Efficacy of forest law enforcement and incentive based conservation to prevent illegal logging in developing countries: experience fromBangladesh

Sharif A. Mukul*, A.Z.M. Manzoor Rashid, Md. Belal Uddin, John Herbohn

Tropical Forestry Group, School of Agriculture and Food Sciences

The University of Queensland

Brisbane QLD, Australia

Outline

Forests & Forestry in Bangladesh;

Illegal logging ~ a global perspective;

Study questions,, challenges, methods & study areas;

Study findings;

- Quantitative & qualitative evidences

Factors affecting illegal logging

Concluding comments

Forests & forestry in Bangladesh: the scenario

- tropical deciduous to mixed evergreen type;
- 2.53 million ha; 16% land mass; true forest cover ~ 5%; protected areas ~ 1.67%;
- contribution to GDP ~ 3.3%, labor force employed ~ 2% ;
- deforestation rate – 3.3%;
- major challenges- poverty, unemployment, conflict with heterogeneous stakeholders, agriculture and fisheries, limitations of FD.

Illegal logging: the global perspective

- **Illegal logging** – *felling and extracting of logs from forests that is not in conformity with an approved management plan, or is not officially licensed or permitted in any other way by a forest authority*;
- viewed one of the major threat to global forests and biodiversity particularly in the tropics that comprise the richest ecosystem on earth;
- continues at a rate of at least **40 million m3** annually, that worth potentially around USD **22.5 billion** (JPC 2005);
- costs developing countries **$15 billion** p.a. in lost revenue (Tacconi et al. 2003);
- law enforcement broadly used to control 'illegal logging', however, among all those involved, it is the rural poor that become one of the first and hardest to be hit with law enforcement (Inoguchi et al. 2005);
- illegal logging even though its negative impacts, controversially, and perhaps paradoxically, benefits many stakeholders, including local communities (Tacconi 2007).

however…

"customary forest law seems unable to prevent illegal logging due to poor recognition/options for local stakeholders!!!"

new strategy (!)…

"involving local people in forest management and rehabilitate stakeholders with AIG options!"

the study was aimed…

"to compare the efficacy of AIG supports and law enforcement to prevent illegal logging"

Questions and challenges

- ~ which works better to prevent illegal logging -law enforcement/governance or economic incentives ?
- ~ what are the underlying causes responsible for illegal logging in the areas ?

challenges…

- ~maintains harmony with diverse qualitative and quantitative data;
- ~avoid biasness; confirm the quality of information; and **securing the ethical issues**!

Forest policy and options in Bangladesh: in a nutshell

- **Current act and regulation:** Forest Act 1927; amended on 1994;
- **Enforcement agency:** Bangladesh Forest Department (FD);
- **Responsible person:** FD field staffs and officials;
- **Punishment:** 2 years (maximum!);
- **Fine:** Tk. 2000, or 6 month jail; if unable to pay!!!
- **Limitation (s):** Lack of clear/solid evidence (!), and lack of witnesses (!).

