

Afghanistan

AUGUST 2024

Pakistan

New Delhi

Nepal

Bhutan

Bangladesh

India

Kolkata

Mumbai

Bengaluru

Bay of Bengal

Andaman Sea

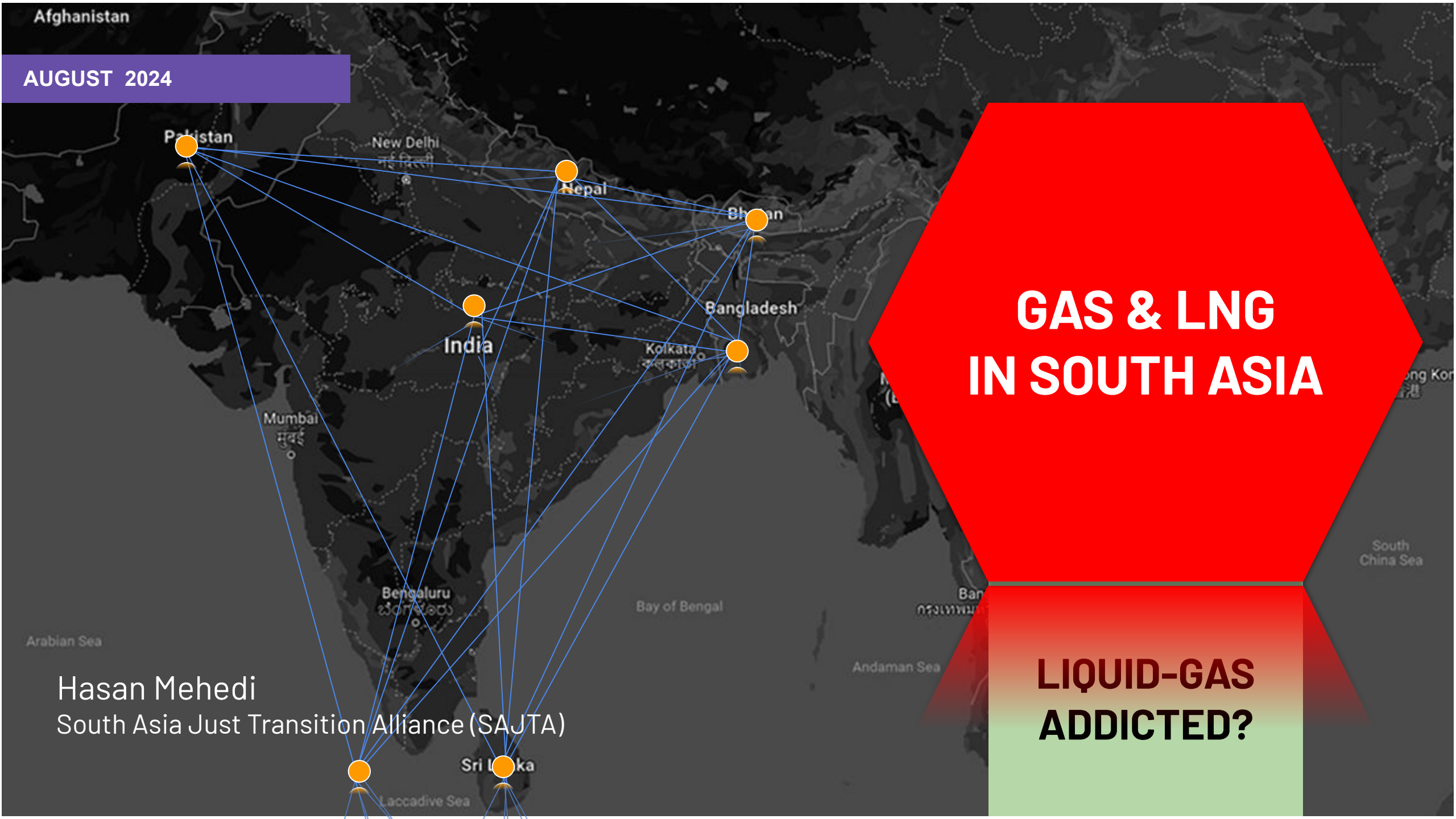
Sri Lanka

Laccadive Sea

GAS & LNG IN SOUTH ASIA

LIQUID-GAS ADDICTED?

Hasan Mehedi
South Asia Just Transition Alliance (SAJTA)



