Sustainable Energy: Carbon Neutrality and Renewables in Asia-Pacific-The legal Response

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The UN Sustainable Energy for All Initiative

- Engages with governments, private sectors and civil society partners globally to achieve three major goals by 2030
  - to ensure universal access to modern energy services;
  - to reduce global energy intensity by 40 percent; and
  - to increase renewable energy use globally to 30 per cent.

SDGs- Goal 7- on Sustainable Energy

- Sustainable Development Goals (7) aim to ensure universal access to affordable, reliable, and modern energy services.
- Sustainable Energy acts as an engine for poverty reduction, social progress, equity, enhanced resilience, economic growth, and environmental sustainability.

Carbon Neutrality

- Carbon Neutrality' means annual zero net anthropogenic (human caused or influenced) CO_2 emissions by a certain date.
- Every ton of anthropogenic CO_2 emitted is compensated with an equivalent amount of CO_2 removed (e.g. via carbon sequestration)
- Carbon Neutrality can be achieved based on three pronged approach,
  - Reducing energy consumption through efficiency;
  - Transitioning to renewable energy sources; and
  - Offsetting emissions that are beyond its control.

Asia Pacific…..Some examples

- Australia
- China
- East Timor
- India
- Indonesia
- Japan
- Malaysia
- Mongolia
- New Zealand
- Philippines
- Republic of S. Korea
- Singapore
- Thailand
- Vietnam
- Myanmar

Current Energy Pattern in the Asia Pacific Region

- Government incentives and current energy patterns reflect three dominant trends:
  - the continued dominance of fossil fuels in the energy mix
  - projections of strong future growth in electricity demand correlated with continued strong economic growth, requiring increased investments in generation capacity and transmission and distribution infrastructure
  - governments seeking to promote renewable energy development and adopting comparable incentives to drive the level of investment required to meet renewable energy targets

RE Law- Some Examples from Asia pacific

- *Energy Development and Promotion Act 1992 (Thailand)*
- *Renewable Energy (Electricity) Act 2000* (Cth) – Australia
- *Energy Efficiency and Conservation Act 2000 – New Zealand*
- The *Energy Law of Mongolia 2001*
- 2003 Renewable Portfolio Standard – Japan
- *The Renewable Energy Law 2006* (REL) –China
- *Renewable Energy Act of 2008 – Philippines*
- *Basic Law on Low Carbon Green Energy 2010 – S.Korea*
- *Renewable Energy Act 2011 – Malaysia*
- Clean Energy Act 2011 (Cth)- Tasmania
- *Energy Conservation Act 2012-Singapore*

RE law- In progress!!

- Draft Base Law for Renewable Energy being proposed in 2010- East Timor
- Draft RE Law, 2009, 2016- India (Electricity Act 2003 which mandates 10% target through RE)
- Green Energy Policy 2004 – Indonesia

Some Key messages!

- Policy directions and incentives for renewable energy continue to strengthen across the region and there are increasingly positive indications from government and private developers!
- Countries such as China, Japan, India, Vietnam, Thailand, the Philippines, Malaysia and Indonesia are moving rapidly towards RE;
- Progression of development for domestic renewable energy industries is at very different stages across the Asia Pacific region
- ISO 14064 is an international standard which provides guidance for Developing GHG emission Inventories.
- Requirements for Companies to become Carbon Neutral as per PAS 2060:2014.

Thrust on the following RE development

- Solar
- Wind
- Hydro
- Biomass
- Ocean Energy
- Geothermal

Carbon Pricing- Challenges within!- E.g. India

- India had established a carbon pricing instrument in form of National Clean Energy Fund through a levy on coal. 2010
- Through Finance Bill 2010-2011 a corpus called National Clean Energy Fund was created out of cess on coal produced for financing and promoting clean energy initiatives, funding research in the field of clean energy.
  - Green Energy Corridor for boosting up the transmission sector, Namami Gange, Green India Mission, Jawaharlal Nehru National Solar Mission's installation of solar photovoltaic lights and small capacity lights, installation of SPV water pumping systems, SPV Power Plants, Grid Connected Rooftop SPV power Plants.
  - However, in 2017 the Clean Energy Cess was abolished and a new cess called GST Compensation Cess was put in place!

The Concerns!

- Wind Farms- Encroachment of commons!
  - Kutch Example in India
- Bird Hits

Hydropower and Cumulative Impacts!

