THE ECONOMIC AND ENVIRONMENTAL POLICY EVALUATION OF INLAND WATER TRANSPORT DEVELOPMENT IN BANGLADESH

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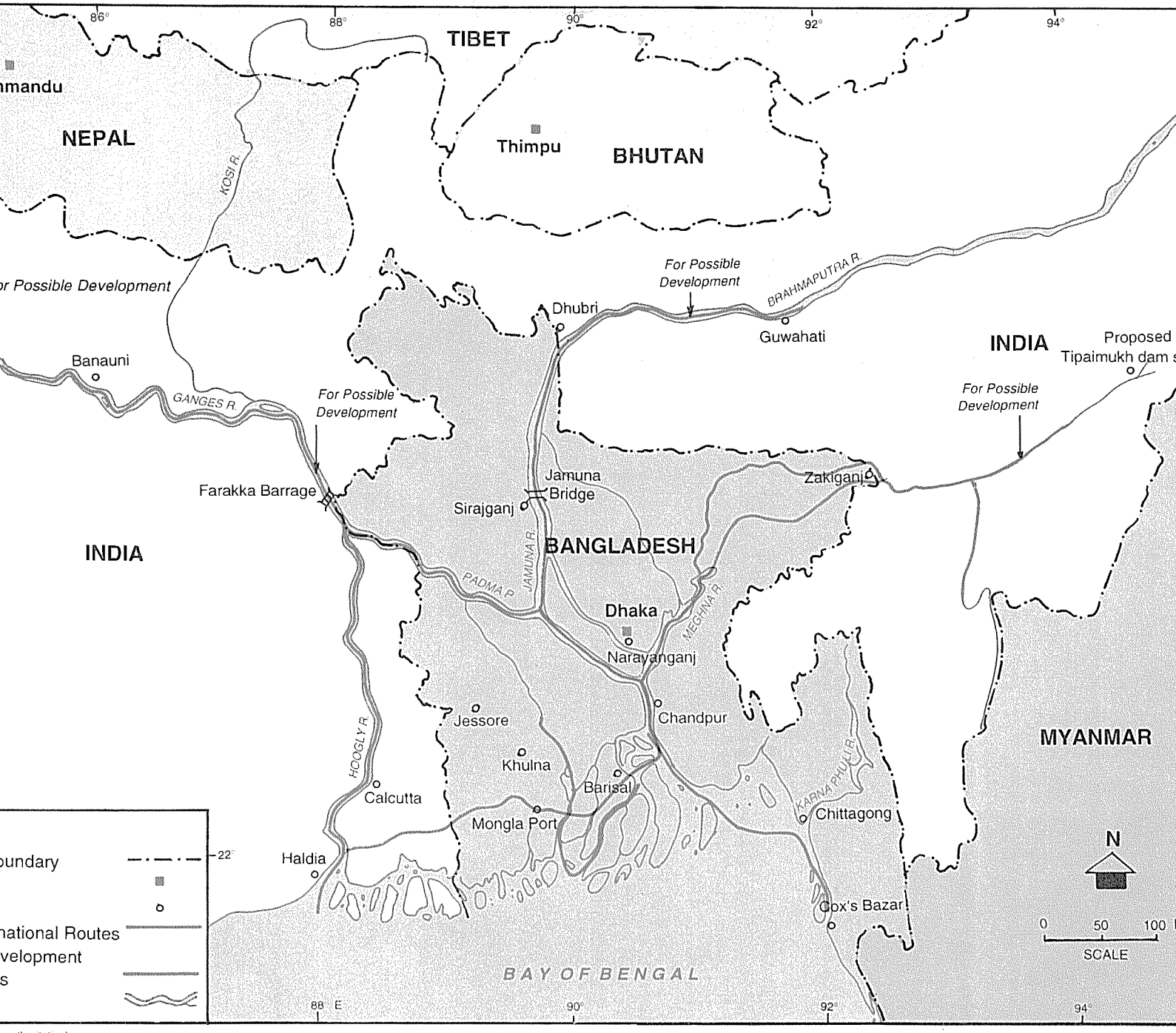