WHO ARE WE

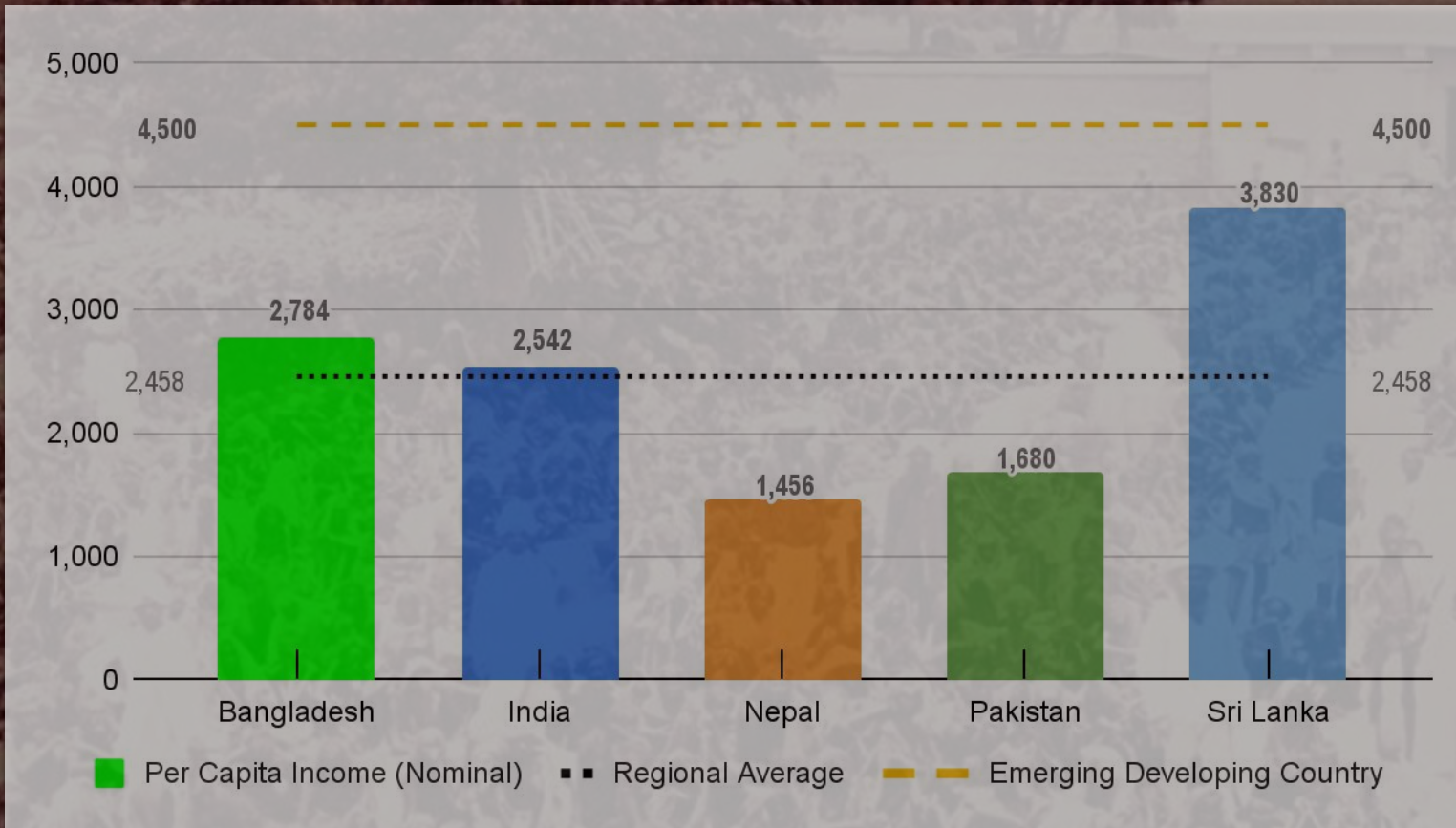


- A highly populated region with 1.93 billion people, which is 27% of the world.
- The countries share border with each other. The people not only share their history, culture and struggle but also the similar pattern of economic life.
- Mostly dependent on the domestic resources for electricity (Coal in India, fossil gas in Bangladesh and Pakistan and Hydro in Nepal and Sri Lanka).
- The countries can install 63.8 TW of Solar and 31.4 TW of wind power together which can fulfill the demand of the sub-region.
- One of the potential regions to initiate regional grid to share renewable energy potential with each other.



47 activists from the sub-region gathered together in Kathmandu last year to discuss our common problems and opportunities. After three days of consultation, the South Asia Just Transition Alliance was formed to strategize and organize campaign together for just and equitable transition in South Asia.

Per Capita Income



South Asia the land of **30%** of the **global people** living under the poverty line.

Average per capita **GDP in South Asia is USD 2,458**, which is one of the lowest among the developing countries.

The amount is 45.4% lower than the emerging Asian countries (USD 4,500) and 82.2% lower than the global average (USD 13,840).

