

Papermaking from Jute: A Win-Win Solution for Bangladesh

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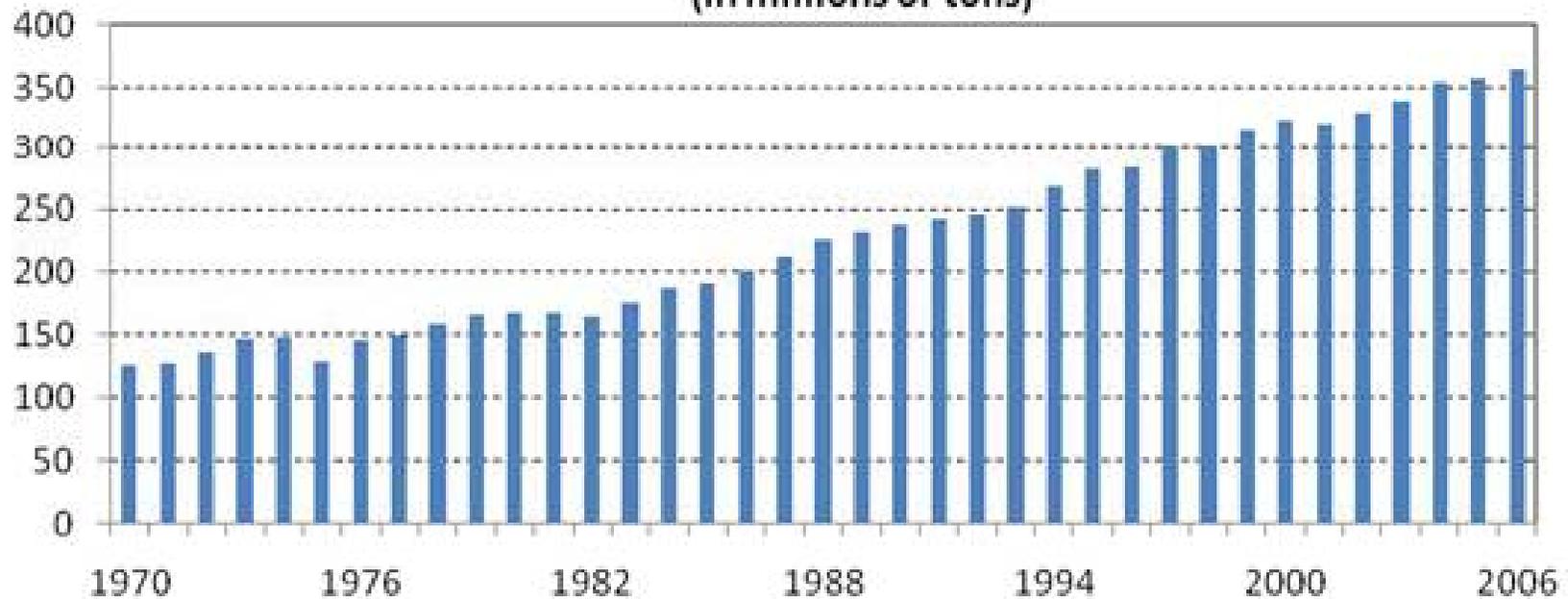


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Figure 1: Global Production of Paper and Paperboard
(in millions of tons)