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GLOSSARY OF TERMS

AADT	Average Annualized Daily Traffic
ADB	Asian Development Bank
ADTA	Advisory Technical Assistance
AL	Awami League
ALGAS	Asian Least-Cost Gas Abatement Strategy
BIWTA	Bangladesh Inland Water Transport Authority
BIWTC	Bangladesh Inland Water Transport Corporation
BIWTMAS	Bangladesh Inland Water Transport Master Plan
BR	Bangladesh Railways
BRTA	Bangladesh Road Transport Authority
BRTC	Bangladesh Road Transport Corporation
BWDB	Bangladesh Water Development Board
BUET	Bangladesh University of Engineering and Technology
CCF	Commodity Conversion Factor
CHT	Chittagong Hill Tracts
CIDA	Canadian International Development Agency
CO	Carbon Monoxide
CPA	Chittagong Port Authority
CPI	Consumer Price Index
DANIDA	Danish International Development Agency
DMB	Disaster Management Bureau
DOE	Department of Environment
DOS	Department of Shipping
EC	European Commission
EGM	Expert Group Meeting
EIA	Environmental Impact Analysis
EIRR	Economic Internal Rate of Return
EPA	Environment Planning Act
EPWAPDA	East Pakistan Water and Power Development Authority
FAP	Flood Action Plan
FPCO	Flood Plan Coordination Organization
FW	Future With (Project)
FWO	Future Without (Project)
GBM	Ganges, Brahmaputra, Meghna River Basin
GDP	Gross Domestic Product
GEF	Global Environmental Fund
GOB	Government of Bangladesh
HYV	High Yielding (Rice) Varieties
ICT	Inland Container Terminal
IEE	Initial Environmental Examination
IMO	International Maritime Organization
ISO	International Standards Organization
ISSA	Inland Ship Safety Administration
IWAI	Inland Waterways Authority of India
IWT	Inland Water Transport
JRC	Joint Rivers Commission
LAD	Least Available Depth
LPG	Liquid Petroleum Gas
MARPOL	Marine Pollution Convention (1973/78)

MOA	Ministry of Airways
MOC	Ministry of Communications
MOEF	Ministry of Environment and Forest
MOF	Ministry of Finance
MOP	Ministry of Planning
MOS	Ministry of Shipping
MOST	Ministry of Surface Transportation (India)
MPA	Mongla Port Authority
MPTFS	Port Masterplan and Trade Facilitation Study
MRA	Mississippi River Authority
MWR	Ministry of Water Resources
NGO	Non-Governmental Organization
NOx	Nitrogen Oxide
NPV	Net Present Value
NTPC	National Transport Policy Committee (India)
NWMP	National Water Management Plan
NWP (I and II)	National Water Plan (Phases I and II)
OECF	Overseas Economic Cooperation Fund (Japan)
O&M	Operations and Management
OPRC	Oil Pollution Preparedness and Response Convention (1990)
PCP	Project Concept Paper
PIANC	Permanent International Association of Navigation Congresses
PM_{10}	Particulate Mater (less than 10 microns)
PRC	People's Republic of China
RAS	Research and Advisory Services
RHD	Roads and Highways Division
SCF	Standard Conversion Factor
SOLAS	Safety of Life at Sea Convention (1974)
SO_2	Sulphur Dioxide
SRF	Sundarbans Reserved Forest
STCW	Standards of Training, Certification and Watch Keeping Convention
SWMC	Surface Water Modeling Center
TER	Total Economic (Crop) Revenue
TEU	Twenty Feet Equivalent Unit (standard container measure)
UNDP	United Nations Development Programme
UNESCAP	United Nations Economic and Social Commission for Asia and Pacific
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VLCC	Very Large Crude Carrier
WB	World Bank
WHO	World Health Organization
WTO	World Trade Organization

ABSTRACT

Throughout Asia, transport and water resources have followed generally separate paths of development and policy. This is particularly clear in Bangladesh where abstraction of surface water for irrigation, both higher in the international basin and within Bangladesh, contributed significantly to reduced channel depths for navigation. Similarly, dredging for channel improvements has had lower priority than embankment construction for flood protection and all weather road and rail services. These have impeded drainage and have constrained the significant informal inland water transport services. Other constraints include a weak legislatory and policy framework, and policy implementation and enforcement are weak in both sectors. Also, dredging is split under two public sector entities, with little incentive or encouragement of private sector involvement.

In Europe and the USA, flood protection improvements, both by river training and dredging, have gone hand in hand over 200 years, and river user management is integrated and controlled under comprehensive legislation, policy, and institutional and user systems. The study has found that some initiatives along these lines are being taken in Bangladesh, especially under an ongoing National Water Management Plan due for completion by 2001, and some project initiatives are being considered. However, concerted effort is needed to recognize the economic and environmental benefits of inland water transport vis-à-vis other transport modes, and to design water resources development projects which also cater to this potential, and allow for inland water transport to make a significant contribution to cost recovery of the waterways improvement.