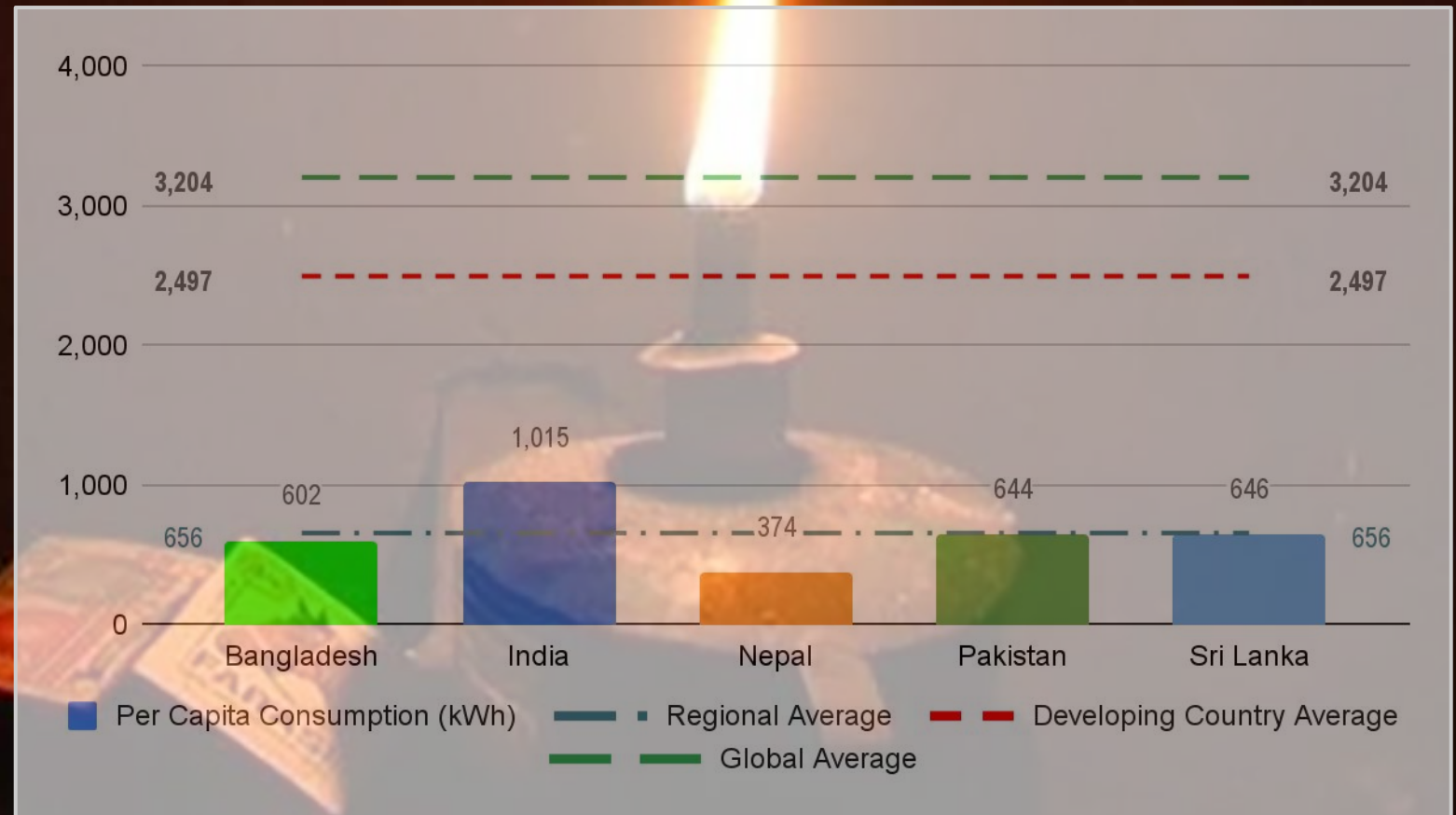
Per Capita Electricity Consumption

Average per capita electricity consumptions in South Asia is lower than any other developing country in Asia.

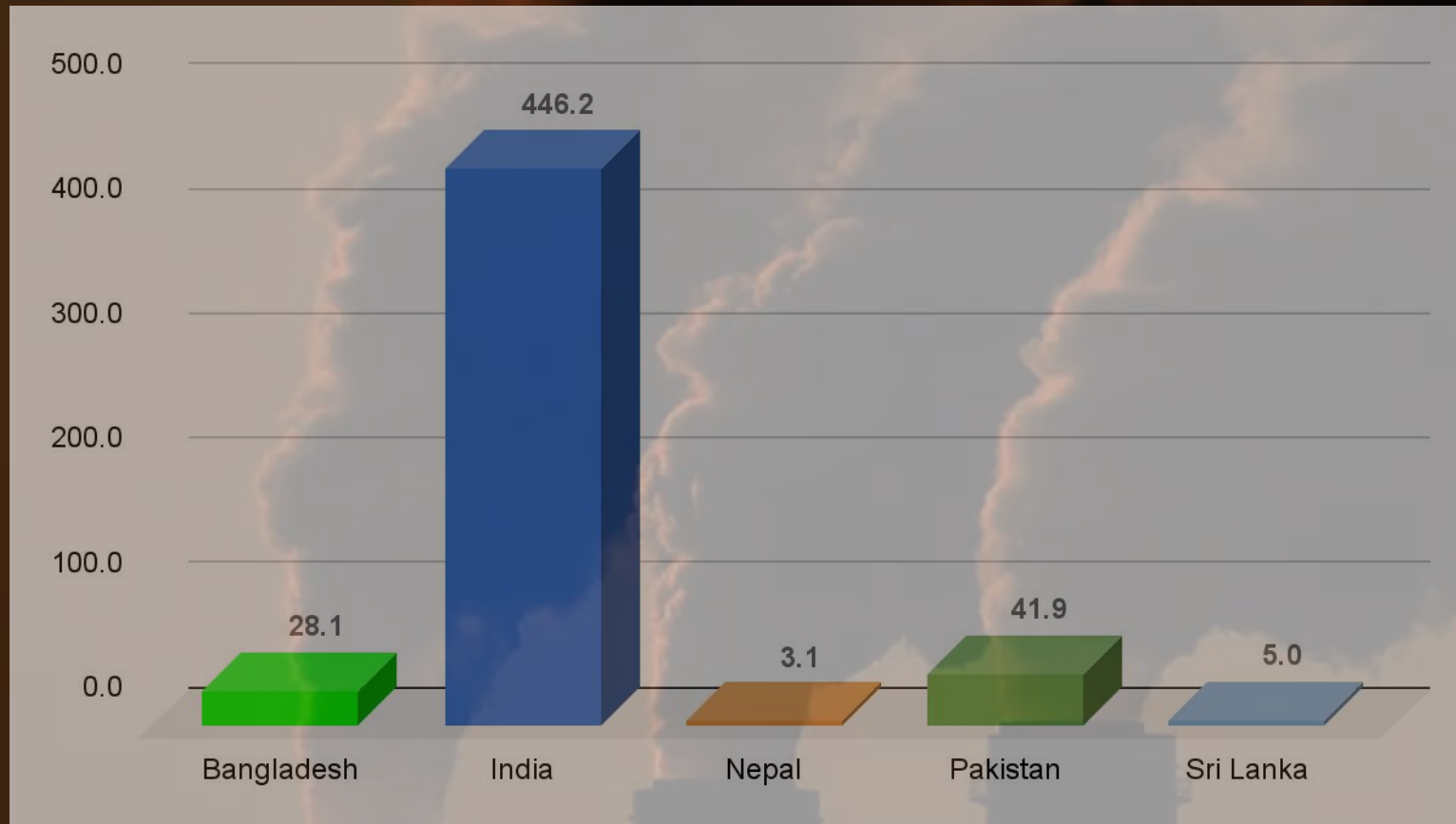
The average per capita **electricity consumption is only 656 kWh**, which is 74% less than the developing Asia and 80% less than the global average.

Rapid growth of electricity generation, is required in South Asia for socioeconomic development of the common people, even to reach the level of developing Asia, let alone the global average.

At the same time, **just and equitable transition** to RE is also an emergence in the region.



