



Intellectual property rights and clean energy technologies

Ahmed Abdel Latif

Senior Programme Manager

Innovation, Technology and Intellectual Property

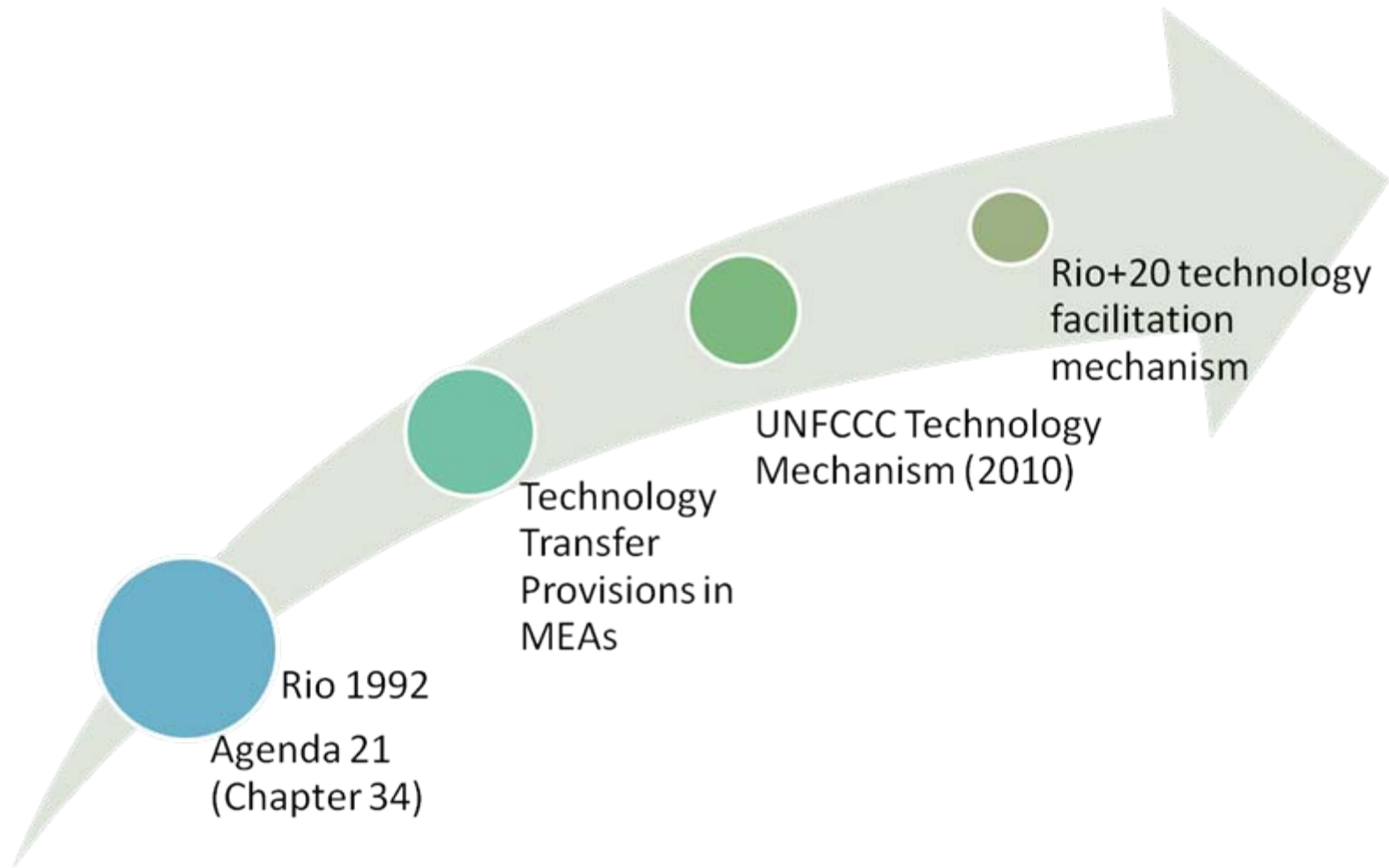
ICTSD

UN Workshop on clean energy technologies

29 May 2013



Technology Transfer at the multilateral level since 1992



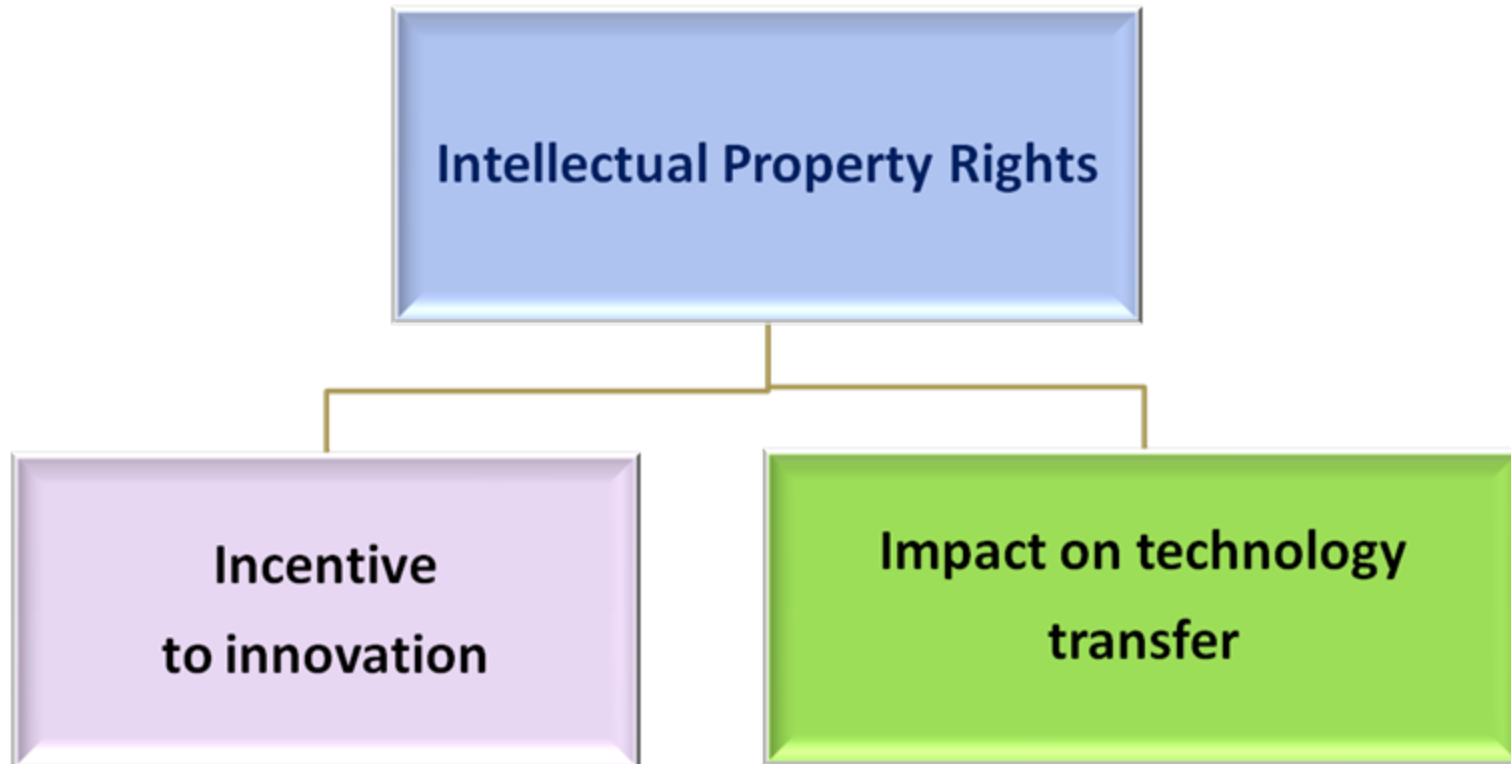
IPRs in Chapter 34 of Agenda 21 (1992)

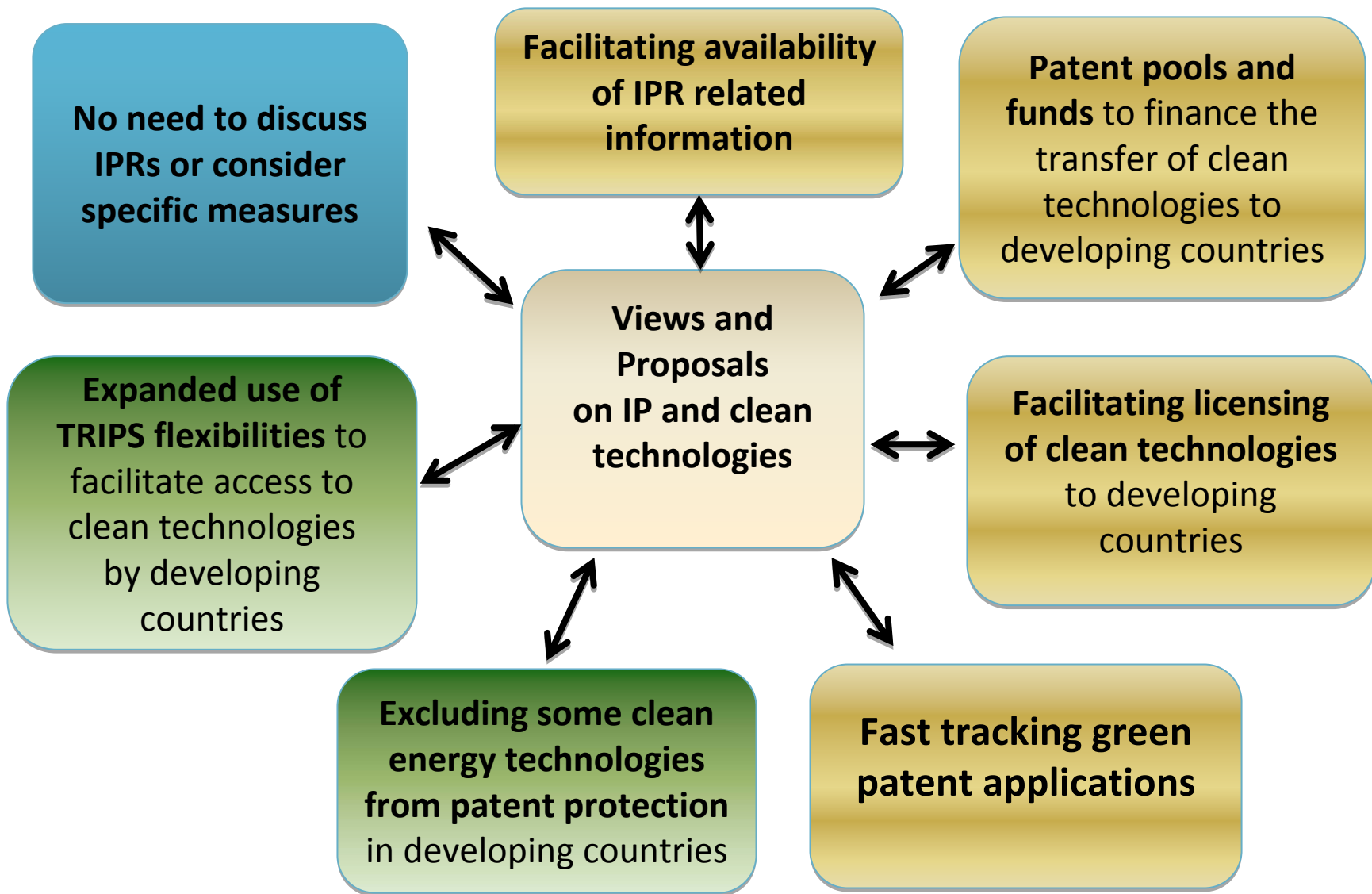
- Formulation of policies and programs for the effective transfer of ESTs that are **publicly owned or in the public domain**;
- **Purchase of patents and licenses on commercial terms for their transfer to developing countries on non-commercial terms**, taking into account the need to protect intellectual property rights;
- In compliance with and under the specific circumstances recognized by the relevant international conventions adhered to by States, the undertaking of measures to prevent the abuse of intellectual property rights, including rules with respect to their acquisition through **compulsory licensing**, with the provision of equitable and adequate compensation;

