



Deep Decarbonization in Industries what does it mean for India?

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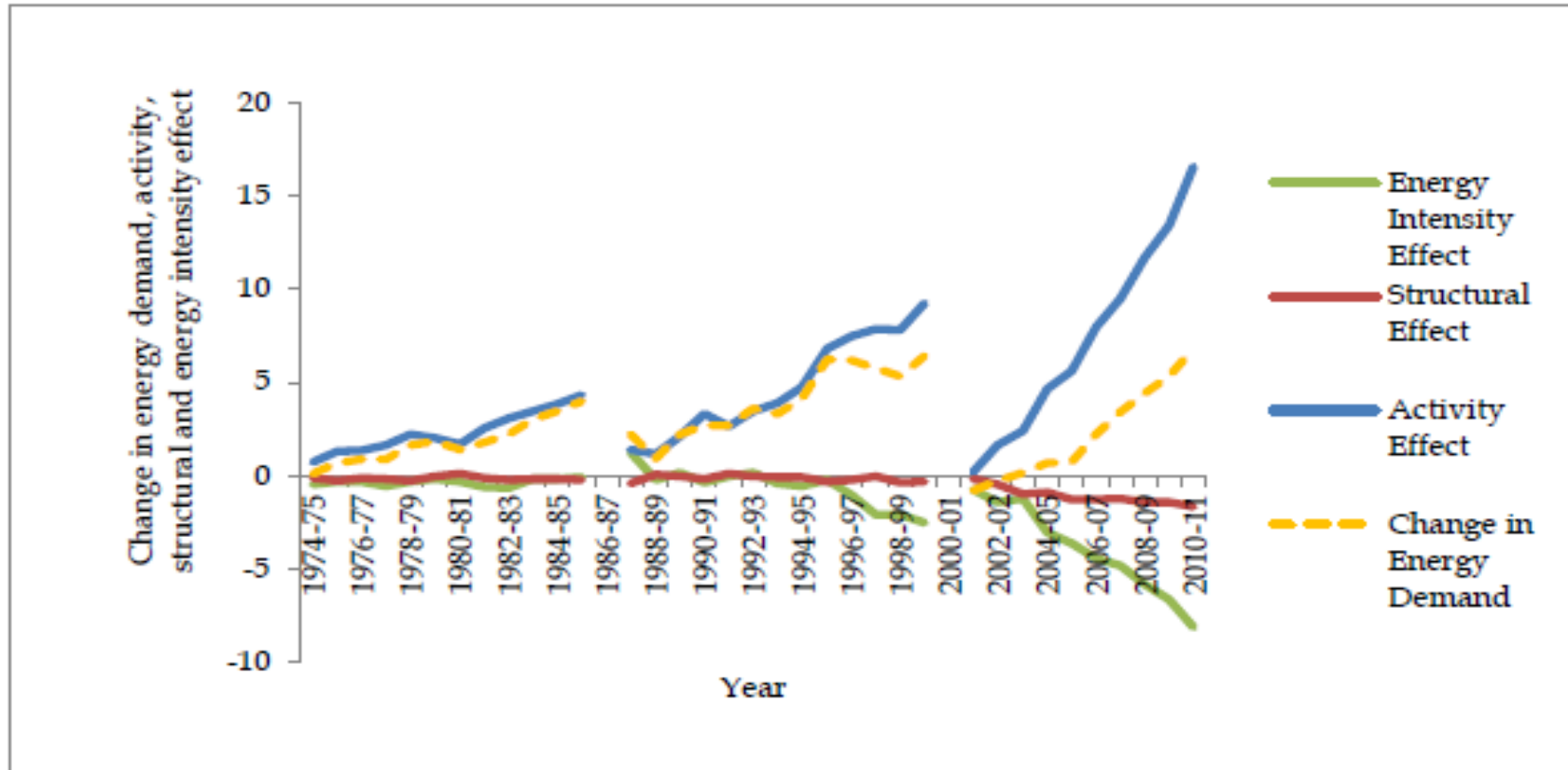
Global Change Programme, Jadavpur University, Kolkata

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Leadership by Industries: Energy Efficiency