Installed Capacity (GW)

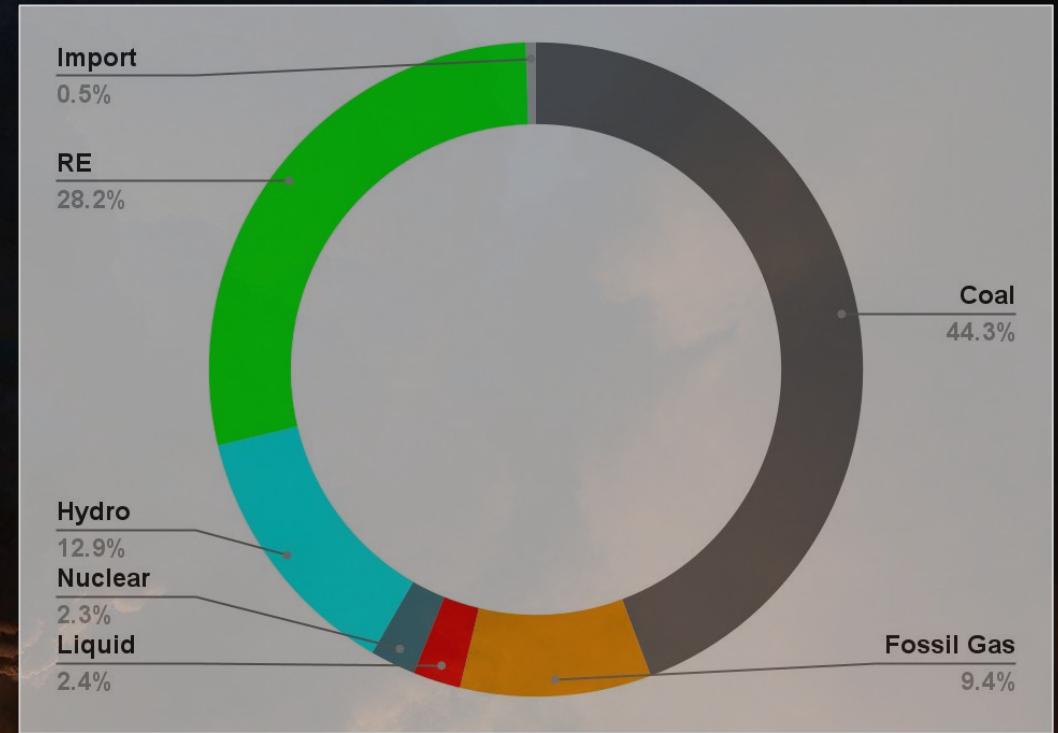
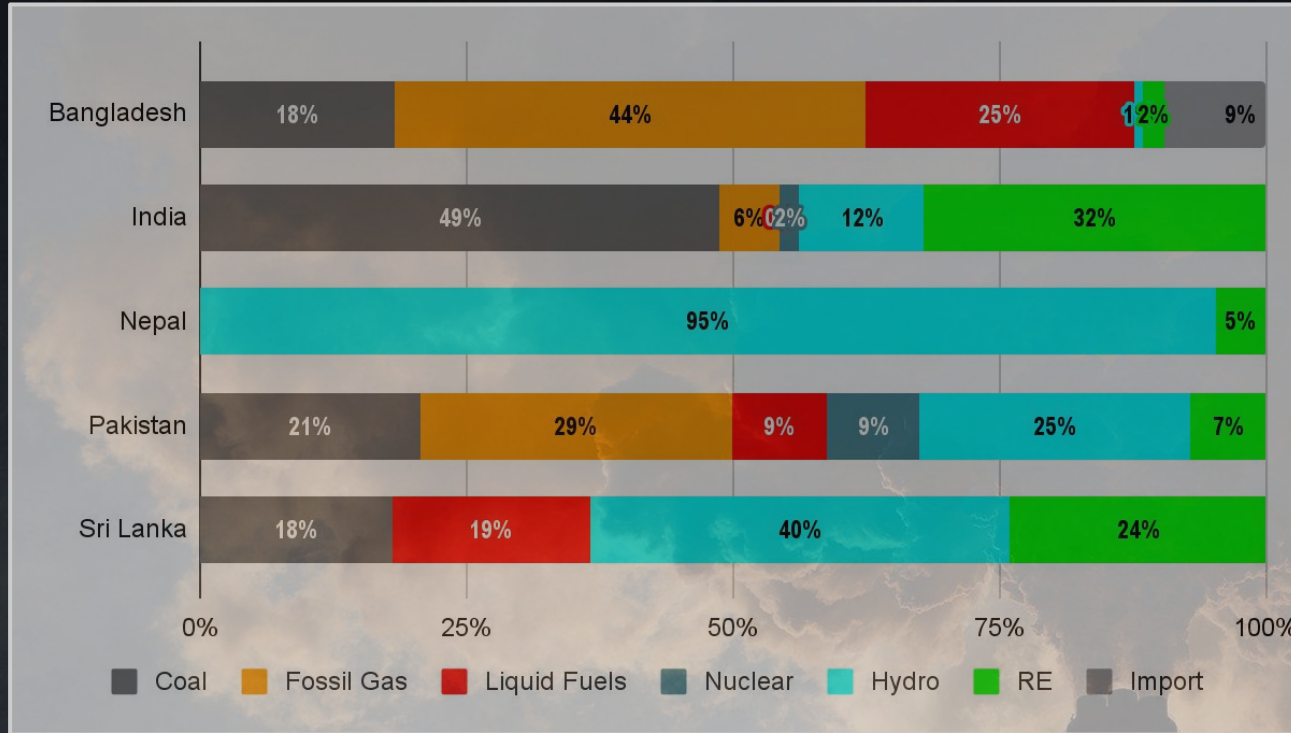


The total installed capacity in the power sector of the region is **524.3 Gigawatt (GW)** where India has 446.2 GW, followed by Pakistan (41.9 GW), Bangladesh (28.1 GW), Sri Lanka (5 GW) and Nepal (3.1 GW).

Power sector of **India is 6 times bigger** than the combined capacity of other four countries.

All of the countries have achieved **around 100% electricity coverage** by 2023, except Nepal (95.4%). However, access to **quality electricity** is still a big issue.