IPRs in Rio+20 outcome document (2012)

We emphasize the importance of technology transfer to developing countries and **recall the provisions on technology transfer, finance, access to information, and intellectual property rights as agreed in the Johannesburg Plan of Implementation**, in particular its call to promote, facilitate and finance, as appropriate, access to and the development, transfer and diffusion of ESTs and corresponding know-how, in particular to developing countries, on favorable terms, including on concessional and preferential terms, as mutually agreed.

The policy debate on IPRs and clean technologies

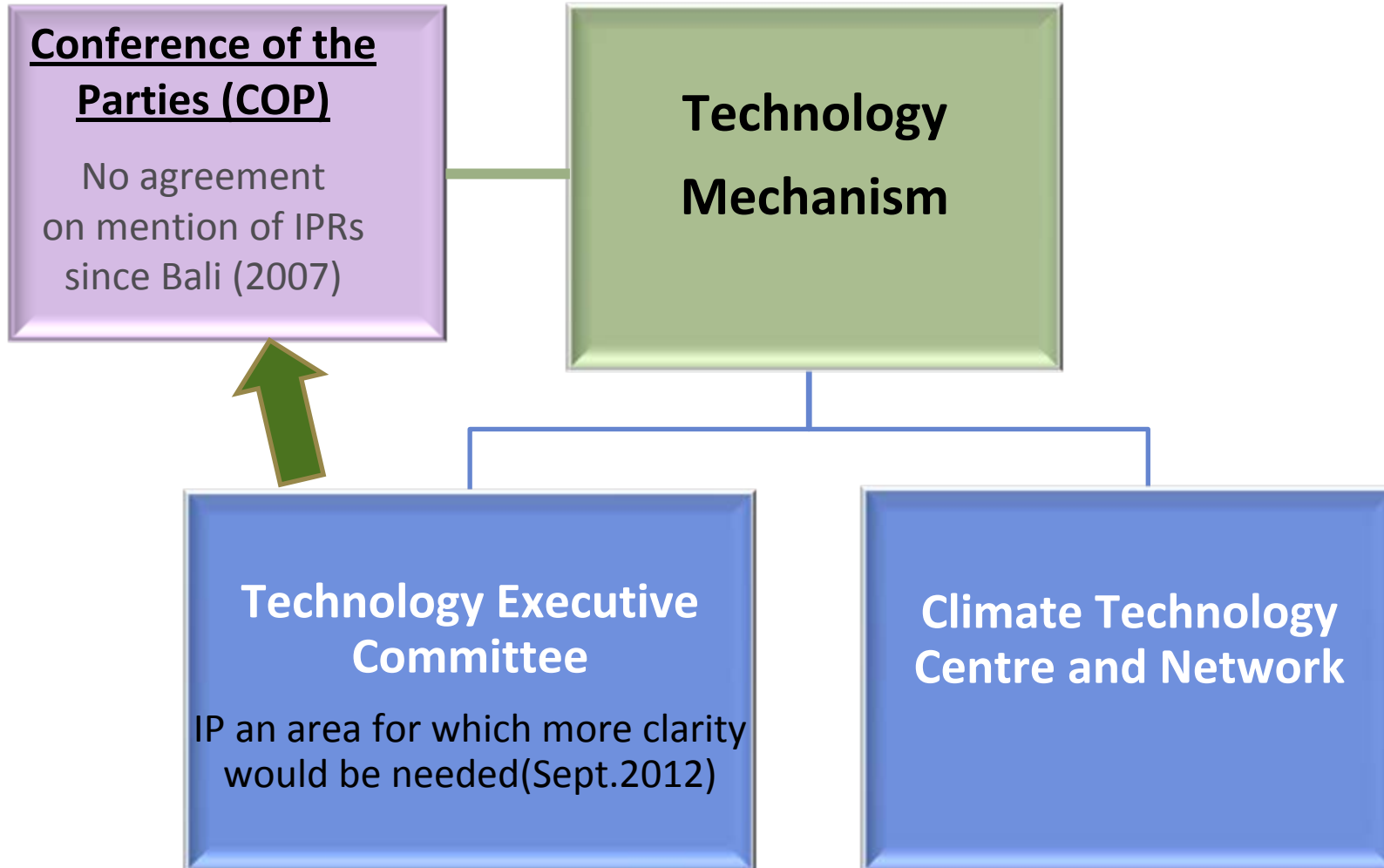




World Bank, *Inclusive Green Growth Report (2012)*

- Suggests the use of **compulsory licensing and patent pools** to facilitate access to green technologies.
- “making it easier for countries to issue compulsory licenses under appropriate circumstances can help ensure more affordable access to patented green innovation by poor households in low income countries.”

The debate on IP at the UNFCCC



Untangling the IP and clean energy technology debate