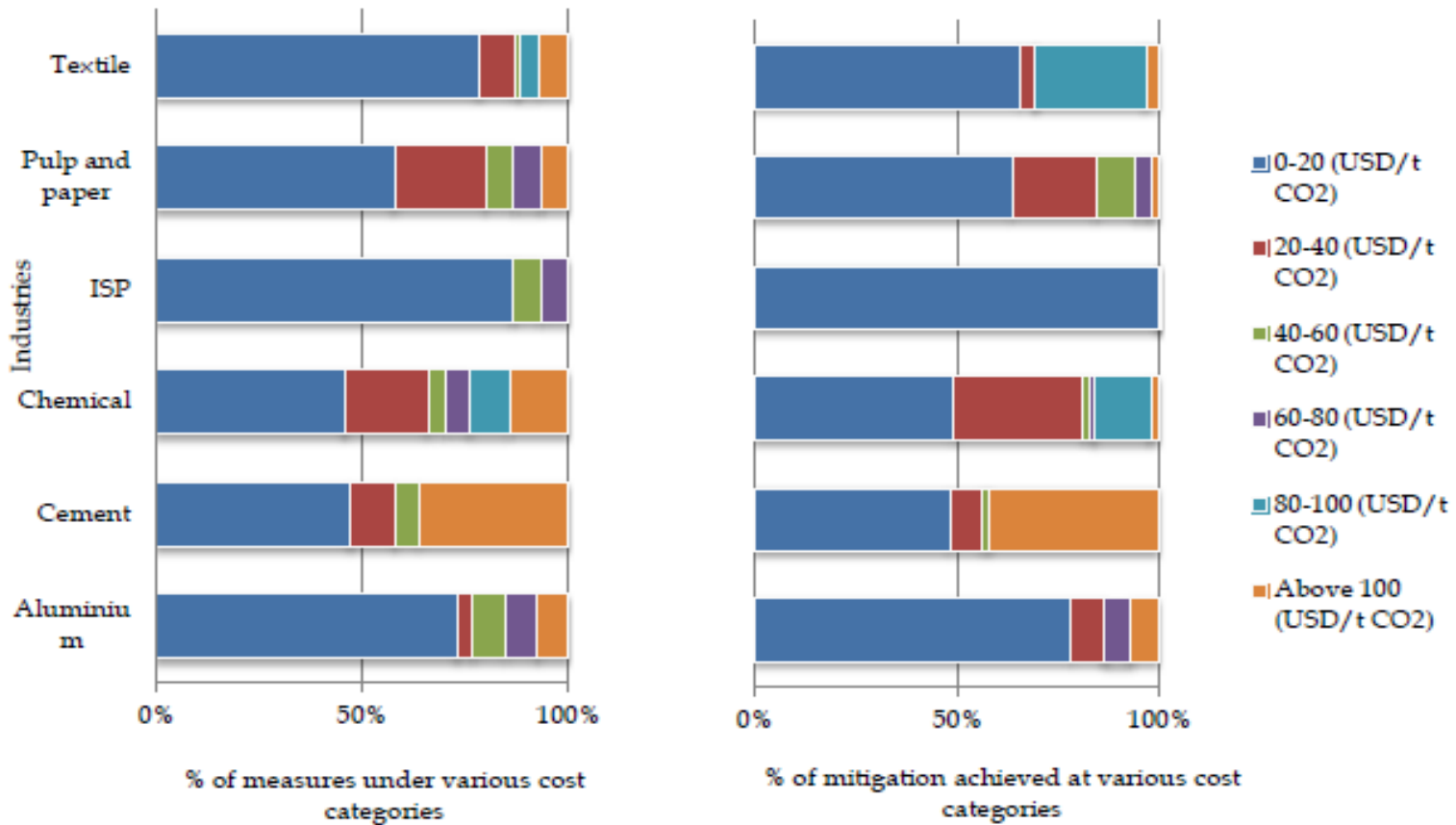
Decomposition of energy demand - Indian manufacturing industries



Based on Annual Survey of Industries, India 1973-74 – 2010-11
Dasgupta and Roy (2016, forthcoming)