- 150 Projects in Arunachal Pradesh- 55000mw

Solar

- Land availability- Food security
- Environmental implications of solar panels disposals!
- Reflector and its impact!
- China, floating photovoltaic systems

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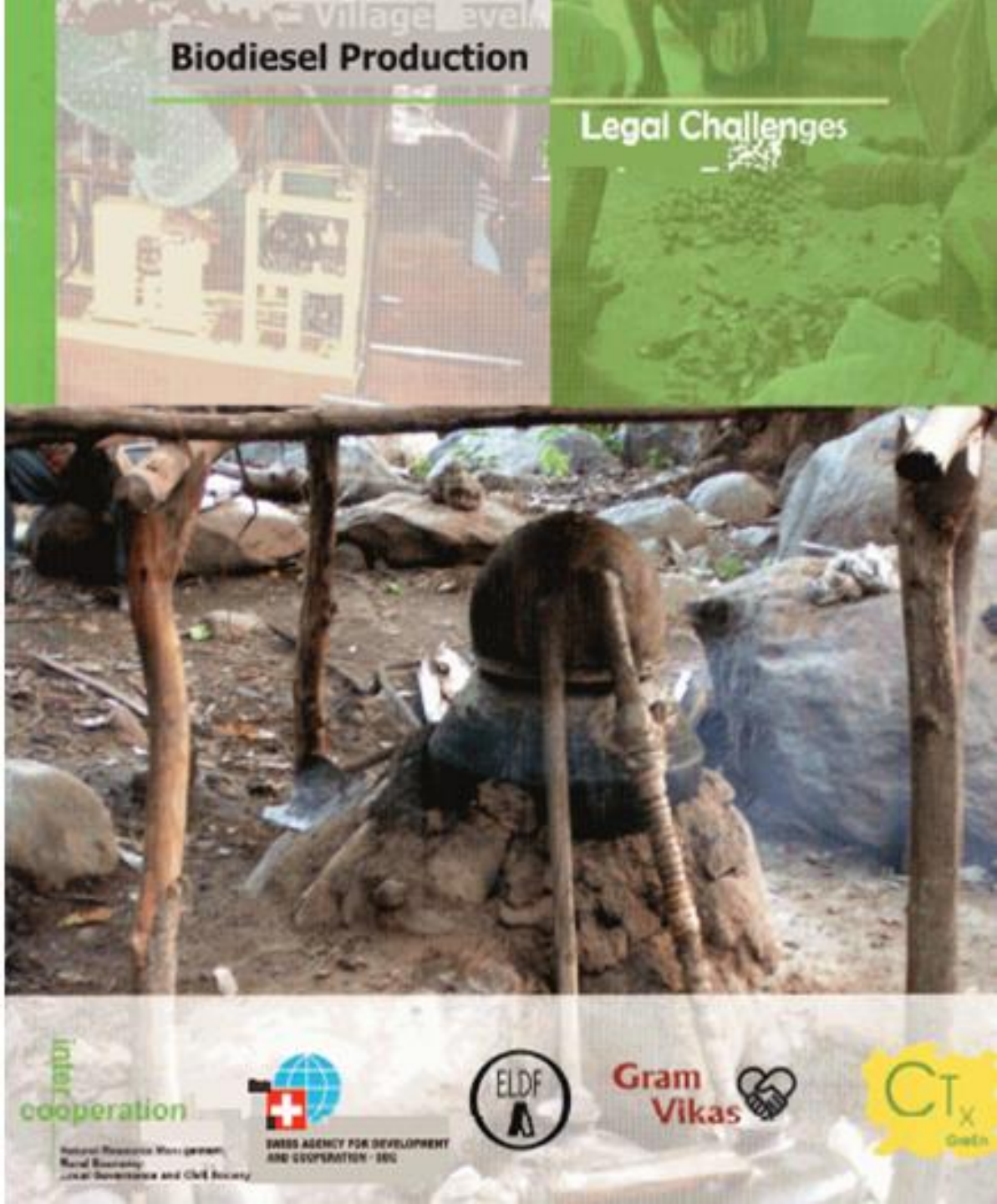
Geothermal

- Not very evolved
- High Risks

Bioenergy

- Village Scale bioenergy projects with link to local livelihoods
- Distributed RE is the way forward for a number of developing countries
- The Jatropha for Mercedes Benz may not work!



Sustainable Energy-Carbon Neutrality- Renewables- Some Challenges!

- Lets not get lost in calculations!
- Carbon Offsets , if real, must eventually help environment, which also should be measurable!
- RE development concerns are real! Lets not brush it under the carpet!
- Carbon Pricing! Clean Energy Funds are nice as a concept , difficult to achieve in reality!
- Lets move away from posturing to reality on the ground!

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THANK YOU

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