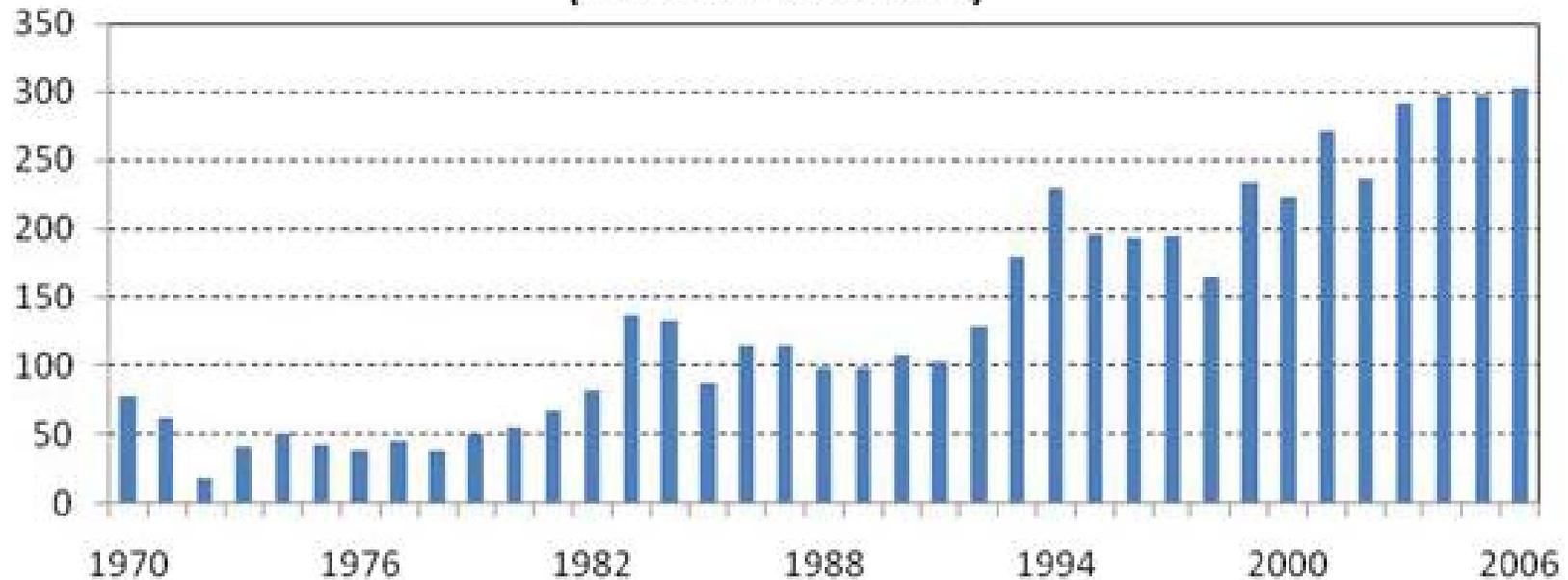


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Figure 2: Consumption of Paper and Paperboard in Bangladesh
(in thousands of tons)