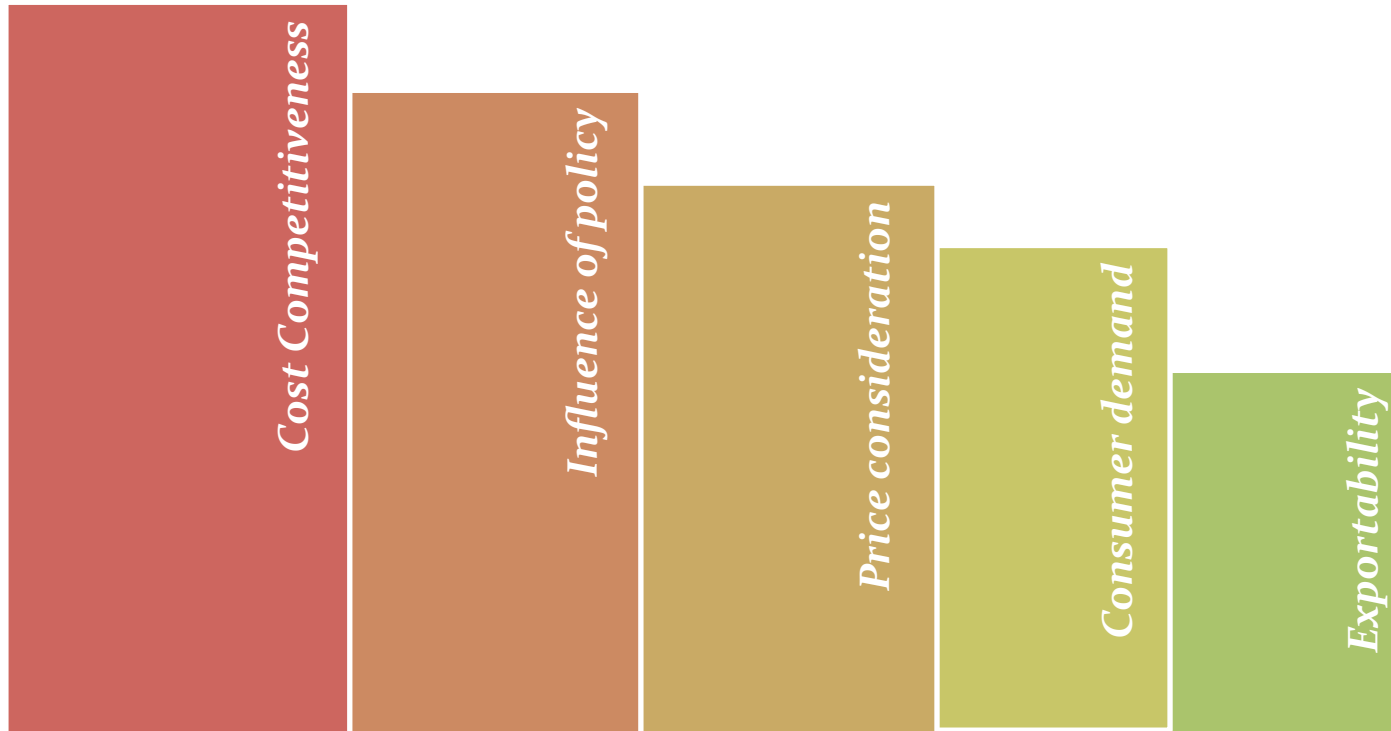
Initiatives ranged from low to high cost



