi government's responses to those decisions (Kamal 2020: 50-53):

— Kamal notes that the Bangladeshi government is ignoring many decisions of the UNESCO World Heritage Committee on the protection of the Sundarbans Natural World Heritage Site. The Committee had first called on the government in

2017 and then repeatedly thereafter to halt construction on the three coal power plants at Rampal, Taltoli and Payra, the two ports responsible for coal deliveries at Mongla and Payra, and the planning or operation of more than 150 other industrial facilities in the immediate vicinity of the Sundarbans. The Committee requested the government to submit a comprehensive strategic environmental assessment (SEA) first.

- However, the government did not submit an SEA in the following years, instead publishing only the «2020 State of Conservation Report to UNESCO (SOCR)» (Government of Bangladesh 2020) in January 2020, which, however, did not meet the requirements for an SEA. The report confirms that there are twenty «red category» industrial facilities – those that produce powerful environmental toxins – in the Ecologically Critical Area (ECA) of the Sundarbans. These twenty facilities belong to the sectors of cement production, LNG filling, bottle manufacturing, petroleum refining, cigarette packaging, artificial hair, car seat heaters, metal fencing and ship docking stations.
- This «2020 State of Conservation Report to UNESCO» also does not mention a key 2018 Bangladesh High Court decision. At the time, the court had found that the Bangladeshi government should not have given any of these twenty companies permission to operate under Bangladesh's applicable environmental legislation.
- The report notes that 7.5 million square meters of the Passur riverbed will be dredged to make it navigable for ships that will supply coal to the Rampal power plant. According to Kamal, this dredging and the subsequent continuous shipping traffic, which would inevitably entail shipping accidents, would endanger or destroy several habitats in the Sundarbans, including those of the river dolphin.
- The report claims that Rampal more than satisfies the World Bank guidelines for coal power plants. However, the World Bank guidelines used for this purpose refer to power plants with a capacity of 600 MW while Rampal has a capacity of 1,320 MW.
- Kamal refers to the cyclone Amphan in the Bay of Bengal in May 2020, which also affected the Sundarbans. It had shown the impact that future flooding caused by cyclones could have on the several hundred hectares of open-air coal ash dumps at the Rampal power plant site. In the future, floods could wash the ash into the rivers of the Sundarbans (Kamal 2020: 52). Climate change is increasing the frequency and destructive power of cyclones, and sea level rise would likely inundate the dumps by 2050.
- Kamal calls for the government to ban the shipping of coal and coal ash on the Passur River, which runs through the Sundarbans, and in the lower section of the river, directly along the Sundarbans UNESCO World Heritage Site.

In her capacity as a commissioner and consultant to the Bangladeshi National Committee for Saving the Sundarbans (NCSS) network, Kamal again addressed the UNESCO World Heritage Committee directly in May 2021 in a statement containing demands similar to those in her contribution to the World Heritage Watch Report 2020 (Kamal 2020). Abdullah Harun Chowdhury, an environmental scientist at Khulna

University, brings up another point of criticism. A flawed environmental impact assessment (EIA) had been carried out, on the basis of which the Bangladeshi government had nevertheless granted the construction permit for the Rampal power plant. He argues that this review uses «secondary data collected before 2010 for most of the parameters; it fails to use proper location and methodology for primary data collection of air, water, soil, biodiversity; it compares sulfur oxide (SOx) and nitrogen oxide (NOx) levels in the Sundarbans with that of urban areas, as if Sundarbans is an urban area, and not an ecologically critical area» (cited in Preetha 2015). Chowdhury notes that the Rampal power plant and other industrial projects near the Sundarbans are causing the soil quality of the Sundarbans to deteriorate; untreated chemical wastes from the power plant and the projects end up in the water and then in the soil (The Daily Star 2021). In some areas of the Sundarbans, Chowdhury said, plant growth is stagnating or even declining as a result. Different areas inside Sundarbans look barren, and the life cycle of different animals and trees in Sundarbans has changed negatively due to pollution in the area. (ibid.). Human rights organizations have produced detailed documentation of acts of intimidation against villagers who did not want to sell their land to the operator of the Rampal power plant, the poor implementation of legally required participation and consultation of the local population in the power plant planning process, and other rights violations (Mahmud/Roth/Warner 2020, South Asians for Human Rights 2015).