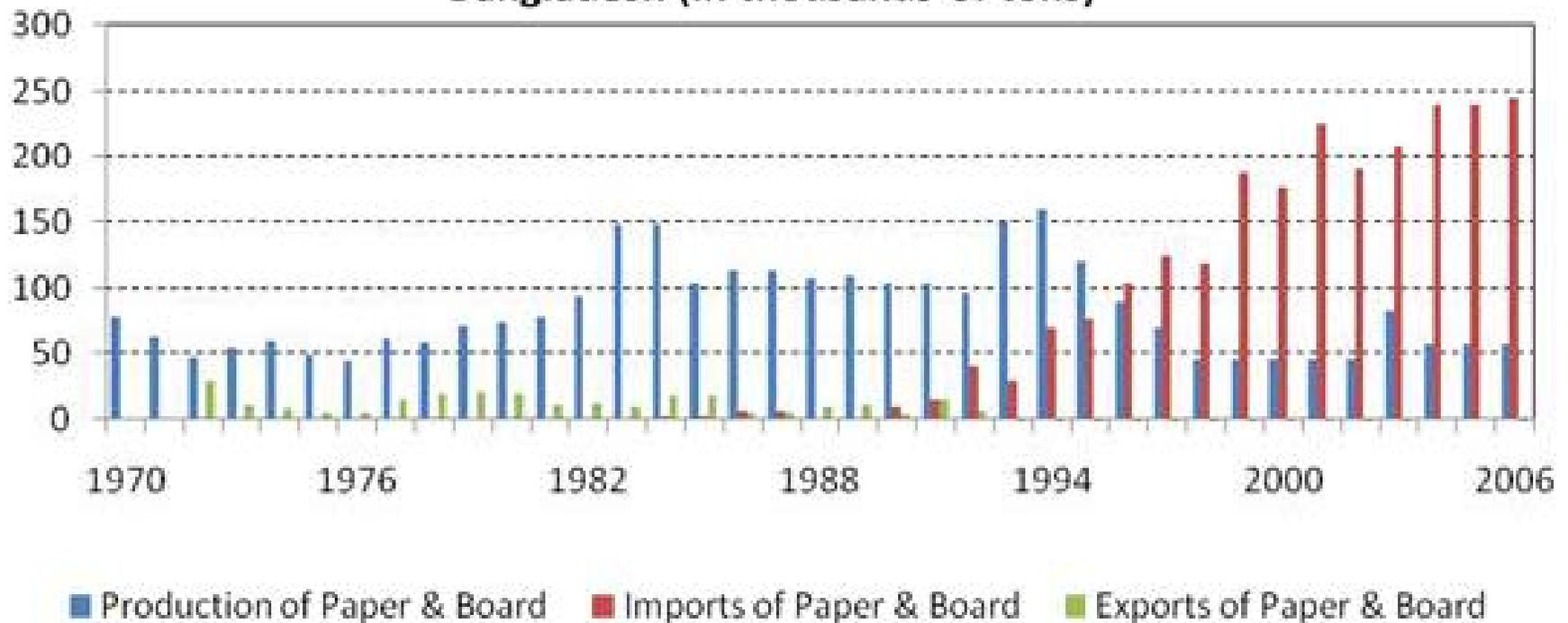


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Figure 3: Production, Imports & Exports of Paper and Paperboard in Bangladesh (in thousands of tons)



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Factors Behind the Decline of Bangladeshi Paper Industry

- There are two main factors responsible for the developments shown in Figure 3:
 - increasing shortages of wood fiber in Bangladesh (which is critical for the **public** pulp and paper mills as they depend highly on forest based fiber resources)
 - falling paper prices at the global level, resulting from an oversupply of paper and paperboard that built up at the global level mostly during the 1990s (which is critical for the **private** paper and board mills as they depend on imported pulps)



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Availability and Suitability of Jute

- Jute is abundantly grown in Bangladesh:
 - Bangladesh grows about 1 million tons a year
 - Bangladeshi jute constitutes nearly 40 percent of the world's jute production
- There are by now various processes and techniques which make jute highly suitable for papermaking.
- Indeed, jute and other nonwoods are already used for papermaking (mostly in China and India), accounting for about 10 percent of the world's pulp production.



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Economic Viability?

- Availability and suitability do not necessarily guarantee the economic viability of jute for papermaking in Bangladesh.
- We would need to know the price of jute pulp and compare it to the price of imported pulp.
 - If jute pulp is cheaper, it is economically viable.
 - If jute pulp is more expensive, it is not economically viable.
- The problem is that there is no jute pulp market and hence, no price available for jute pulp.