International IP standards

Empirical evidence

Some developments and initiatives

A possible way forward

What do international agreements tell us about the role of IPRs in innovation and technology transfer?

International IP standards: the TRIPS Agreement

Article 7: objectives

The protection and enforcement of intellectual property rights **should** contribute to **the promotion of technological innovation** and to **the transfer and dissemination of technology**, to the **mutual advantage of producers and users** of technological knowledge and in a manner conducive to **social and economic welfare**, and to a **balance** of rights and obligations.

International IP standards: the TRIPS Agreement

Article 8: Principles

Appropriate **measures**, provided that they are consistent with the provisions of this Agreement, **may be needed to prevent the abuse of intellectual property rights** by right holders or **the resort to practices which** unreasonably restrain trade or **adversely affect the international transfer of technology**.

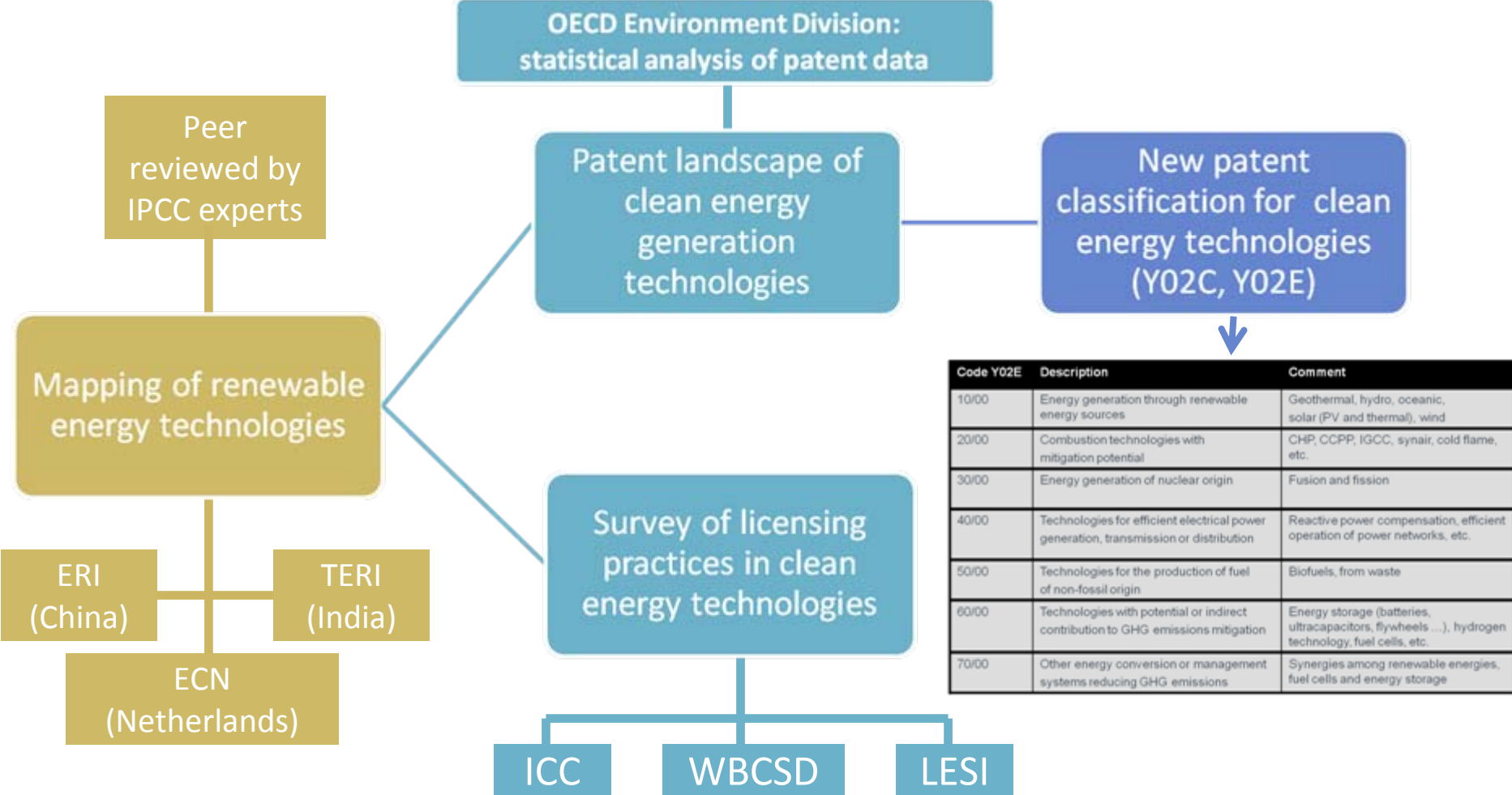
International IP standards: the TRIPS Agreement