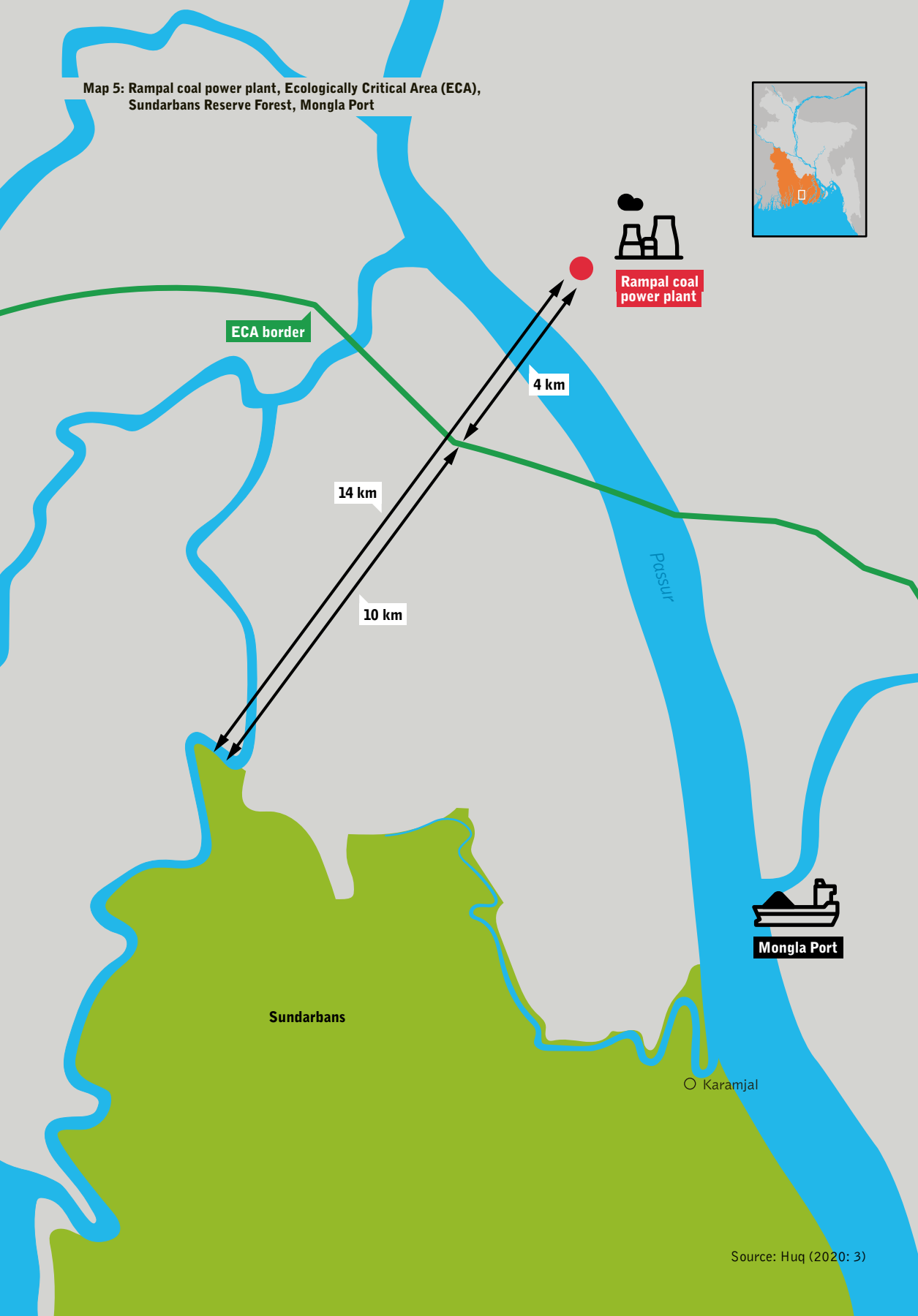
Engineers from Bangladesh's two universities, Bangladesh University of Engineering and Technology (BUET) and Ahsanullah University of Science and Technology, fear that substandard construction materials (including cement, concrete, and steel) are being used for the Rampal power plant (The Daily Star 2018). According to the scientists, they are unsuitable for buildings located near the coast that are vulnerable to severe corrosion caused by the high salinity in the air (ibid.). This would greatly reduce the planned service life of the power plant and thus its profitability (ibid.). Finally, Bangladeshi economists have warned against the construction of coal power plants financed by large foreign loans and the resulting rapidly increasing debt of the Bangladeshi state and involved companies (DATA BD 2020, Kabir 2020, Rahman, M. Azizur 2019, Chowdhury 2018, IEEFA ed.2016). The DataBD website estimates that the originally planned construction cost of the Rampal power plant of \$2 billion has, for example, now increased to about \$5 billion (DATABD 2020, Kabir 2020).

Public statements, demonstrations, protest marches and strikes

In Bangladesh, there are various protest movements not only against Rampal, but also against other coal power plants and coal mine projects linked to the general criticism of coal power plant construction. In some of these demonstrations – and in protests by employees against working conditions in coal power plants – people have been killed by police or other state security forces:

■ In September 2005, as explained above, the Bangladeshi government provisionally approved a British company's planned expansion of the Phulbari coal mine

Map 5: Rampal coal power plant, Ecologically Critical Area (ECA),
Sundarbans Reserve Forest, Mongla Port



and the construction of a coal power plant dependent on it, as well as a resettlement program for farming families whose land would have been affected by the expansion (Bengtsson/Roy 2019). On August 26, 2006, a 50,000-strong demonstration supported in particular by these families was held near the coal mine, during which three protesters were killed and about 200 injured by the Bangladesh Border Police (Nuremowla 2016:1, Cordero/Leitner 2014).

- On April 4, 2016, four protesters were killed and many others injured by police officers during a demonstration in Chattogram against a coal power plant project in Banshkhali, a village in the south of Chattogram district, according to official reports (BBC 2016). This project is financed by a Chinese loan. The demonstration was directed against the impending loss of farmland due to the power plant (ibid.).
- On April 15, 2021, another five protesters died in police shootings during a demonstration near the coal power plant project in Banshkhali; those killed were workers who were demanding a reduction in working hours and an increase in wages from the power plant management (New Age 2021).

The successful 2006 protests against the planned use of the Phulbari coal mine and the construction of a coal power plant dependent on it served as a model for the protest movement against Rampal (Wahiduzzaman/Salamr 2013). Protests against the construction of power plants and other industrial projects near the Sundarbans in Bangladesh – unlike protests against power plants in other regions of Bangladesh – are linked to well-connected, older environmental and human rights movements that aim to protect the Sundarbans. The Rampal protests involve a very diverse range of NGOs, environmental and human rights networks, local initiatives, think tanks, research institutes, journalists, political parties and prominent intellectuals that oppose the construction of the power plant and demand a fast, comprehensive and state-supported development of renewable energy sources. The movement holds regular press conferences and demonstrations, and publishes statements and research on the impact of the Rampal coal power plant. Some actors are also involved in or have initiated actions outside Bangladesh in Australia, Europe or North America. M.A. Huq describes the important function of «civil actionism» of individual intellectuals and academics in the Rampal protests and refers to a part of the protests shaped by them as an «eco-nationalistic social movement» in Bangladesh (Huq 2020). Some critics of Rampal emphasize the involvement of Indian companies and the government of India. They criticize the fact that Rampal is owned 50 percent each by a Bangladeshi and an Indian company, that it is largely financed by a loan from an Indian bank, and that Indian companies and Indian construction workers have an important role in the power plant's construction. Huq argues that the «eco-nationalist» positions of some intellectuals are fostering anti-Indian resentment (ibid.).