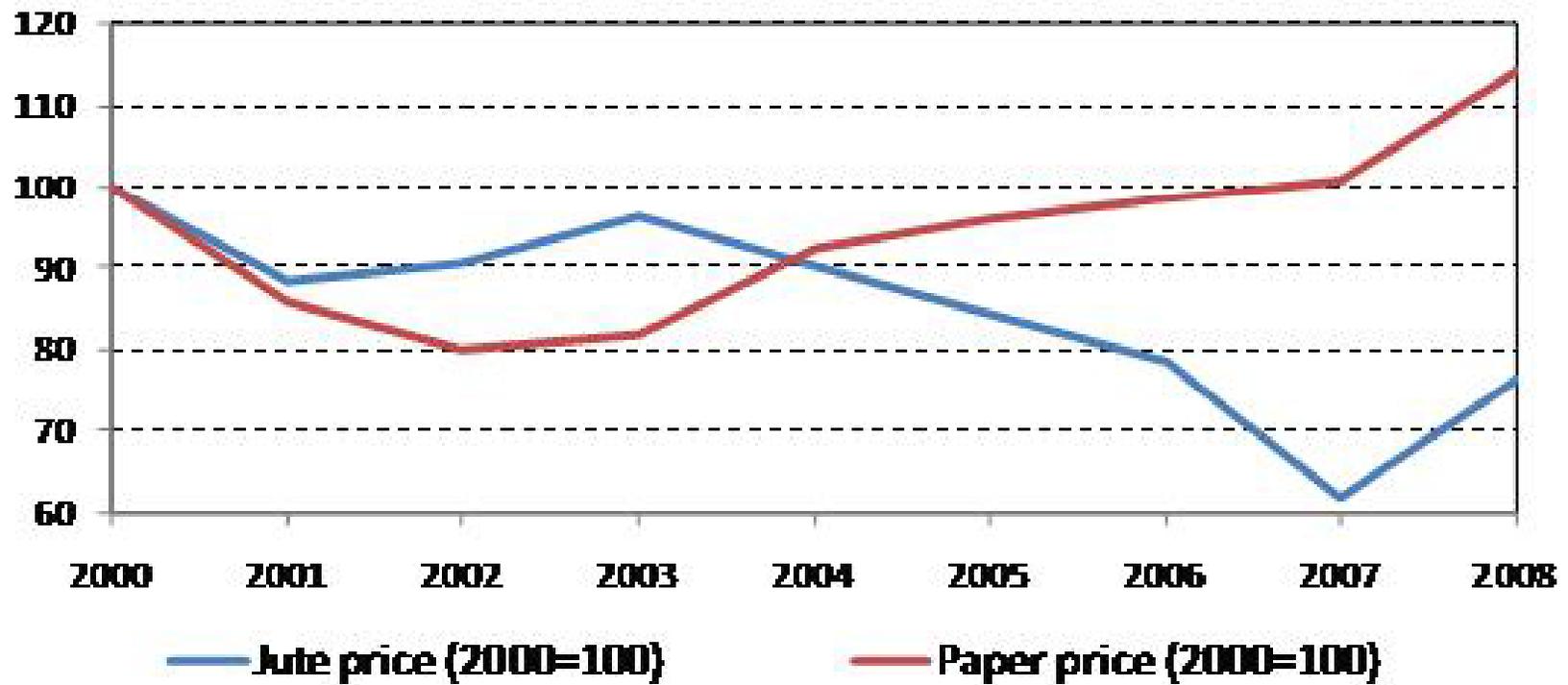


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Some Broad Price Trends

Figure 4: Price Developments of Jute and Paper in Asia



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Estimating the Price of Bangladeshi Jute Pulp

- We estimate the price of jute pulp by dividing the actual average producer price of jute (averaged from 2004-2007 to control for volatility) by the average percentage pulp yield of whole jute.
- We averaged the producer price from 2004 to 2007 as:
 - 2004 was the first year Bangladesh imported a significant amount of nonwood pulp
 - 2007 was the last year for which such data was available
- It turns out that the average raw material price for pulp produced from domestic jute would have been US\$320 per ton of jute pulp.