Article 40

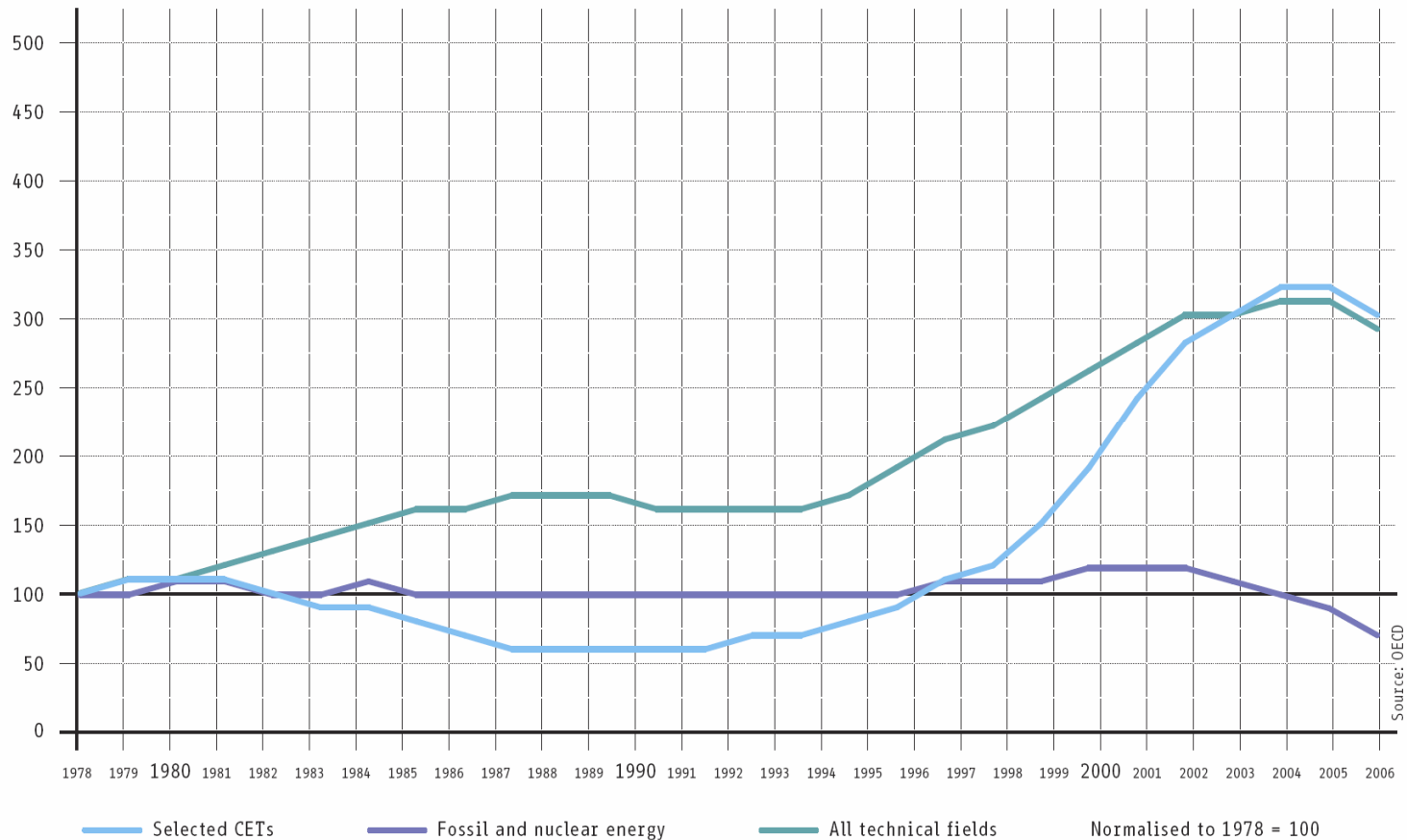
Members agree that **some licensing practices or conditions** pertaining to **intellectual property rights** which **restrain competition** may have adverse effects on trade and **may impede the transfer and dissemination of technology**.

What does empirical evidence tells us?