The National Committee for Saving the Sundarbans (NCSS), which existed prior to the Rampal project, has a pivotal function in the Rampal protest movement (see Box 2). The NCSS has been campaigning for the protection of the Sundarbans for many years, is involved in the push to stop the construction of the Rampal power plant, and

cooperates closely with other environmental protection organizations, think tanks, and scientists in Bangladesh and elsewhere. The National Committee to Protect Oil, Gas, Mineral Resources, Power and Ports and its spokesperson Prof. Anu Muhammad also play a key role in the Rampal protest movement. Muhammad criticizes certain aspects of the work of NGOs in Bangladesh.

In August 2013, the Bangladeshi government issued a construction permit for the power plant and construction began in April 2017. However, legal and political moves have been made to prevent the power plant's construction since 2011 (Global Energy Monitor Wiki 2021a, The Daily Star 2021) (see Box 2 below).

Box 2

The protest movement in Bangladesh and elsewhere against the Rampal coal power plant (since 2011, selection)

Sources: Global Energy Monitor Wiki 2021a, The Daily Star 2021, Huq 2020:12, Dhaka Tribune 2016, Hussain/Khan/et al. 2013

March 1, 2011: The Bangladesh High Court queries the Bangladeshi government on the legal basis for the planned construction of the Rampal power plant and the scope of the acquisition of farmland near the Sundarbans.

July 9, 2011: Police prevent local protests against Rampal near the power plant; several protesters are arrested. At a joint press conference in Khulna, a city of over a million people less than 50 km from the power plant site, five NGOs call for the punishment of police officers who attacked and injured protesters.

July 18, 2011: Bangladesh National Party (BNP) Secretary General Mirza Fakhru Islam Alamgir calls on the government not to build the proposed Rampal power plant because it would have a negative impact on the ecology of the Sundarbans, and declares his support for the local people protesting against the project.

2013: Groups in Bangladesh and elsewhere launch an online petition opposing the construction of the Rampal power plant on the NGO platform 350.org.

September 24, 2013: A march of several thousand protesters opposing the power plant departs Dhaka and arrives at the Sundarbans at a location 400 km from Dhaka five days later. The march is organized by the National Committee to Protect Oil, Gas, Mineral Resources, Power and Ports, several environmental NGOs, smaller left-leaning parties and others.

September 27, 2013: Fifteen people from academia and the environmental activism community from Australia and Bangladesh oppose the construction of the Rampal power plant in an article stating «Bangladesh cannot survive without the Sundarbans».

March 2016: A multi-day march to save the Sundarbans and oppose the

construction of the Rampal power plant begins in Dhaka and ends at a site near the Sundarbans.

July 28, 2016: Clashes break out between police and protesters at an anti-Rampal demonstration in Dhaka. The police use tear gas grenades and batons.

August 16, 2016: Pragatishil Chhatra Jote, an alliance of Bangladeshi student climate activists, blocks the busy Shahbagh intersection in Dhaka to protest the Rampal power plant. Protesters break through police barriers and several people are injured.

January 7, 2017: Demonstrations take place in the United States, the United Kingdom, the Netherlands, Germany, Australia and Indonesia as part of an international day of protest against the Rampal power plant.

November 10, 2018: Internationally coordinated anti-Rampal protests are held in London, Berlin, Amsterdam, Paris, Toronto, Calgary and Dhaka. The protesters are mobilized using the hashtag #SaveSundarbans.

June 28, 2019: The National Committee for Saving the Sundarbans (NCSS) holds a press conference expressing support for the UNESCO World Heritage Center's intention to place the Sundarbans on its list of World Heritage Sites in Danger and its opposition to the construction of the Rampal power plant and government-sponsored industrial developments near the Sundarbans.

November 29, 2019: A group of Bangladeshi NGOs – the Association for Land Reform and Development (ALRD), ActionAID, Bangladesh Poribesh Andolon (BAPA), Transparency International Bangladesh (TIB) and Water Keeper Bangladesh – hold a public hearing in Dhaka on the negative impacts of the Rampal power plant. Government representatives are invited but decline to attend.

July 26, 2021: In its statement to a UNESCO World Heritage Committee hearing, the National Committee for Saving the Sundarbans (NCSS) points out that Rampal and other coal power plants threaten the intact Sundarbans ecosystem upon which millions of people depend. The NCSS notes that the environmental impact assessment carried out by the government is flawed and needs to be redone (Daily Sun, July 2021). In a written statement, NCSS calls for a renewed, comprehensive and government-independent international scientific commission to study the impacts of existing and proposed coal power plants, ports and industrial developments on the Sundarbans (NCSS, July 2021).

7 The German debate about the Rampal coal power plant and Fichtner Group

In recent years, it has been rare for German media to report in detail about individual controversial, non-European energy sector projects – as was the case, for example, with the planned US oil pipeline linking Alaska and the southern states of the US, or Siemens AG's participation in a coal mine in Australia planned by the Indian Adani Group. The German and transnational environmental and human rights civil society sector has built an online public sphere, networked and functional information campaign mechanisms, and public and non-public lobbying and advocacy work. Online petitions, protest letters, demonstrations, scientific analyses and documentations are regularly used forms of action. The Rampal power plant and the involvement of Fichtner Group were, and remain, the subject of civil society activities in Bangladesh and elsewhere. Legal and political efforts to prevent the erection of Rampal have been undertaken in Bangladesh since 2011, when the first official plans were made. Construction nonetheless began in 2017.