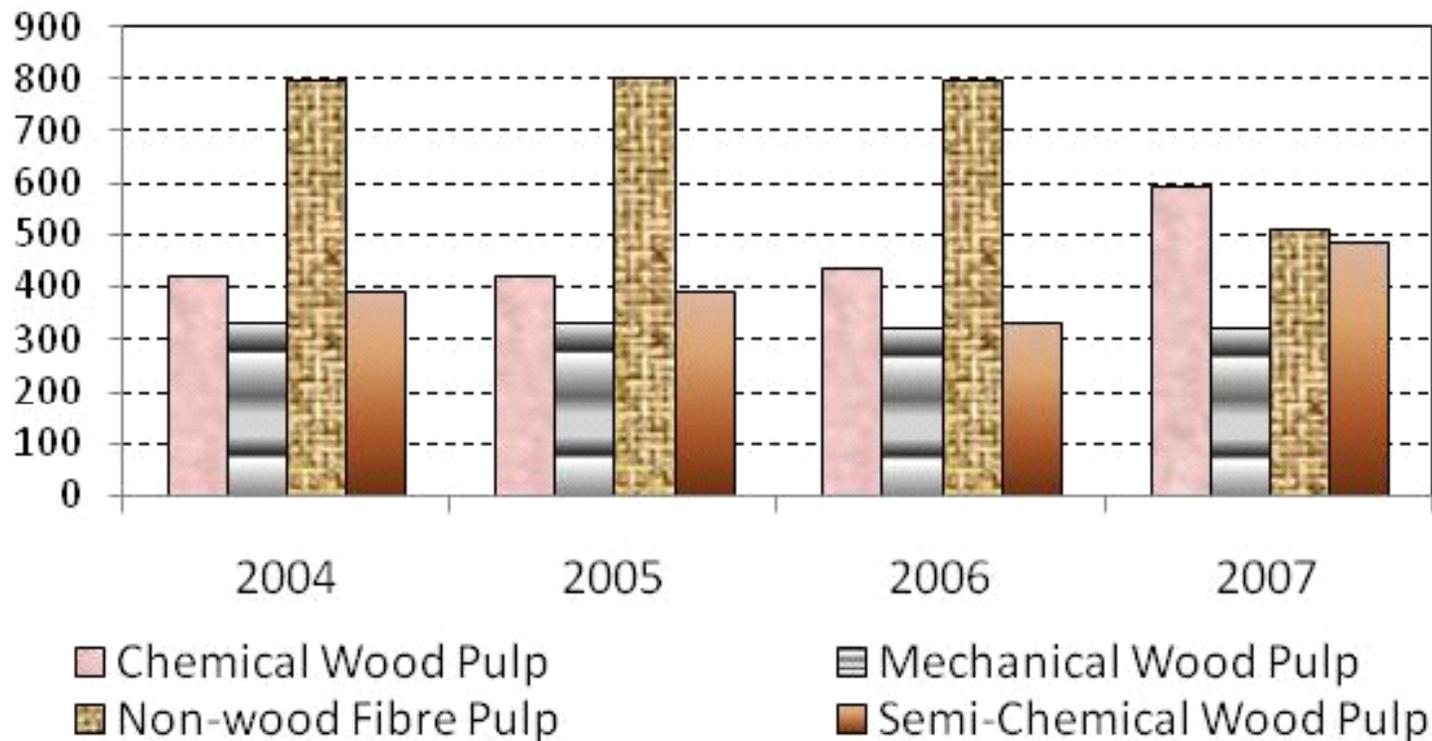


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Comparing US\$320 per Ton of Jute Pulp with:

Figure 5: Price Paid per Imported Ton of Pulp



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Developmental Implications

- The developmental implications of making paper from jute would be significant and complex.
- Some of the more obvious implications are:
 - reduce the import bill by US\$210 million a year (from US\$40 million of imported pulp and US\$170 million of imported paper)
 - create about 100,000 jobs in agriculture and industry
 - improve Bangladesh's economic diversification



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Conclusions

Substituting wood pulp with jute pulp in papermaking implies a win-win solution for Bangladesh as

- jute is abundantly available in Bangladesh
- jute is based on its chemical and morphological characteristics highly suitable for papermaking
- papermaking from jute seems to be economically viable
- papermaking from jute would contribute positively to Bangladesh's urgently needed economic diversification as well as to poverty reduction
- there are no intrinsically negative implications on the environment from using jute for papermaking in Bangladesh



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Conclusions

- Given that
 - jute has been successfully tried as a raw material for pulp and paper in Bangladesh, China, India, Thailand and the United States
 - the global paper industry has been reacting very slowly in adopting it as a new pulping resource