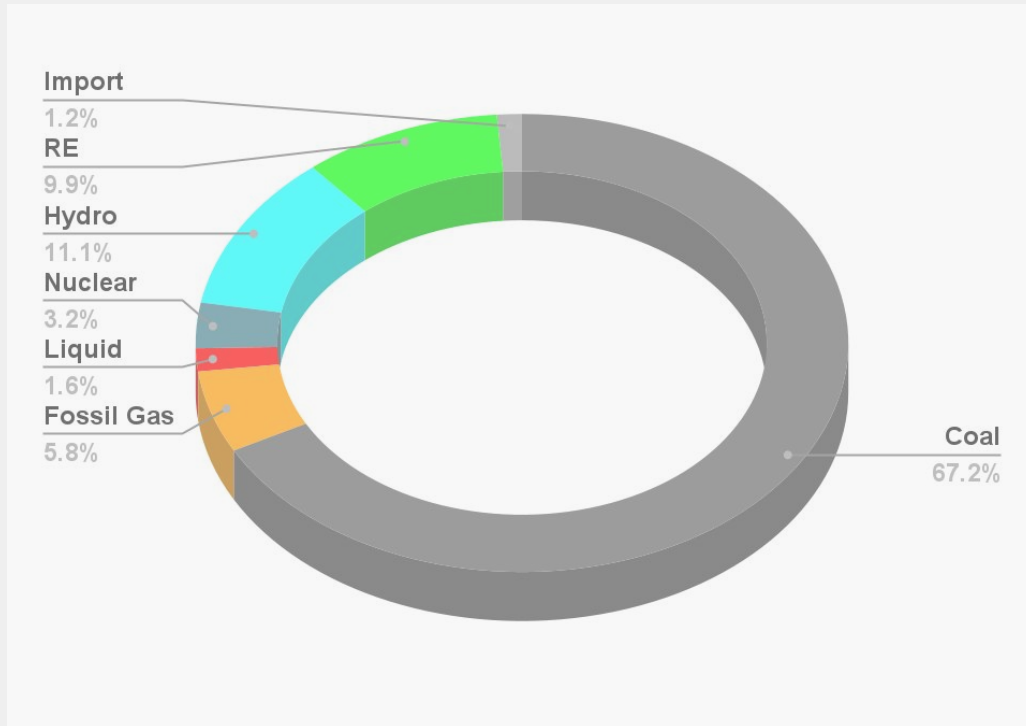
Energy Mix in Installed Capacity



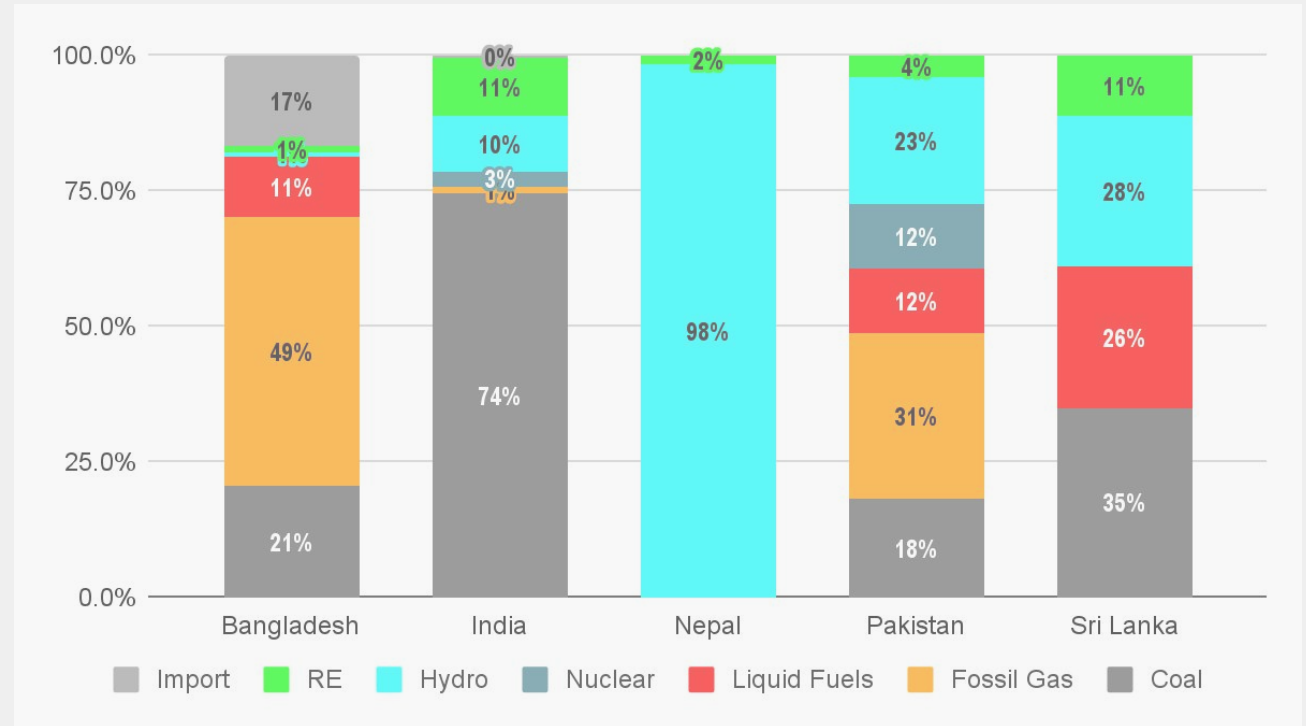
India highly depends on Coal for the primary energy (49%), followed by Pakistan (21%), Bangladesh (18%) and Sri Lanka (18%). Bangladesh mostly depends on Fossil Gas (44%), followed by Pakistan (29%) and India (6%). Nepal is solely dependent on Hydro, which is 40% in Sri Lanka.

Overall, 44% of regional installed capacity based on coal, 9.4% on fossil gas, 2.4% on liquid fuels, 2.3% on nuclear, 13% on hydro, and 28% on RE-sources. But the ratios of generation is totally different.