The former German ambassador to Bangladesh, Albrecht Conze, criticized the location of the Rampal power plant near the Sundarbans in an interview in a Bangladeshi journal as early as 2014 – long before the first public statements and protests related to Rampal in Germany (see below) (bdnews24 2014). It was not until 2017 – possibly triggered by the disagreement over the Rampal power plant between the Prime Minister of Bangladesh and Al Gore at the World Economic Summit in Davos in January 2017 – that the first two articles on the negative impacts of Rampal and the involvement of Fichtner Group appeared in established German print media. They were published in DIE ZEIT (Finke 2017) and in the Stuttgart-based KONTEXT:Wochenzeitung (Lessat 2017), which also forms the weekend supplement of the tageszeitung (taz). Other articles about the Rampal power plant and Fichtner Group appeared in the Süddeutsche Zeitung in 2018 (Perras 2018), and in December 2019 in the tageszeitung: «Viel Natur, Bangladesch leidet unter dem Klimawandel, braucht aber dringend Strom und setzt auf Kohle – mithilfe deutscher Firmen, ein Dilemma» (A wealth of nature: Bangladesh is suffering from climate change, but urgently needs electricity and relies on coal – with the help of German companies: a dilemma) (Haque 2019). In January 2020, the monthly magazine Weltsichten published an interview with Prof. Anu Muhammad, spokesperson of the National Committee to Protect Oil, Gas, Mineral Resources, Power and Ports, in which he describes Rampal as «absolute madness» and criticizes the role of Fichtner Group (Weltsichten 2020).

Despite these publications, there has not been a single public statement in Baden-Württemberg before 2019 on the involvement of the Stuttgart-based Fichtner Group in the Rampal power plant by the Baden-Württemberg state governments, the executive committees of the parties represented in the Stuttgart state parliament, the city of Stuttgart, or local civil society organizations, to the author's knowledge. And this despite the fact that Baden-Württemberg has a wide-ranging network of environmental, development and human rights civil society organizations that could have put the issue more firmly on the political agenda and in the public eye. In 2017, Baden-Württemberg's Minister of Economic Affairs, Nicole Hoffmeister-Kraut of the conservative Christian Democratic Party (CDU), awarded the state's business medal to Georg Fichtner, then Chairman of the Management Board of Fichtner Group. In her laudatory speech, the minister said, «With his skill in the international realm and his calm and level-headed manner, he has made a strong contribution to the economy in the region and far beyond» (Landesregierung Baden-Württemberg 2017, Jansen 2017; translation by the author).

It is only since 2019 that the Rampal power plant and Fichtner Group's involvement has become a more frequent topic of discussion in Germany at the state, parliamentary and non-governmental levels. In early 2019, a delegation of members of the Bundestag visited the power plant construction site and spoke with representatives of Fichtner Group (see below). In the fall of 2020, a query from the Alliance 90/The Greens parliamentary group on the role of the German government in coal projects of German companies in Bangladesh was submitted to the Bundestag and answered by the government in December 2020. Even after this response from the federal government, no member of the Baden-Württemberg state government, nor any member of the executive committees of the parties in the state parliament has yet – to the author's knowledge as of December 2021 – publicly commented on the involvement of the Stuttgart-based Fichtner Group in the Rampal coal power plant. Only one Green member of the state parliament published a statement on this involvement, rejecting the construction of the Rampal power plant, in November 2020 (Schwarzer 2020).

German NGOs had pointed out the negative impacts of Rampal as early as 2015. However, it was not until 2017 that there was more frequent reporting in the German media about the power plant and the involvement of Fichtner Group; criticism was leveled at Rampal and the involvement of Fichtner Group at protests and events (see Box 3).

Box 3

Actions, information events, media reports (from 2017 to 2021, selection)

January 7, 2017: The National Committee to Protect Oil, Gas, Mineral Resources, Power and Ports (NCBD) had declared January 7, 2017 to be a «Global Protest Day», with demonstrations in various countries against the construction of Rampal and the destruction of the Sundarbans. According to media reports, protests

are held in Australia, Bangladesh, Finland, Germany, India, Italy, Norway, the United Kingdom and elsewhere (Greenwatch 2017, Phulbari Solidarity Blog 2017).

August 2, 2017: Stuttgart's KONTEXT:Wochenzeitung publishes the article «Welterbe zerstören mit Stuttgarter Hilfe» (Destroying world heritage with Stuttgart's help), describing Fichtner Group's involvement in the Rampal power plant (Lessat 2017).

August 17–20, 2017: A one-day lecture event «Kohlestrom und Mangrovenwald: Bangladeschs UNESCO-Weltnaturerbe Sundarbans in Gefahr?» (Coal power and mangrove forest: Bangladesh's Sundarbans UNESCO Natural World Heritage Site in danger? – Entwicklungsforum Bangladesch e.V. 2017) takes place in Hamburg. Two days later, the conference «Solidarität, Aktionen und Vernetzung zum Schutz der Sundarbans und alternative Energieerzeugung in Bangladesch?» (Solidarity, actions and networking for the protection of the Sundarbans and alternative energy production in Bangladesh?) is held in Berlin at Haus der Demokratie und Menschenrechte. A «Berlin Declaration», which according to media reports was signed by over a hundred transnational organizations, is adopted at the conference (Hashem 2017).

July 12, 2019: Klima- und Umweltbündnis Stuttgart (Stuttgart Climate and Environmental Alliance, KUS) publishes a press release rejecting the construction of the power plant and the participation of Fichtner Group (Klima- und Umweltbündnis Stuttgart 2019).

July 22, 2019: In its focus on «business and ethics», Stuttgarter Zeitung publishes the article «Ein Kohlenmeiler im Reich des Tigers. Hiesige Unternehmen geraten in die Kritik, wenn sie im Ausland strittige Projekte durchziehen – Die Fichtner GmbH ist ein Beispiel» (A coal power plant in the realm of the tiger. Local companies come under fire for carrying out controversial projects abroad – Fichtner GmbH is one example – Link 2019a and c).