Methodology

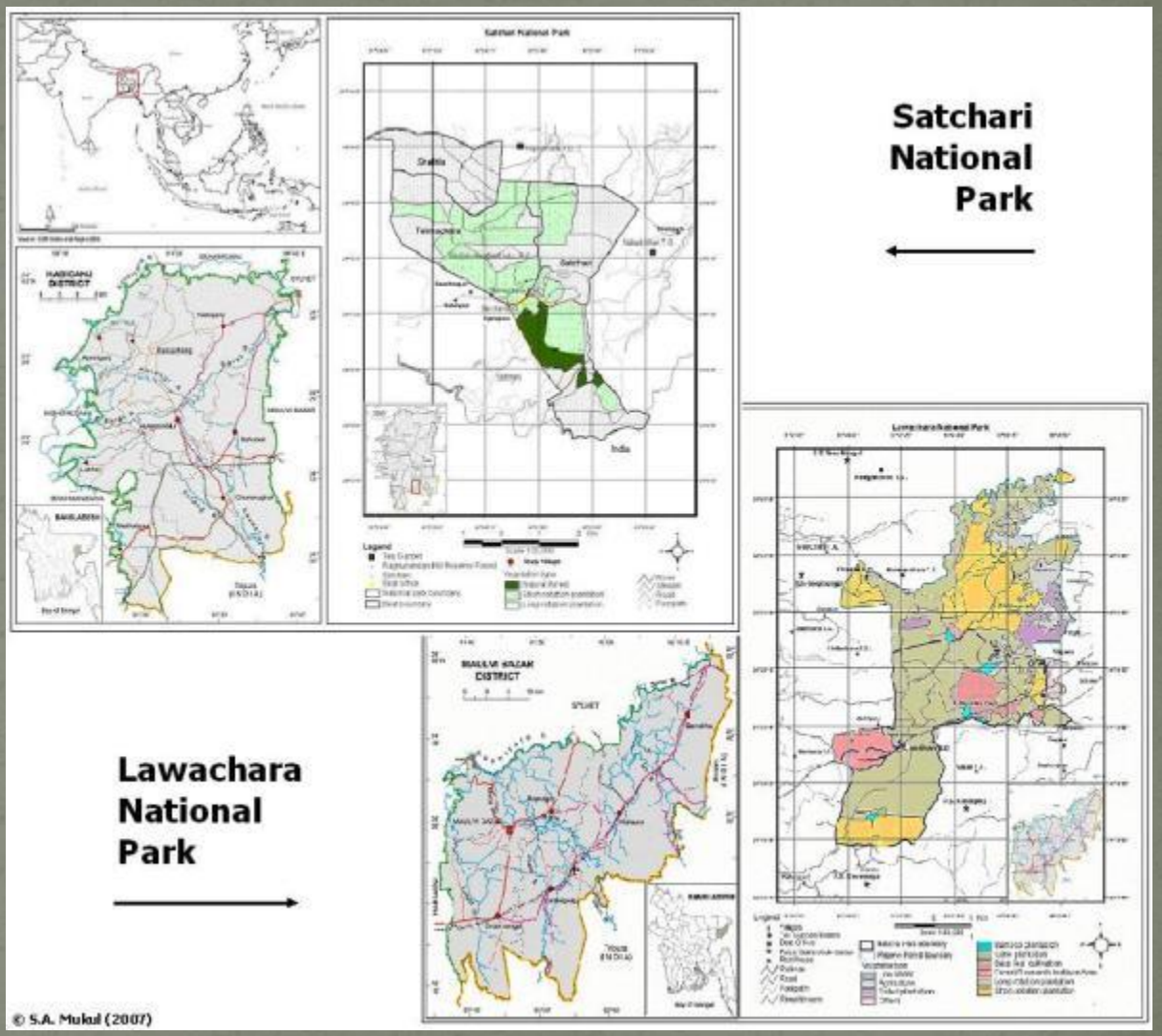
- field survey 2007-2008;
- semi-structured questionnaire with illegal logger (n=30) with the help of key informant;
- open ended discussion with FD officials and political persons (n=5);

General features of the study sites

- **Lawachara National Park** (LNP; area- 1245 ha), **Satchari National Park** (SNP; 241 ha);
- under co-management schemes since 2005, with aid from USAID;

Study sites

Bangladesh


Satchari National Park
Lawachara National Park
© S.A. Mukul (2007)

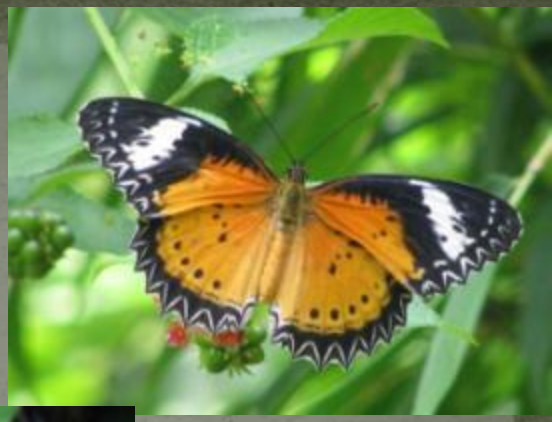


Photo credits: **Sirajul Hossain & Sharif A Mukul**

Key findings

General features of the respondents (n = 30)

- literacy rate – 20%, family size ~ 7 (SD±2.08), age ~ 37 (SD±4.5);
- Avg. monthly expend. ~ 7,500 Tk (69 tk~1USD)
- without any permanent job – 70%
- case filled against – 17 person; avg. case filled ~ 6.5 (SD±2.85) !