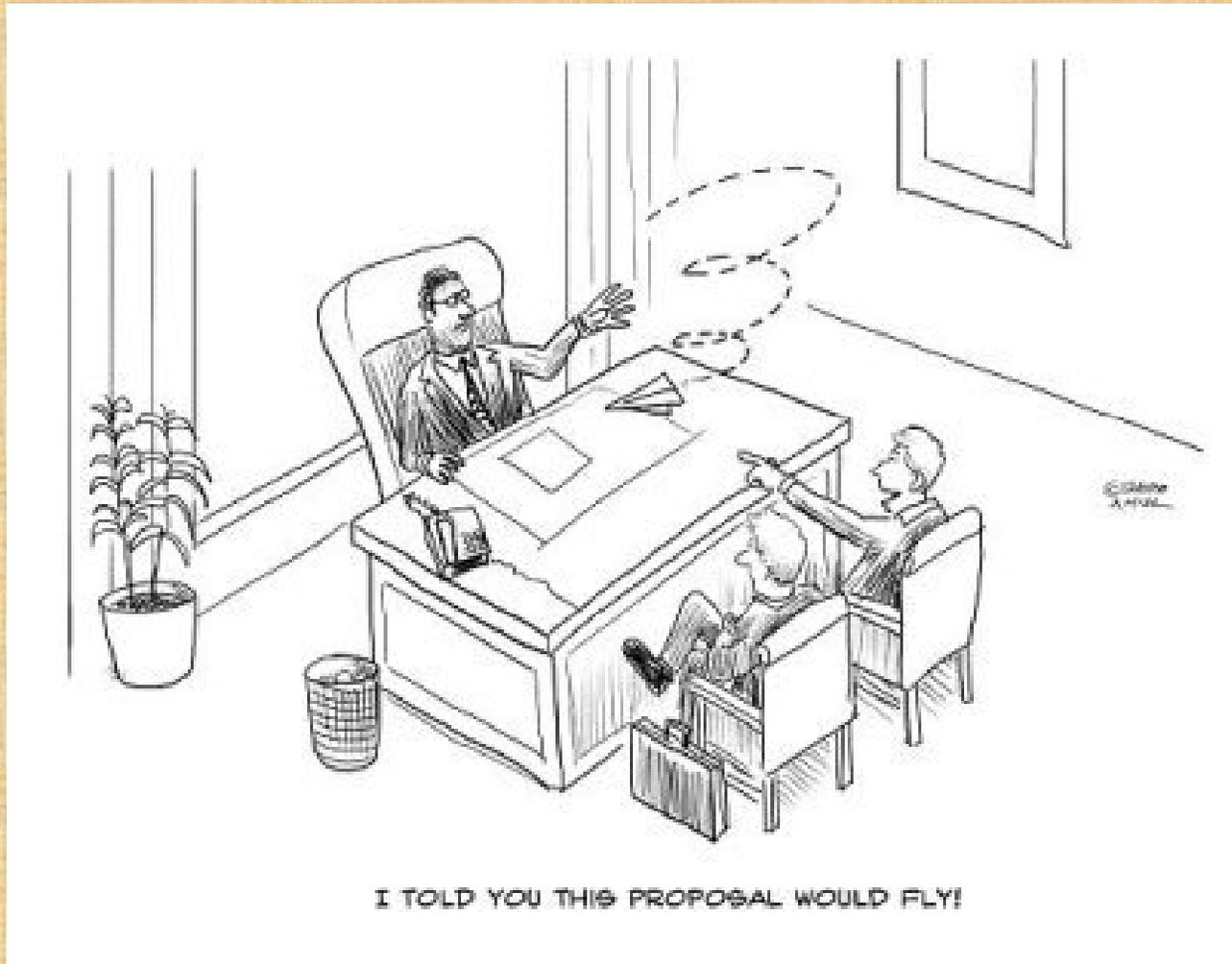
there is a role for public policy to encourage the use of jute for papermaking in Bangladesh and other countries.



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Thank you for your attention.



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