June 19, 2020: A protest in front of the Fichtner Group headquarters in Stuttgart, where the Chairman of the Management Board of Fichtner GmbH, Dr. Andreas Weidler, symbolically publicly accepts a petition with 25,000 signatures in the form of a large poster entitled «Kohlekraftwerk zerstört UNESCO-Weltnaturerbe in Bangladesch – Stoppt deutsche Beteiligung!» (Coal power plant destroys UNESCO Natural World Heritage Site in Bangladesh – stop German involvement! – Weichert 2020) prompts further reports on Rampal and the involvement of Fichtner Group. More than 40,000 people sign the petition as of January 2022 (Petition 2021).

July 3, 2020: An article in the Süddeutsche Zeitung (Mayr/Perras 2020) states (translation by the author): «In response to an inquiry by the SZ, the company [Fichtner Group] is for the first time publicly commenting on what is probably its most controversial contract. «We take the protests and the world situation on climate change very seriously,» a spokesperson says. He states, however, that fossil fuels are not the only factor to consider in the Rampal project and that it is

about «all three dimensions of sustainability – social, environmental, economic – equally.» According to him, coal power is currently «a key component» for improving infrastructure and living standards in Bangladesh. «Fichtner's withdrawal from the project would in no way solve this issue, which is more complex than critics make it out to be.» Furthermore, the spokesperson notes, the site is «sufficiently far» from the World Heritage Site.» What is remarkable about this brief statement by Fichtner Group is, firstly, that it is the company's first public acknowledgement of its involvement in Rampal and, secondly, that it attempts to use a rhetorical sleight of hand to describe the construction of the power plant as compatible with the concept of sustainability.

September 14, 2020: Baden-Württemberg is home to a wide-ranging network of organizations that arose in opposition to Deutsche Bahn's «Stuttgart 21» railway station megaproject. At one of the regular «Monday demonstrations» of the network in Stuttgart, activist Tonny Nowshin gives a speech entitled «Connecting struggles – from Sundarbans to Stuttgart/Klimazerstörung made in Stuttgart: Kohlekraftwerksprojekt in Rampal/Bangladesch», in which she also criticizes the participation of Fichtner Group in Rampal (Nowshin 2020b, Netzwerk gegen Stuttgart21 2020).

November 18, 2020: The German public broadcaster ARD shows the TV movie *Ökozid* (Ecocide), which depicts a fictional session of the UN International Court of Justice in 2034. In this simulation, Germany is accused by 31 countries of being a contributor to climate change and the destruction of livelihoods. The countries, including Bangladesh, are therefore demanding €60 billion in compensation (Grefe 2020). The prosecutor also refers to the Rampal power plant and to a (fictitious) representative of Fichtner Group present in court (klimakonferenz.org 2020).

May 10, 2021: An open letter to Fichtner Group signed by representatives of the NGOs Market Forces, Robin Wood and Citizens' Alliance for Saving the Sundarbans calls on the company to cease its activities not only in Rampal, but also in Matabari, the second coal power plant in Bangladesh in which Fichtner Group is involved (Robin Wood/Market Forces 2021).

September 20, 2021: The NGO Robin Wood stages an action in front of the Stadtpalais Stuttgart, the venue of the «Fichtner Talks» (Robin Wood 2021). The subject of the talks is «Hydrogen – Key to Decarbonization» (Fichtner Talks 2021).

The position of the state government and state parliament of Baden-Württemberg

In the above-mentioned Stuttgarter Zeitung interview with Baden-Württemberg's Minister of Economic Affairs, Nicole Hoffmeister-Kraut (CDU), when asked about her assessment of the controversial involvement of the Baden-Württemberg-based Fichtner Group in the Rampal coal power plant, and by Heidelberg Cement Group in a

limestone mining project and cement plant in the Kendeng karst mountains in Central Java in Indonesia, stated that she did not want to evaluate the cases mentioned, as she did not know «the background». In the interview, she advocated greater attention to «corporate due diligence along global supply and value chains» and noted that «our SME-driven economy in particular thinks in long lines and pays attention to social and sustainability aspects» (Link 2019c; translation by the author).

In a statement published on her website in November 2020, Andrea Schwarz, member of the state parliament and development policy spokesperson for the Alliance 90/The Greens parliamentary group in Baden-Württemberg, described the construction of the Rampal power plant, which is being carried out «with German expertise» by Fichtner Group, as «reprehensible, because the construction of the power plant impairs and severely endangers the Sundarbans UNESCO Natural World Heritage Site, the largest mangrove forests on earth» (Schwarzer 2020). «How the construction of coal power plants can be reconciled with the company's mission statement [regarding Fichtner Group's sustainability] is a mystery to me» (ibid.).

The position of the German federal government and parliament

The former German ambassador to Bangladesh from 2012 to 2014, Albrecht Conze, criticized the location of the Rampal power plant near the Sundarbans in an interview in a Bangladeshi journal (bdnews24 2014): It is «not too late to look for other sites»; he is «not convinced» that the positive effects of getting electricity from the plant would «outweigh the project's environmental risks»; it is «a little adventurous or even hazardous to plan something just a few kilometers from the borders (of the Sundarbans)» (ibid.). He said he had spoken to Fichtner Group in the hope that the company would commit to another site (ibid.). In July 2018, Conze's successor, Ambassador Thomas Prinz, founded the German Business Council Bangladesh at the German embassy in Dhaka together with representatives of companies working in the country: Siemens Bangladesh, DHL, BASF, Commerzbank, Fichtner Group and Bayer CropScience (Deutsche Botschaft Bangladesch 2018). To the author's knowledge, Prinz has not yet publicly commented on the Rampal power plant, unlike his predecessor. Two members of the German parliament from Alliance 90/The Greens, Claudia Roth and Frithjof Schmidt, visited the Rampal construction site in February 2019 and spoke with Fichtner Group representatives. In their reports on the conversation, Roth and Schmidt express their great skepticism and rejection of the power plant:

«Our delegation concluded that the arguments, while reasonable, did not seem satisfactory. By the same logic, one could justify building similar facilities in any protected area.»