Source: IPCC 2014



Big Industries acted as leaders : Driving forces behind actions



Source: Chakraborty & Roy 2012



Emergence of Policy framework

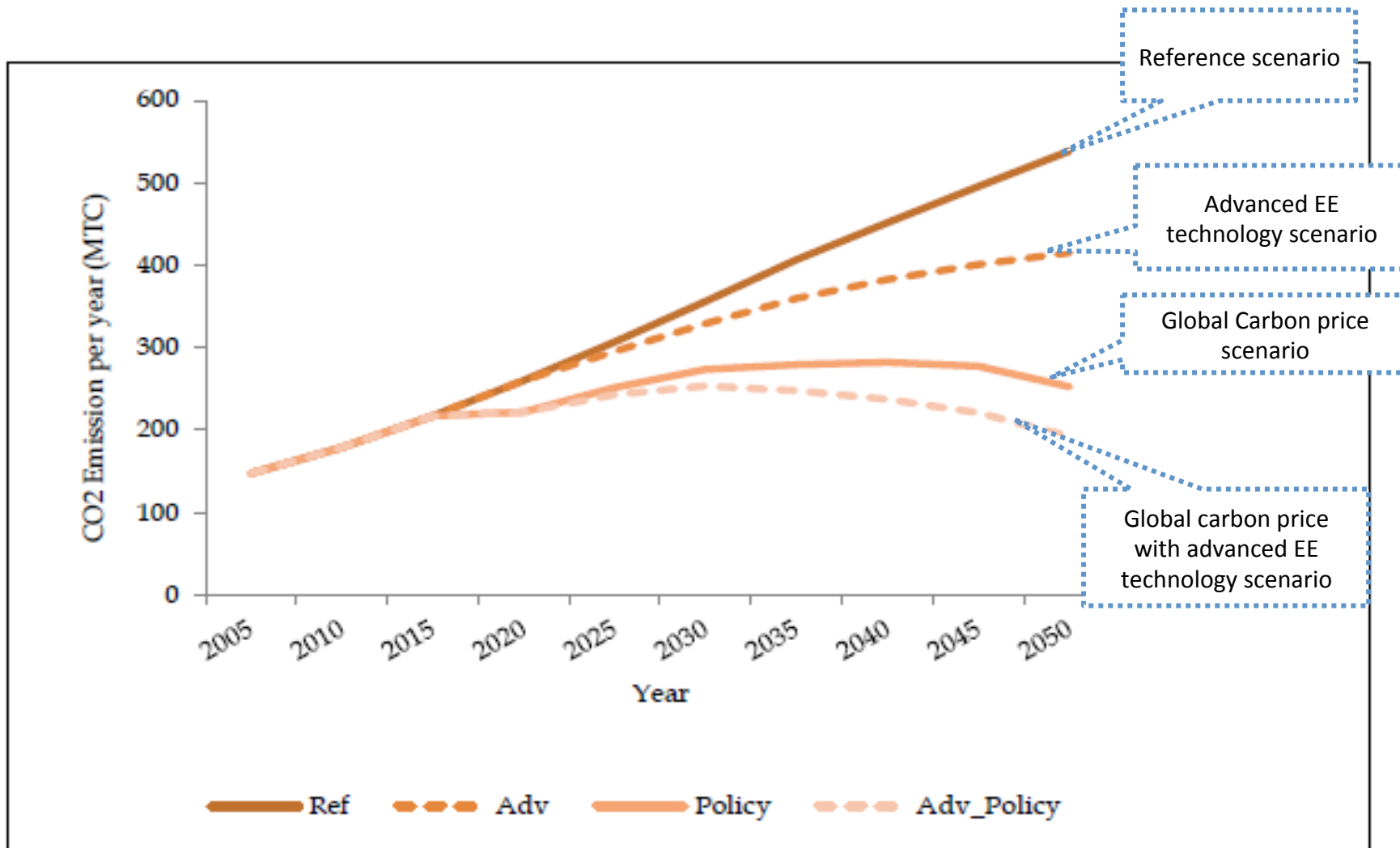
- National Enhanced Energy Efficiency Mission (for large energy intensive industries)
- Energy Certificates Market under PAT (like EU-ETS)
- Coal Cess (INR 400/ton of coal~ \$6/ton)