Economic Incentives (in terms of AIG supports)

AIG support	Number of illegal logger	Form of support
Eco-tour guide	1	training, promotion (to tourists)
Fishery	1	hatched fish
patrol guard	7	uniform, monthly salary
Livestock (beef, pig)	3	cow, pig (for ethnic people)
Nursery	1	seeds, poly-bags, fertilizer, small money for fencing, support during selling
Poultry rearing	2	Hatched chicken, small money for housing
Vegetable gardening	3	seeds, small money for fencing
Total	**18**	

Source: Field survey (2007-09)

Cont ...

Quantitative data

2007

- No. of entries ~ **10.83 (±59.3)**;
- Quantity of timber collected ~ **116.87 (±59.1)** cft.

2009

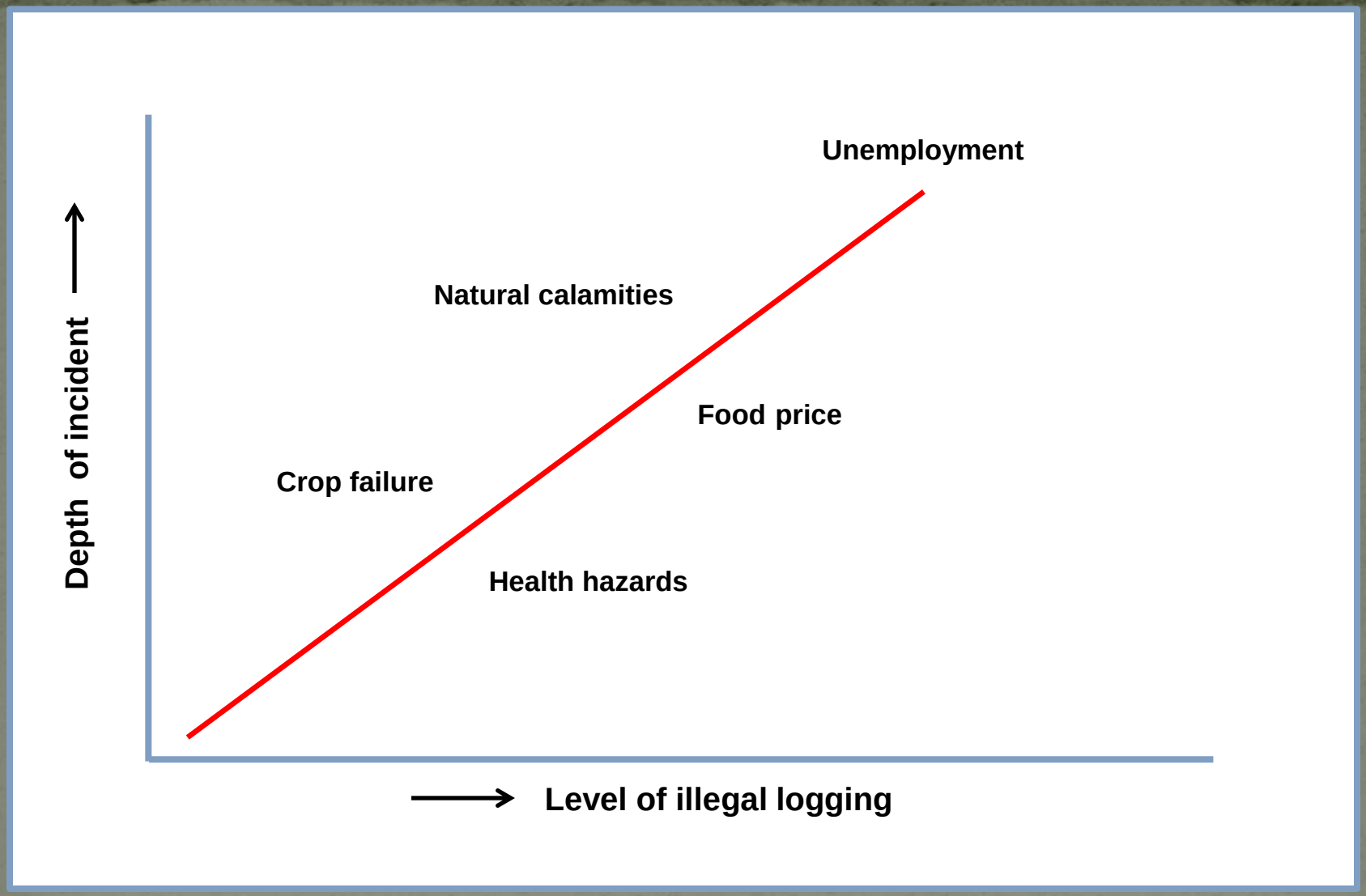
- No. of entries ~ **6.07 (±67.08)**;
- Quantity of timber collected ~ **74.66 (±81.74)** cft