UNEP-EPO-ICTSD Report on Patents and Clean Energy

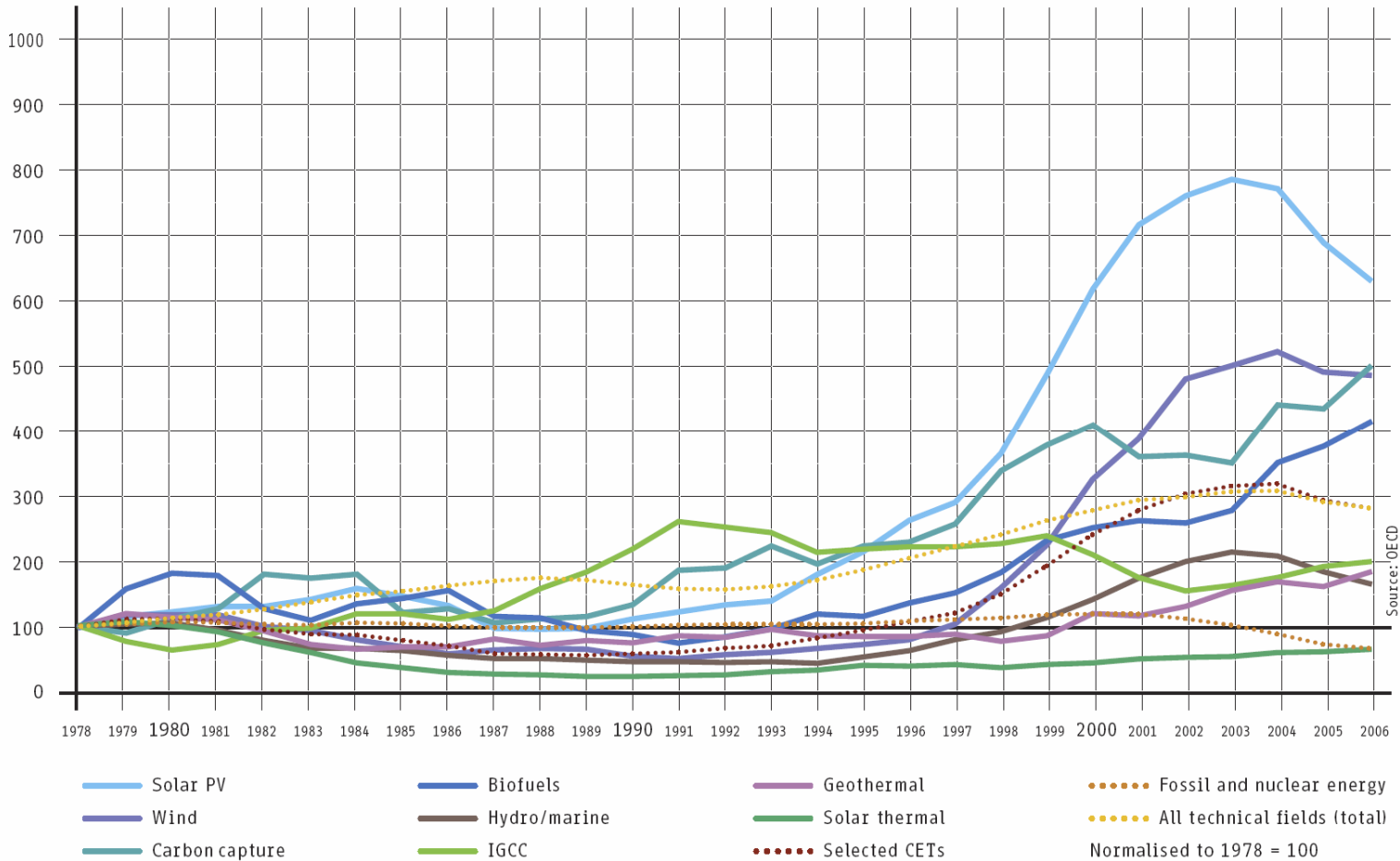


Increase in clean energy technology patenting



Patenting rates in the selected clean energy technologies (CETs) have **increased at roughly 20 per cent per annum since 1997**, outpacing traditional energy sources of fossil fuels and nuclear energy.

Relative growth rate for selected clean energy technologies



The fields experiencing the most intensive growth include **solar PV, wind, and carbon capture.**

Patenting in clean energy technologies dominated by OECD countries

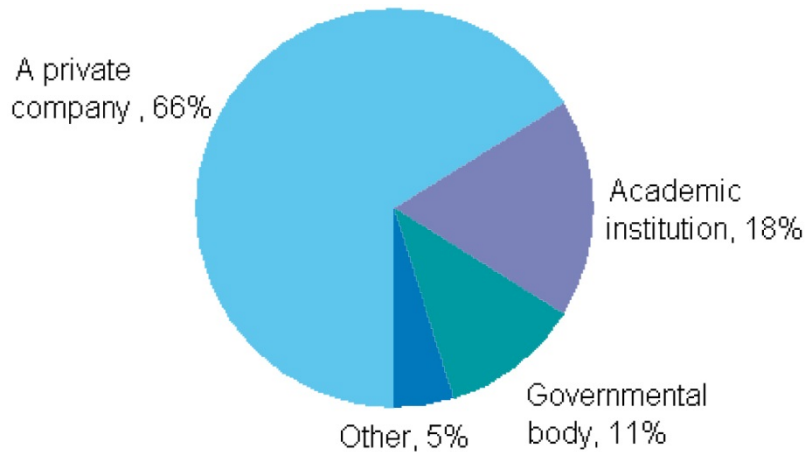


- These six countries account for almost **80 per cent of all patent applications in the clean energy technologies**, each showing leadership in different sectors.
- Concentration of patenting activity in these countries reflects patenting trends in other technology sectors.