Energy Mix in Actual Generation

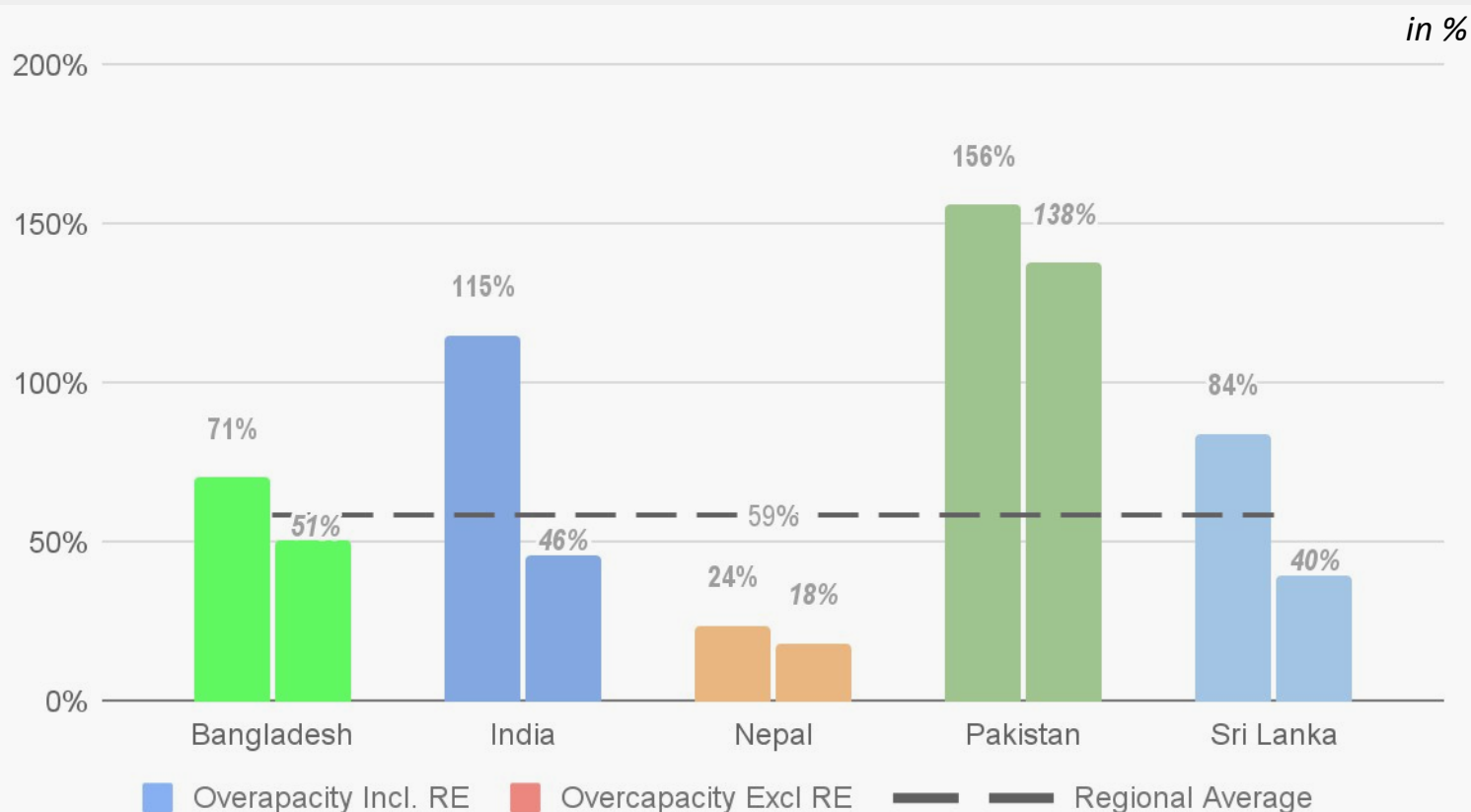


From generation point, 67% of the electricity generated from coal, 6% from fossil gas, 1.6% from liquid fuels, 3.2% from nuclear, 11% from hydro and only 9.9% from RE Sources.



India leads the coal power generation with 74%, followed by Sri Lanka (35%), Bangladesh (21%) and Pakistan (18%). On the other hand 50% of electricity in Bangladesh comes from Gas, followed by Pakistan (31%) and India (1.5%).

Note: Heavy Fuel Oil (HFO), High-speed Diesel (HSD), Light Diesel Oil (LDO) and Residual Fuel Oil are combined together under Liquid Fuels; Lignite is added in Coal while Waste-to Energy (WTE) is combined with Biomass to simplify the presentation. Hydro and WTE are not actual RE, but those are included make it simple.



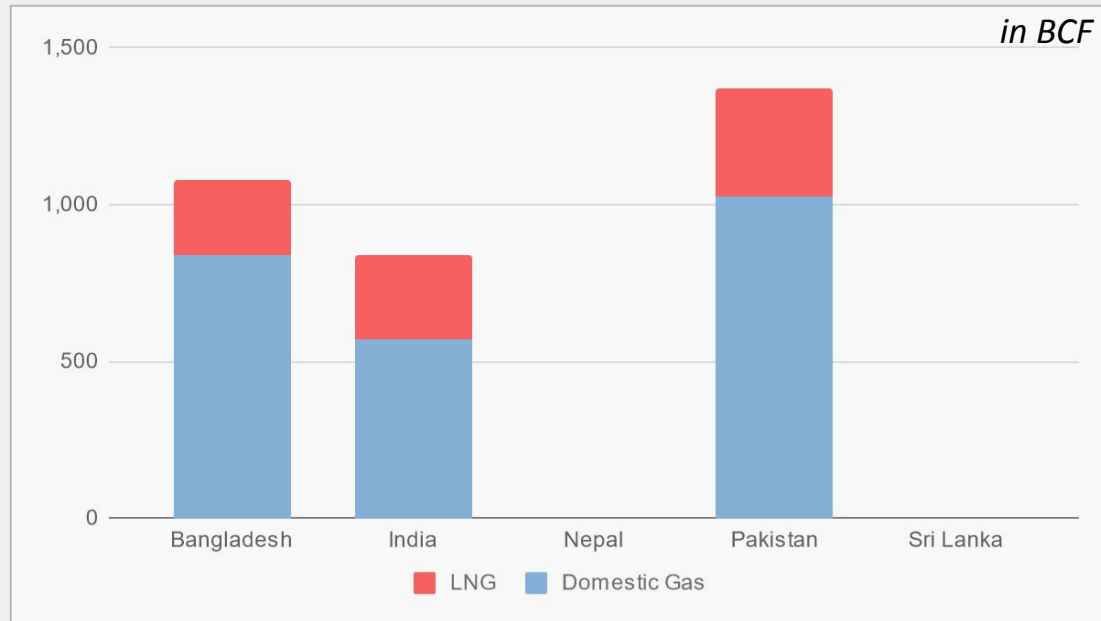
Four countries, out of five, except Nepal, are suffering with a massive overcapacity in the power sector.