Cont…

Illegal logging trends in two case study site (Source: Mazumder et al. 2007)

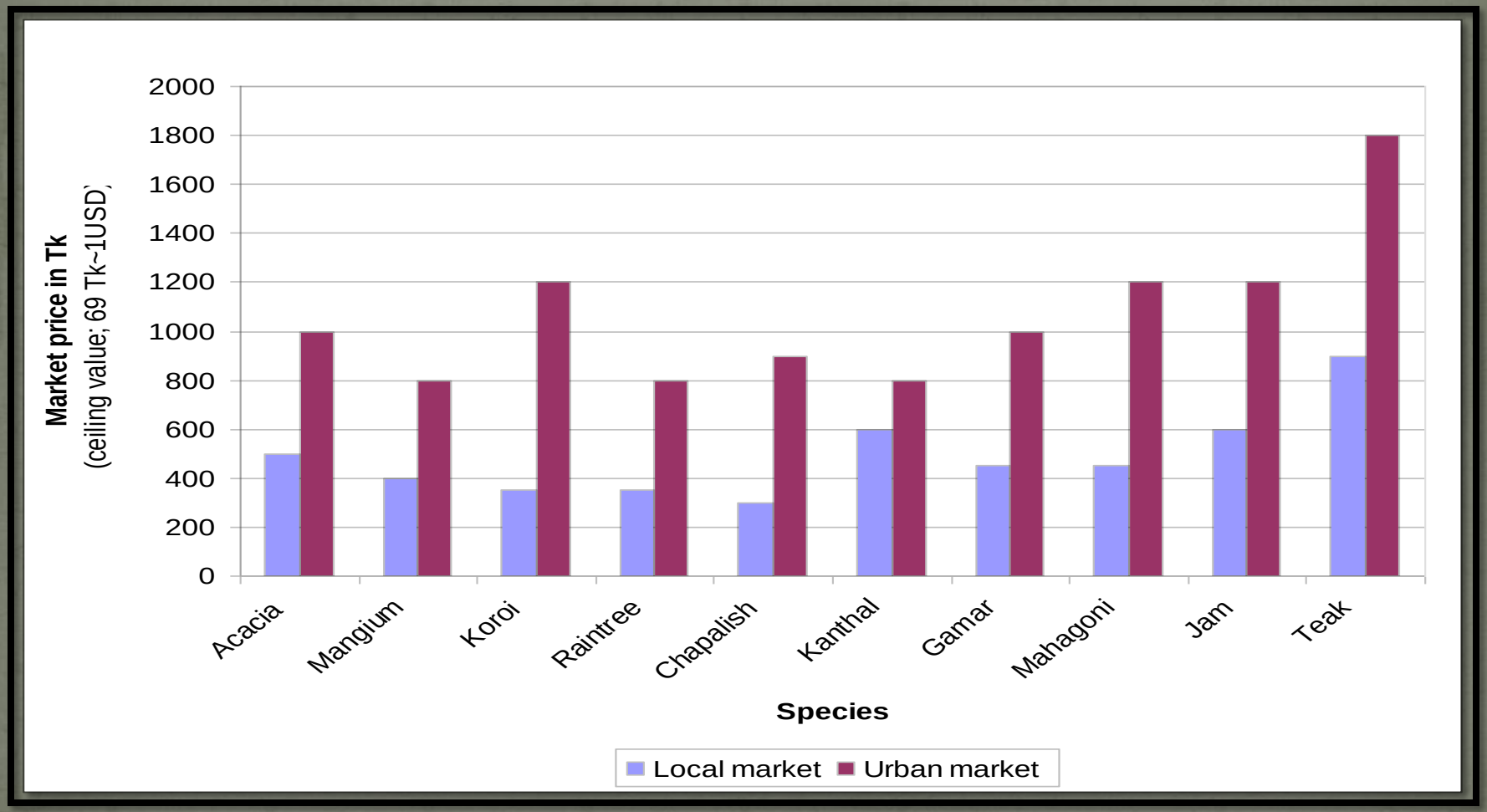
Factors affecting illegal logging

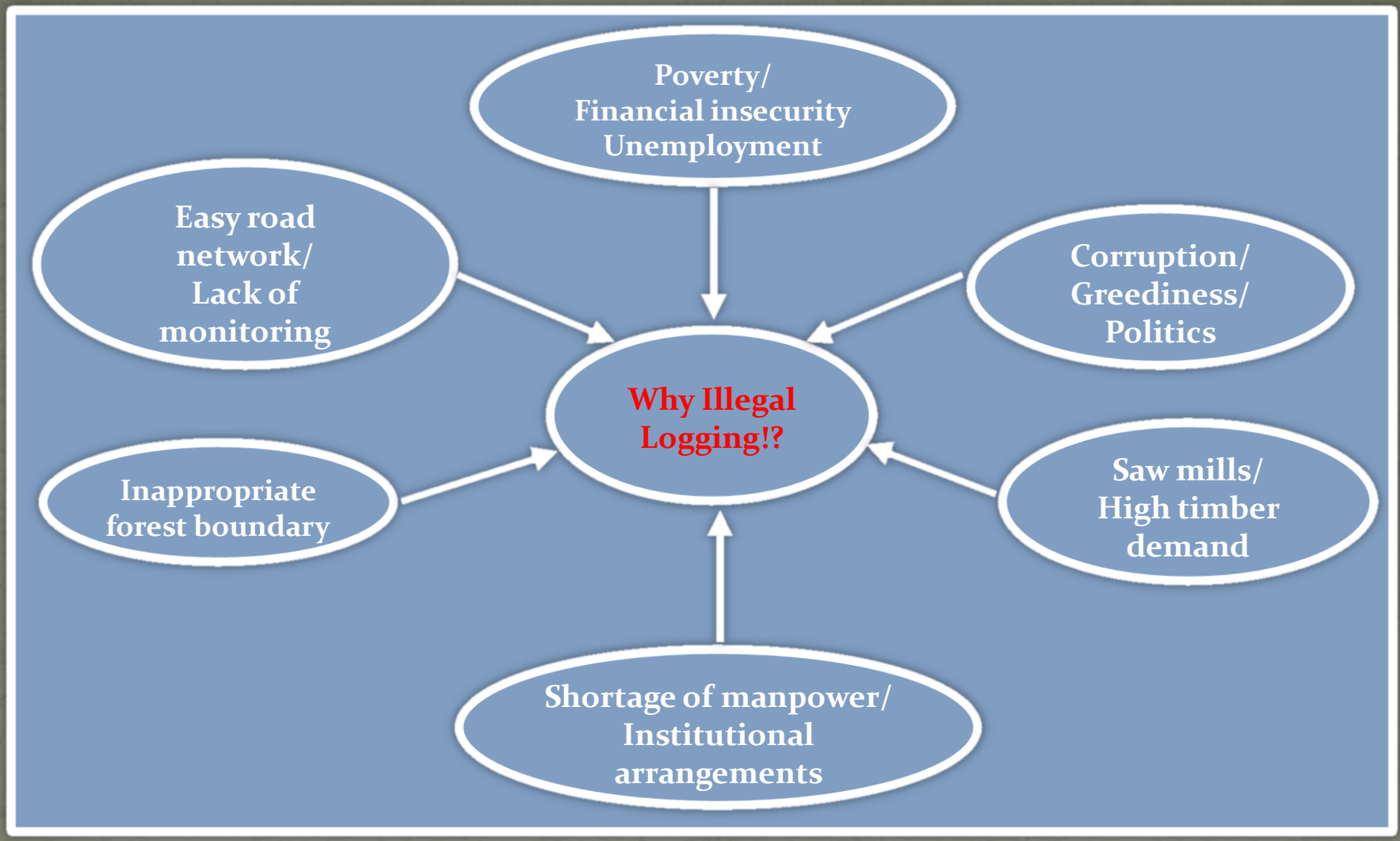
- livelihood insecurity;
- tenure insecurity/conflicts with customary forest use;
- high timber demand attributed by comparatively low market price locally;
- presence of sawmills and furniture shops;
- poor monitoring, ease transportation and road networks;
- lack of conspicuous forest boundary.