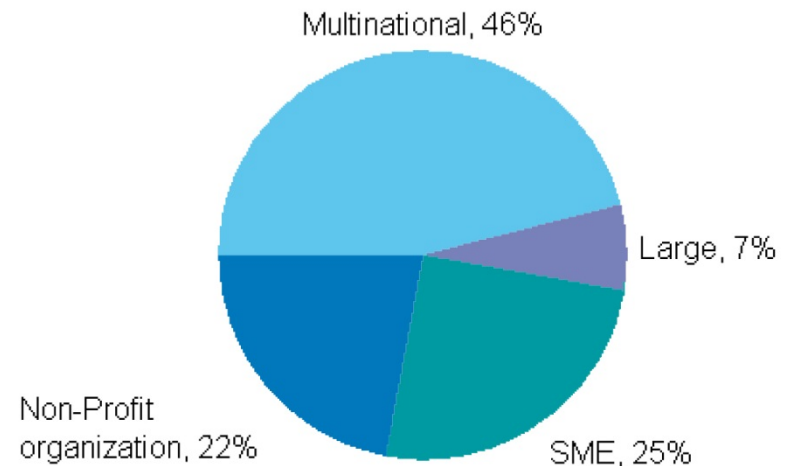
First global licensing survey of clean energy technologies

- Some **160 entities** completed questionnaires returned (50% via online survey)
- Wide range of responding organisations (multinationals, universities, government agencies)

Type of organisation



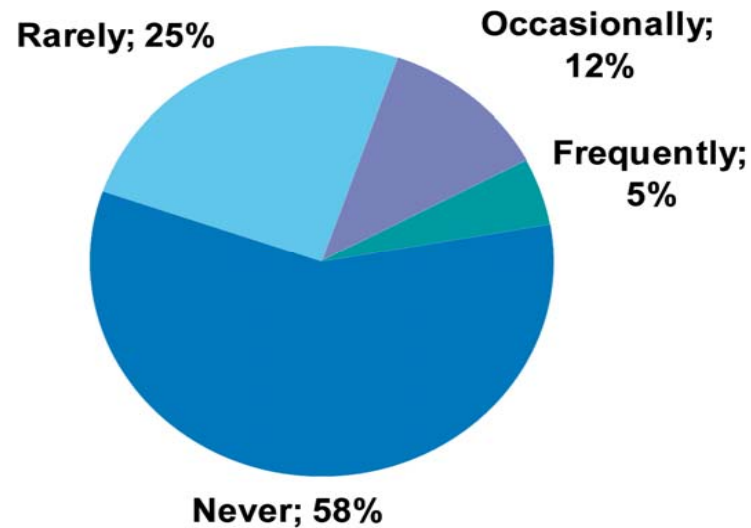
Size





Limited licensing to developing countries

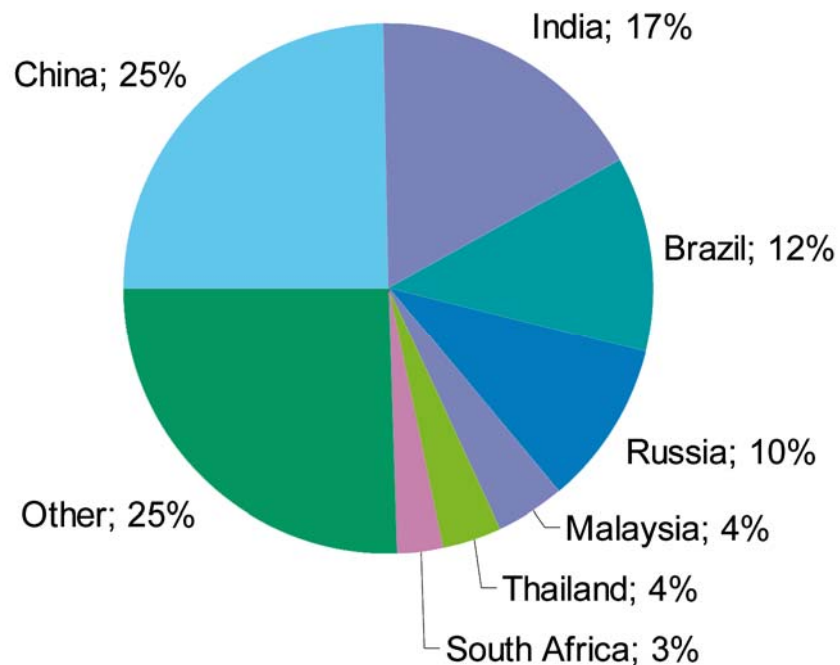
'To what extent has your organization entered licensing agreements that involve licensees (which are not majority-controlled subsidiaries) based in developing countries in the last three years?'