(Roth 2019: 5-6)

«Upon confronting the companies with the public's strong concerns, we were given plausible yet unconvincing arguments that ultimately cannot justify such an invasive project in an already-fragile nature reserve»

(Schmidt 2020)

In the fall of 2020, a query by Alliance 90/The Greens MPs Omid Nouripour, Frithjof Schmidt and Uwe Kekeritz on the role of the German government in coal projects of German companies in Bangladesh was submitted in the Bundestag and answered by the government in late December 2020 (Bundesregierung 2020 – see Box 3). Asked about its environmental or energy policy assessment of the Rampal power plant, the federal government stated that it does not make such assessments. In other responses, it emphasized that it is promoting the development of renewable energy in Bangladesh and that a German Federal Ministry for Economic Cooperation and Development (BMZ) project implemented by the German Association for International Cooperation (GIZ) is supporting the Bangladesh Forest Department in its conservation programs for the Sundarbans.

In its responses, the German government of the day appeared to be pursuing two goals in a kind of dual strategy. Firstly, it avoided any direct or indirect reference to its environmental and energy policy assessment of the Rampal power plant and Fichtner Group's involvement. Secondly, it refers in detail to a BMZ environmental protection project for the Sundarbans that includes monitoring measures. According to the German government, the findings of this monitoring will «support the discussion on its protection status as a UNESCO Natural World Heritage Site» (Bundesregierung 2020; translation by the author). This project is thus likely to document the environmentally damaging effects of the Rampal power plant and other construction projects and – if the findings are published – could then indeed potentially support the argument in favor of including the Sundarbans on UNESCO's list of World Heritage in Danger (BMZ/GIZ 2020, BMZ/GIZ undated). However, there is a major weakness in the German government's argumentation. When asked whether it is committed to placing the Sundarbans on the UNESCO list of World Heritage Sites in Danger, the government evasively explains that Germany is not currently a member of the UNESCO World Heritage Committee, which alone has to decide on this issue (see Box 4 below) (Bundesregierung 2020). This response ignores the fact that in recent decades, German government members have repeatedly commented on individual endangered World Heritage Sites, even in years in which Germany was not a member of the Committee. The government could therefore speak out publicly on the debate over the endangered World Heritage status of the Sundarbans, regardless of its Committee membership.

Box 4

Excerpts from the federal government's response to a query by the members of the Bundestag of the Alliance 90/The Greens parliamentary group, Omid Nouripour, Frithjof Schmidt and Uwe Kekeritz

Source: Document 19/24887, Role of the German government in coal projects of German companies in Bangladesh, Dec. 23, 2020 (Bundesregierung 2020; translation by the author)

«Question 5: Does the German government know whether environmental impact assessments were carried out by the companies involved in the construction of the Rampal coal power plant? If so, what was the result?

Answer: ... the federal government (is) aware that ... the Center for Environmental and Geographic Information Services (CEGIS) has conducted an environmental impact assessment. The federal government has not evaluated this environmental assessment.»

«Question 14: To what extent does the construction of the coal power plant in Rampal run counter to the objectives of the BMZ-supported GIZ project 'Support to the Management of the Sundarbans Mangrove Forests in Bangladesh (SMP-II)', which includes establishing an ecological monitoring system to support the conservation of the Sundarbans UNESCO World Natural Heritage Site? Against this background, have the involved companies been contacted? If so, what was the result?

Answer: The project 'Support to the Management of the Sundarbans Mangrove Forests in Bangladesh (SMP II)', which is being implemented in cooperation with the Bangladesh Forest Department, aims to improve the sustainable management of the Sundarbans mangrove forests. The new concept developed by the project to establish long-term ecological monitoring also covers developments taking place in the vicinity of the Sundarbans. This will assist the responsible forest department in identifying and responding to environmental impacts to the Sundarbans in a timely manner. Within the project, contacts were established with the institutions that prepared the environmental impact assessment (The Center for Environmental and Geographic Information Services, CEGIS) or are preparing the strategic environmental assessment, which has not yet been completed (CEGIS and Integra Consulting). Based on these discussions, additional parameters (e.g. on water quality and changes in index species) were added to the long-term ecological monitoring, and further activities were agreed to improve the technical capacity of the Bangladesh Forest Department responsible for monitoring the Sundarbans.»

«Question 15: Does the German government advocate, as recommended and requested by the International Union for Conservation of Nature and Natural

Resources (IUCN) ... putting the Sundarbans on the UNESCO list of World Heritage in Danger? If not, why not?

Answer: Germany is not currently a member of UNESCO's World Heritage Committee, which alone decides whether to inscribe a World Heritage Site on the list of World Heritage in Danger.»

«Question 16: To what extent does the German government take into account the lessons learned from the BMZ project 'Support to the Management of the Sundarbans Mangrove Forests in Bangladesh (SMP-II)'?

Answer: The initial findings of the long-term ecological monitoring, which are expected from mid-2021, can provide the German government, as well as the International Union for Conservation of Nature (IUCN) and the Bangladeshi government, with well-founded information regarding changes in the environmental status of the Sundarbans and thus support the discussion about its protected status as a UNESCO Natural World Heritage Site. Furthermore, please refer to our response to question 15.»

«Question 17: To what extent does the construction project of the coal power plant in Rampal run counter to the BMZ's development policy focus on promoting renewable energies and climate change adaptation in urban areas?