**What more?
New Potential**



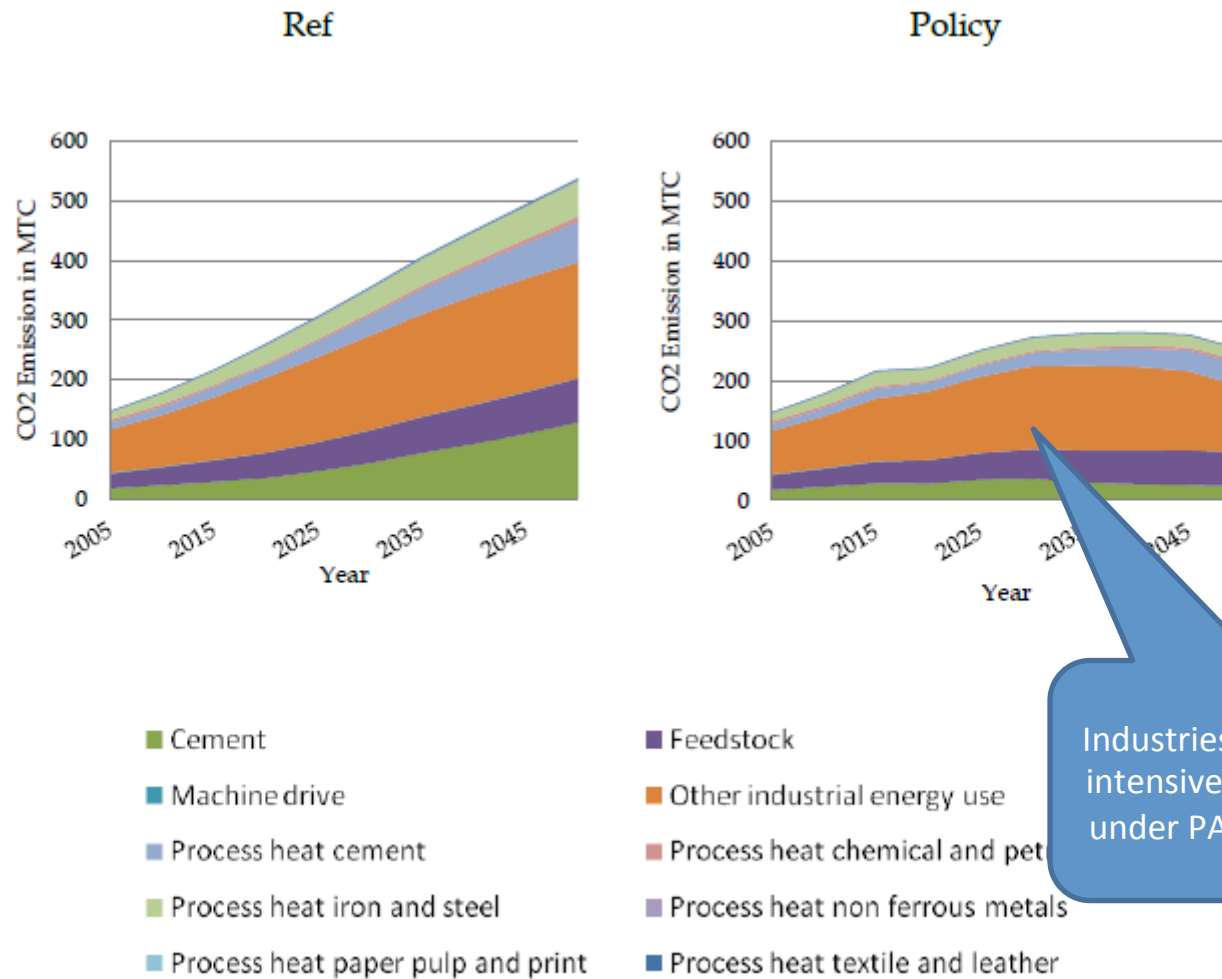
Results from GCAM



Source: Dasgupta, Roy et.al (2015) Unpublished



Potential beyond energy intensive industries

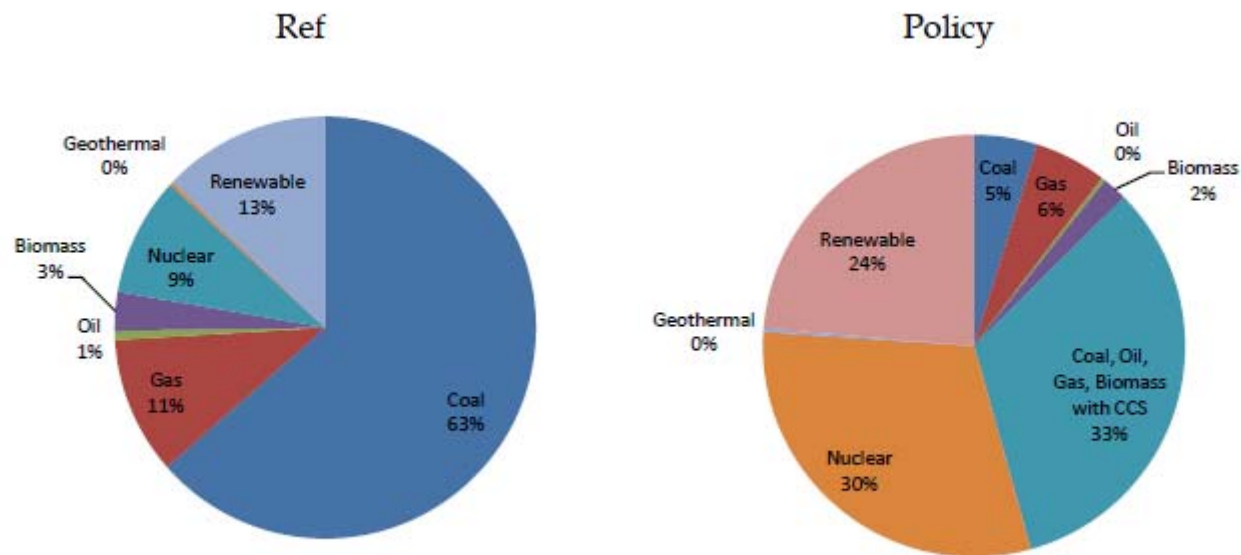


Source: Dasgupta, Roy et.al (2015) Unpublished



Implications for power generation

Long run green growth in industry requires large scale electrification



Projected consumption of fuel use for electricity generation in Indian in 2050: comparison of Reference scenario and green growth policy scenario

Source: Dasgupta, Roy et.al (2015) Unpublished



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<http://juglobalchangeprogram.org/>

Jadavpur University



Thank you