It is led by Pakistan (156%), followed by India (115%), Sri Lanka (90%) and Bangladesh (71%). So, that the SA Countries do not need any more thermal power plant.

These stranded assets in the power sector result in low PLF and serious financial burden.

Pakistan paid USD 7.7 billion (43%) as capacity charge of the IPPs in FY 2023-24 which was USD 2.4 billion (38%) for Bangladesh. In India, it is as large as most as 13% of the Discom revenue.

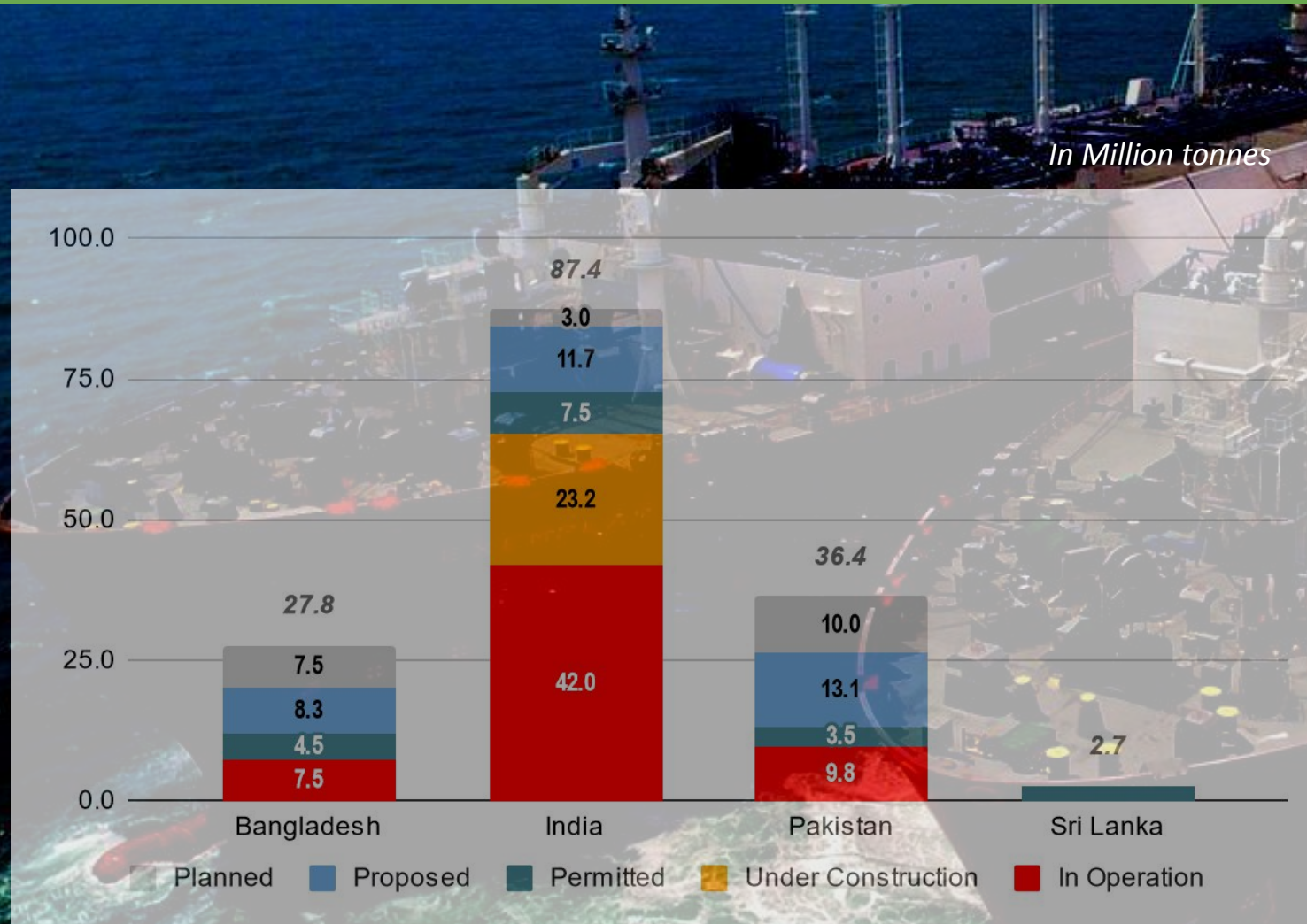
LNG in current gas-based Power



Bangladesh, India and Pakistan mix LNG with Domestic Fossil Gas (DFG) for power generation. These three countries **import 860 bcf** of LNG per year and **LNG contributes 26%** of the fossil gas on an average. Nepal and Sri Lanka is yet to introduce LNG, but Sri Lanka has initiated a process to generate power from imported LNG.

LNG used in the Power Sector

Domestic gas reserves of all of these three countries (Bangladesh, India, Pakistan) have been depleting at 10% per year. Currently, the domestic gas and LNG combinedly can supply maximum 49% of the power sector's demand. Still, Bangladesh and Pakistan has been installing new gas-based power plants in the recent years.