Answer: The aim of development cooperation in the 'Renewable Energy and Energy Efficiency' field of action is to provide access to sustainable energy for the rural population, to expand the deployment of renewable energy technologies and to increase the climate and environmental compatibility of the Bangladeshi energy sector. The phase-out of fossil fuels such as coal and the transformation to a sustainable energy system based on renewable energies is supported within this framework. Bangladesh is planning a climate-positive change of direction in its energy policy. According to various sources, the construction of 13 to 26 of the total 29 planned coal power plants will not go ahead. Instead, gas-fired power generation, renewables and electricity imports are expected to meet demand. Currently, the share of renewable energies is just under 3 percent. No direct impacts are discernible as a result of the construction of the coal power plant in Rampal on the development policy focus on climate change adaptation in urban areas. However, the coal power plant will cause climate-damaging emissions. The strategic environmental assessment for this is not yet available.»

8 The construction of the Rampal coal power plant – a defeat for transnational civil society?

In recent years, numerous reports and statements have been published by research institutes and environmental protection organizations from Bangladesh, India, Europe, the United States, Canada, Australia and other countries, as well as by transnational environmental organizations, objecting to the specific location of the Rampal coal power plant near the Sundarbans, or against the construction of coal power plants in Bangladesh in general. Some institutes and organizations have presented studies that argue that Bangladesh's energy needs can be met entirely or almost entirely by renewable energy in the medium term. Within the UN system, a number of UN officials, the official UNESCO advisory organization International Union for Conservation of Nature and Natural Resources (IUCN) and the UNESCO World Heritage Center have pointed out repeatedly in their statements and studies that the Rampal power plant, Mongla Port, the planned coal transports through the Sundarbans and other power plants in the vicinity of the Sundarbans and the further industrial settlements related to them will have a significant impact on the ecological integrity of the Sundarbans. The Sundarbans UNESCO Natural World Heritage Site should therefore be placed on the UNESCO list of World Heritage Sites in Danger. Civil society organizations in Bangladesh and elsewhere have used the tools of lobbying, advocacy, public relations and local and transnational campaigning extensively and continuously to stop the construction of the power plant for over ten years, to no avail.

While the Bangladeshi government had announced in 2020 that it would reconsider the construction of more than 20 coal power plants that had not yet been granted final approval (Dhaka Tribune 2020), the Rampal and Payra power plants, among others, were exempt from this review, as were several others that have already received final approval and have been commissioned or are scheduled to be commissioned this year or in the next few years (Roy 2020). The Rampal power plant is scheduled to go into operation in 2022. The strengths and weaknesses of the transnational human rights and environmental protection movements can be illustrated effectively using Rampal as an example. Neither the movement itself – organized inside and outside Bangladesh since 2011 – nor the analyses of research institutes supporting it have stopped the construction of the Rampal power plant and will not be able to prevent its planned commissioning. What are the reasons for this?

An important reason is – firstly – that the coal power plant is of overriding importance not only for the anti-Rampal protest movement, but, in terms of both energy

and domestic policy, also for the Bangladeshi government and for powerful business lobby groups including the energy and construction sectors. The government and lobby groups have therefore consistently and extensively used the political, administrative, legal, financial and media tools at their disposal to influence public debates – as they have done in the past with other controversial construction projects. It would stand to reason that the governments of Bangladesh and India, the owner of the Rampal power plant, the Bangladesh-India Friendship Power Company (BIFPC), and the two state-owned entities in the power sector, the Power Development Board (BPDB) of Bangladesh and the National Thermal Power Corporation (NTPC) of India, have cooperated closely in this matter. Other Rampal supporters, such as local politicians in southwestern Bangladesh, small business owners, large landowners, businessmen and the local government administration in the district of Khulna, where the Rampal power plant and Mongla Port are located, are also likely to have participated in this collaboration. These actors are united in their commitment to Rampal and have an extensive range of tools at their disposal to push the project through.

Secondly, illegal intimidation measures and other forms of repression against critics of the power plant have weakened the protest movement.

Thirdly, China and other countries on the UNESCO World Heritage Committee succeeded in recent years in preventing the Sundarbans UNESCO Natural World Heritage Site from being placed on the UNESCO list of World Heritage Sites in Danger. This Chinese blockade policy not only serves the interests of Chinese companies, but also of businesses in Bangladesh, Germany, India and the United States that are involved in the construction or operation of the Rampal, Taltoli and Payra coal power plants and the two ports near the Sundarbans. Putting the Sundarbans on the UNESCO list would have weakened the arguments of the Rampal supporters.

Fourthly, the participation of Fichtner Group serves to support the Bangladeshi government in pushing the power plant project to completion. Prime Minister Sheikh Hasina likes to highlight the «German engineering skills» supposedly embodied by Fichtner Group and admired by the Bangladeshi public. According to the Prime Minister, Fichtner ensures the construction of an ultra-modern and environmentally friendly coal power plant.

It is very difficult to assess what impact a withdrawal by Fichtner Group from further involvement in the project would have had on the debate within Bangladesh and on the construction of the power plant. At the very least, a withdrawal would have weakened the Bangladeshi government's case and strengthened the protest movement. The following aspects presumably contributed to Fichtner Group's continued involvement despite the public rejection of the specific location of the power plant by the former German Ambassador to Bangladesh, Albrecht Conze, and others as early as 2014 – three years before the start of construction of Rampal – and the highly controversial debate within Bangladesh:

- Terminating the contract with the Rampal power plant operators would have resulted not only in financial losses for Fichtner Group, but would also have damaged its image with current and potential future clients.

- On the other hand, the company's image has not suffered at all in the general public – either in the company's hometown of Stuttgart or in Baden-Württemberg or in Germany as a whole – as a result of its involvement in the Rampal power plant, and only minimally among some civil society organizations.
- From the point of view of Fichtner Group, its PR strategy of not making a detailed public statement on its involvement and thus avoiding public debate was highly successful. The brief remarks by a Fichtner Group spokesperson quoted in a July 2020 *Süddeutsche Zeitung* article (Mayr/Perras 2020) did not amount to such a statement.