Several potential projects have been identified which will help to address the situation. In parallel, further efforts to build international cooperation among the riparian states and measures to mitigate the potential pollution impacts of inland water transport need to be put into place quickly.

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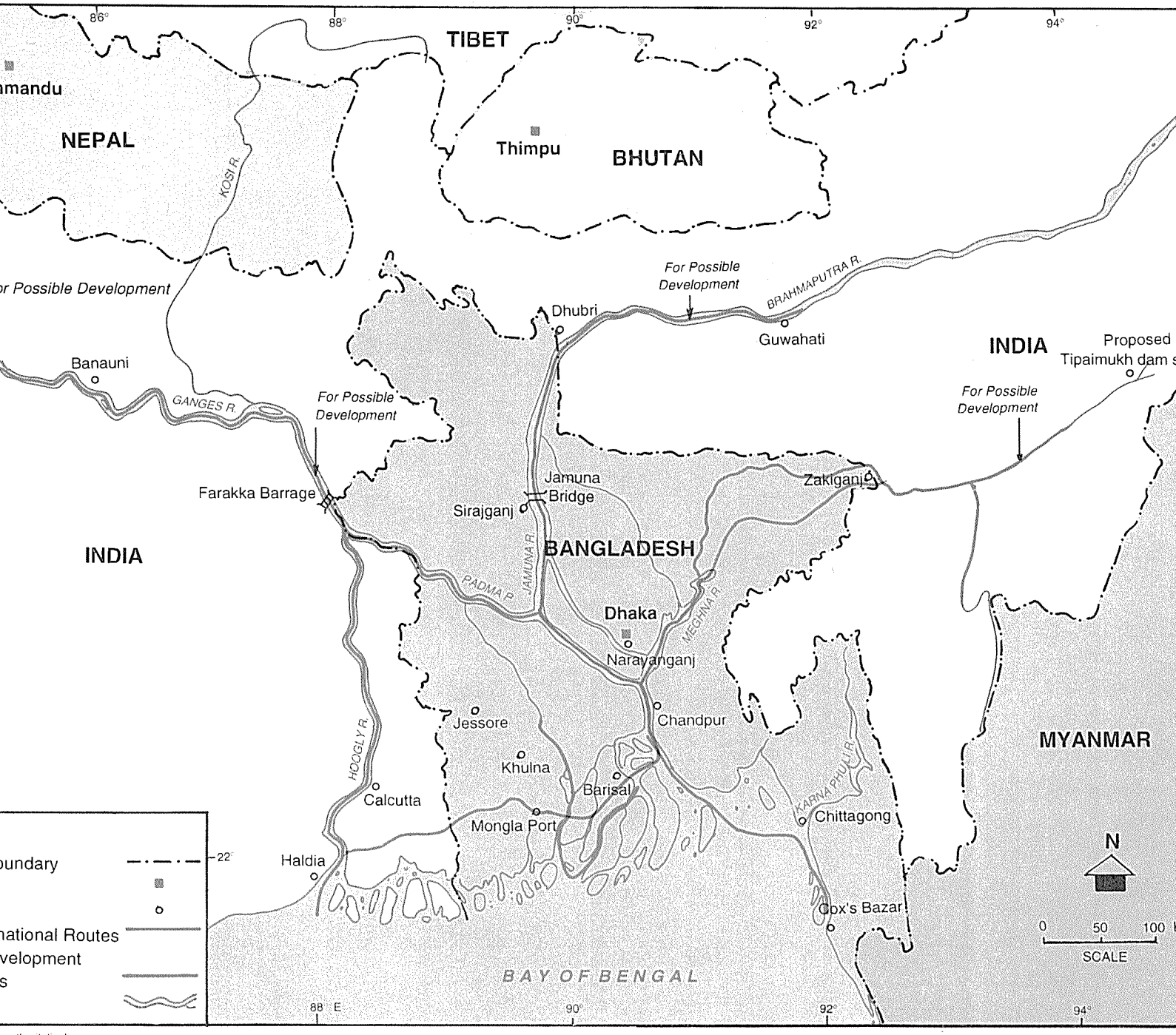

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