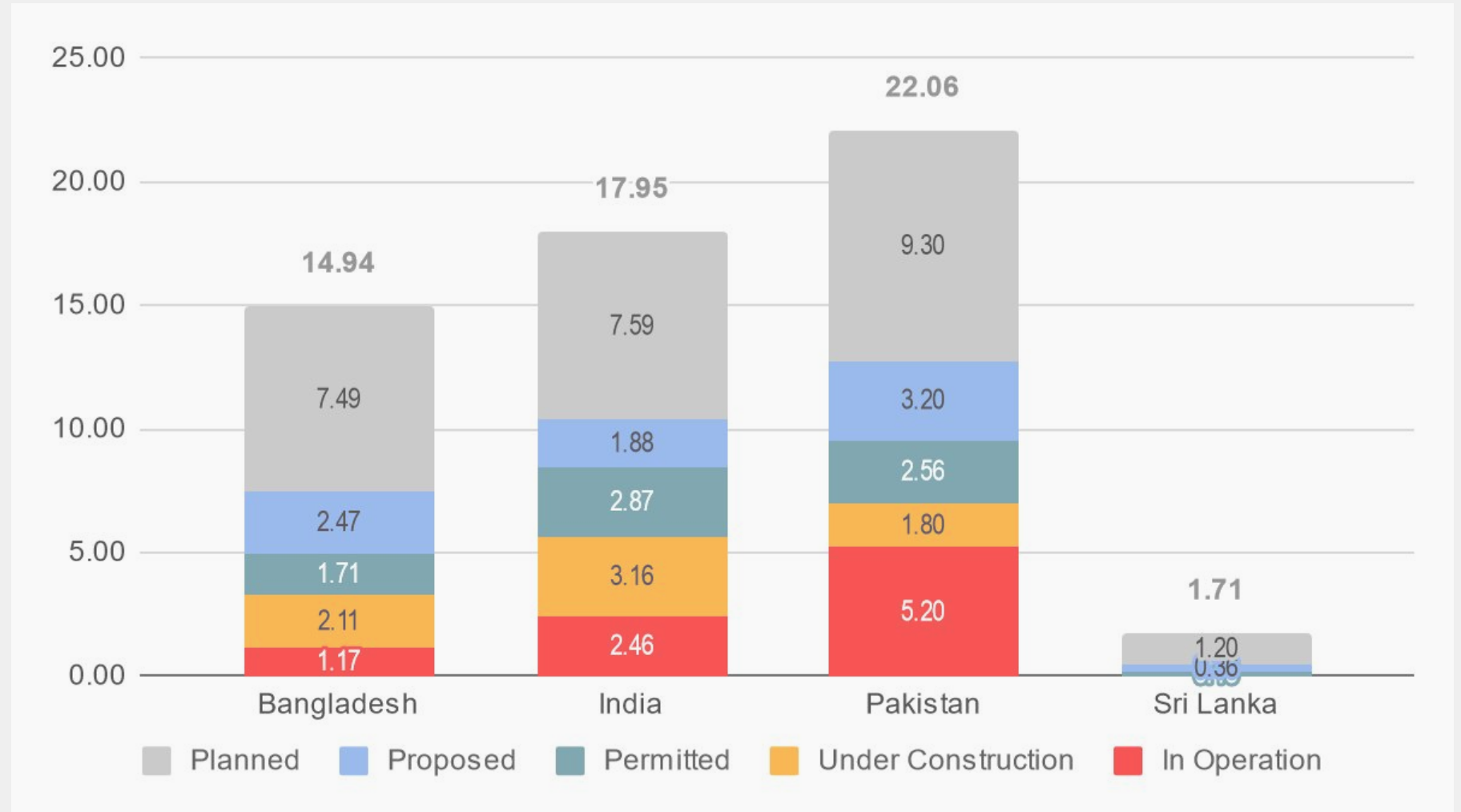


LNG Imports are led by India in the region with 7 FSRUs and a capacity of 42 MTPA followed by Pakistan (9.8 MTPA) and Bangladesh (7.5 MTPA). India also much ahead of other countries in capacity addition, followed by Pakistan and Bangladesh.

India plays the role of investor in Bangladesh and Sri Lanka also. Adani, Petronet, H-Energy and Reliance are the biggest project developers in the sub-region.

Instead of canceling new gas power plants, considering the reality of domestic gas, our government's planned to install more LNG Power Plants, prioritizing the agenda of crony capitalists in the country.

Interestingly, the South Asia can





LNG Alliance Mangalore FSRU has been shelved (Growthwatch)



Pakistani CSOs are campaigning to cancel Energas LNG Terminal and Taber LNG Terminal



Summit's second LNG Terminal could be canceled any time. India-Bangladesh LNG Pipeline is in risk of shelving any time.



Petronet LNG Terminal EIA Report is being analyzed to challenge in the Sri Lankan Green Tribunal.

bcf	Billion cubic feet	MOP	Ministry of Power (India)
BPDB	Bangladesh Power Development Board	MOPE	Ministry of Power and Energy (Sri Lanka)
CBSL	Central Bank of Sri Lanka	MTPA	Metric Tonnes per Annum
CEA	Central Electricity Authority (India)	NEA	Nepal Electricity Authority (Nepal)
CEB	Ceylon Electricity Board (Sri Lanka)	NEPRA	National Electric Power Regulatory Authority
DFG	Domestic Fossil Gas	NSB	National Statistics Bureau (Bhutan)
Discom	Distribution Company	NSO	National Statistical Office (India)
FSRU	Floating Storage and Regasification Unit	ONGC	Oil and Natural Gas Corporation Limited
GDP	Gross Domestic Product	PACRA	Pakistan Credit Rating Agency Limited
GECF	Gas Exporting Countries Forum	RFO	Residual Fuel Oil
HFO	Heavy Fuel Oil	WTE	Waste-to-Energy
HSD	High-speed Diesel		
IPP	Independent Power Producer		
LNG	Liquefied Natural Gas		
MMCF	Million metric cubic feet		
MOE	Ministry of Energy (Pakistan)		
MOF	Ministry of Finance (Bangladesh)		

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