The public, symbolic acceptance of the 25,000 signatures under a petition calling on Fichtner Group to end its involvement in Rampal at a protest in front of its headquarters by the Chairman of the Management Board in mid-June 2020, and the first public mention of Rampal by a spokesperson of the company, including a reference to the petition shortly thereafter in the abovementioned article in early July 2020 (Mayr/Perras 2020) is, however, an indication that Fichtner Group is certainly reacting flexibly to growing public pressure at home in Stuttgart. In the summer of 2020, the company saw fit to temporarily and partially abandon its strategy of consistently refusing to publicly justify its participation in a highly controversial project. The question of whether more extensive protests at the Fichtner Group headquarters before the start of construction of the power plant would have prompted the company to withdraw from the Rampal project can only be answered speculatively.

The dilemma of «fouling one's own nest» and attempts at compensation

Why has no broad public debate on Fichtner Group's participation in the Rampal power plant arisen to date in the Group's home town of Stuttgart and in Baden-Württemberg? This lack of debate is surprising in that state governments led by Alliance 90/The Greens have been in office in Baden-Württemberg since 2011; the last state government was re-elected in 2021. In addition, numerous environmental and human rights organizations based in the state and active there see themselves as part of transnational civil society. They would have been able to put an issue such as Fichtner Group's involvement in Rampal on the political and public agenda earlier and more prominently. An important reason for this largely absent public debate is probably a dilemma faced by many civil society, political and state actors worldwide. When such actors criticize or oppose certain projects and investments of influential local companies, their social and political circles and the local public often accuse them of «fouling their own nest», impacting the wider reputation of a city or region and endangering jobs and tax revenues. A quasi-compensatory «way out» can then be the uncovering of issues that have no direct connection to one's own region.

It is possible that representatives of the Baden-Württemberg state government, the parties supporting it and also parts of the state's civil society feel that they face such a dilemma. The government and the parties may fear that open criticism of Fichtner

Group's involvement in Rampal would worsen their relations not only with Fichtner Group itself, but also with companies in the state on whose support they depend for their industrial policy of ecological transformation. These companies would – or so it is assumed – «show solidarity» with the publicly criticized Fichtner Group. Local civil society organizations and activists may also suspect that open criticism would make their work more difficult.

However, a constructive public debate about the involvement of local companies in obviously unsustainable projects such as the Rampal power plant would have combined the rejection of a project with the identification of alternative investment opportunities. For example, Fichtner Group has a lot of experience with renewable energy, which it could have used to a greater extent in foreign investments in Bangladesh and other countries. It is very likely that the Sundarbans will be added to the UNESCO list of World Heritage Sites in Danger and that the Sundarbans will later lose their World Heritage status altogether. Last but not least, in a few years, Rampal will most likely also be the subject of legal action in which those suffering damages from the power plant will seek compensation. These developments would then have an adverse effect on the image of Fichtner Group, and possibly also that of the State of Baden-Württemberg.

9 Outlook

Critics of Rampal and other coal power plants in Bangladesh will continue their cooperation in transnational civil society networks and in scientific institutions, as well as their lobbying in the UNESCO World Heritage Committee and other international organizations within the UN system and elsewhere. If the Committee were to add the Sundarbans to the list of World Heritage Sites in Danger at one of its upcoming meetings, this would only amount to a – likely temporary – setback for Rampal's proponents. It would appear that parts of Bangladesh's government and its political and economic establishment have long since calculated and «priced in» the cost of losing World Heritage Site status. The government and said establishment – with the support of China and other countries – seem to be just trying to delay the addition to the list and the loss of status for as long as possible. The influence of the boosters of industrial development of southwestern Bangladesh and the nationwide expansion of fossil energy based on Rampal and other power plants that disregard the integrity of the Sundarbans UNESCO Natural World Heritage Site appears to be stronger than years of diverse criticism of the power plant and the specific form of industrial development that will weaken or even destroy the ecosystems of the Sundarbans.

In the future, however, new norms and rules will emerge in national law, in case law in Germany and other countries, and in international law. These will expand the possibilities to sue states and companies for violating human rights and environmental protection standards and to impose penalties such as compensation payments. The Rampal power plant, the future coal transport on the rivers of the Sundarbans, and especially the inevitable shipping accidents associated with it will cause great environmental damage. These could then be subject to such legal proceedings. Legal action relating to other coal power plants or to Bangladesh's nuclear power plant and to the respective involvements of Fichtner Group, Oldendorff Carriers GmbH & Co. KG, Lahmeyer International GmbH, Thyssenkrupp GmbH, Siemens AG and other companies will then also address violations of human rights and environmental protection standards and compensation claims. An energy mix policy based on fossil and nuclear energy will increasingly be a cause of political conflict and legal proceedings in the future – in Bangladesh and in many other countries.

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Coal, Capital and Conflicts

The Rampal power plant in Bangladesh,
the protection of the Sundarbans and
the role of German companies

The Sundarbans are the largest contiguous mangrove forest area in the world. They are a UNESCO World Heritage Site and cover a large part of the Bangladesh coast. This unique ecosystem is under massive threat. Only a few kilometers north of the protected area, the Rampal coal-fired power plant is being built. In the future, about 200 container ships per year will cross the mangroves to supply the power plant with almost 4 million tons of imported coal. Waste and pollutants threaten the regional ecosystem and the population. The construction is justified with the necessary industrialization of the country.

The study by Asia expert Dieter Reinhardt shows why the construction of this coal-fired power plant is an exemplary anachronism: it prevents the expansion of renewable energies, which is necessary because of climate change and for which Bangladesh has the potential; and it weakens coastal protection, which should have priority in view of rising sea levels. Rampal also shows how a whole series of internationally active investors, banks and companies want to continue the fossil fuel era.