Potential livelihood related peculiarities associated with illegal logging

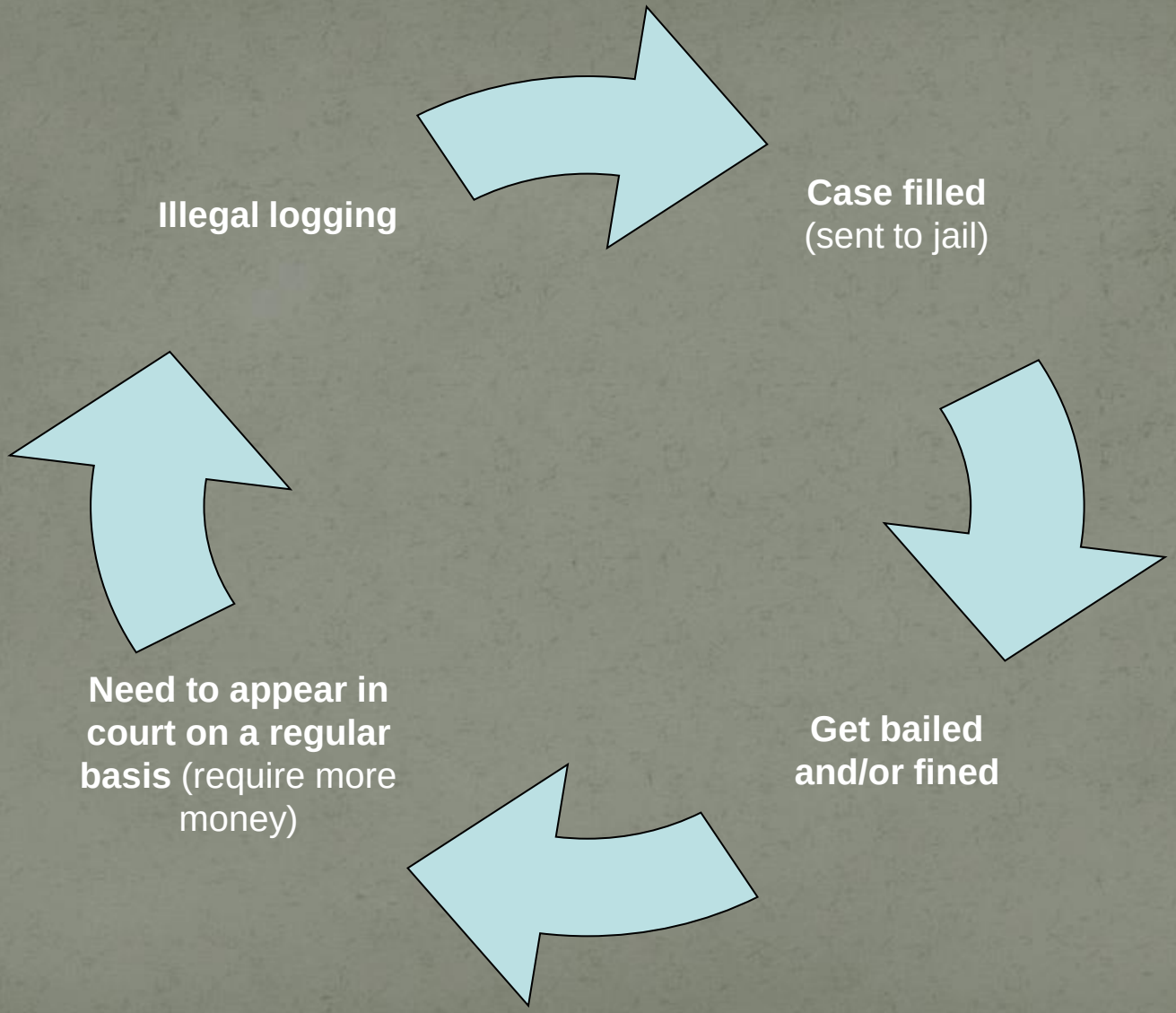
Price variation of top 10 species in local and urban market (Source: Field work 2007-08)





Conceptual framework describing how factors affect illegal logging

Does law really works !?



Concluding comments

The law (sometime) is an ass !!!

(DFID, 2007)

To ensure a secure future…

"government should revise existing law and policy prioritizing local livelihoods and politics"

"… also securing a sustainable financing source to keep the result in affect is vital!"

Linking illegal logging and climate change

Illegal logging helps to sequester carbon, indirectly, through removal of valuable timber from the forest (thus enhancing restoration of forest by fast growing new species) and thereafter stored in wooden furniture's !!!

Acknowledgements

Prof. Dr. Jurgen Pretzsch, TUD, Germany
Dr. Jefferson Fox , EWC, USA
Mr. Mofizul, **Mr. Tito**, **Mr. Pranto**, Bangladesh
All the respondents
USAID-Bangladesh
Commonwealth Forestry Association, UK
Asia-Pacific Network for Global Change Research (APN)

© 2013
Photographs: **S.A. Mukul**