BRIC countries important for licensing -related activities

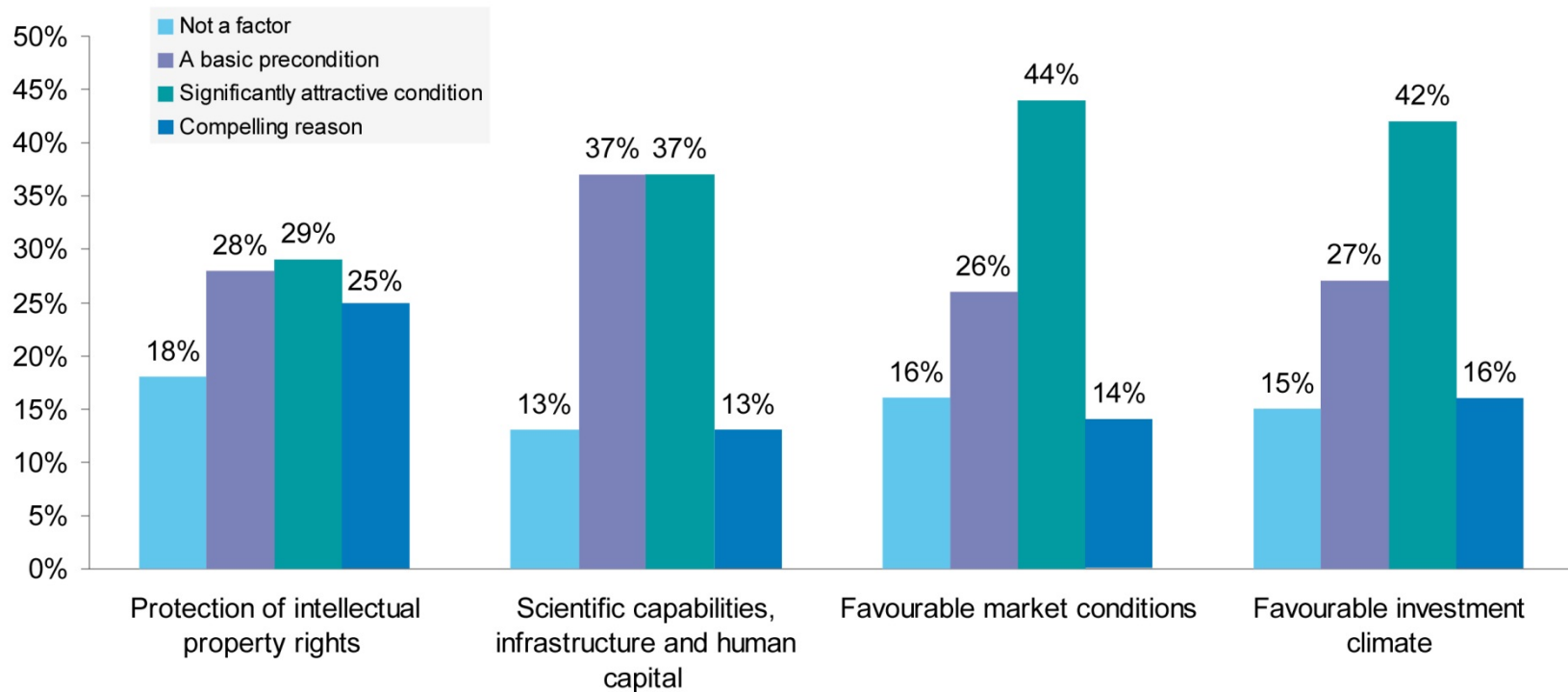
'With which countries has your organization been most involved in licensing or other commercialization activities of intellectual property in the field of CETs?'





Factors affecting licensing or co-operation with developing countries

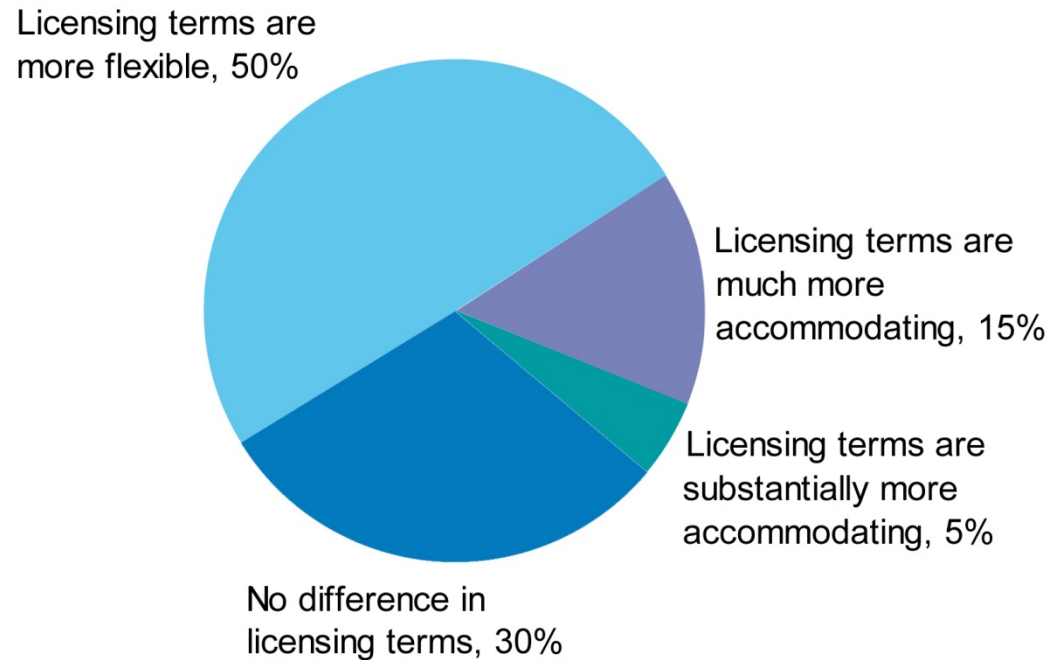
'When your organisation is making a decision whether or not to enter into a licensing or co-operative development agreement with a party in a developing country, to what extent would the following factors positively affect your assessment?'



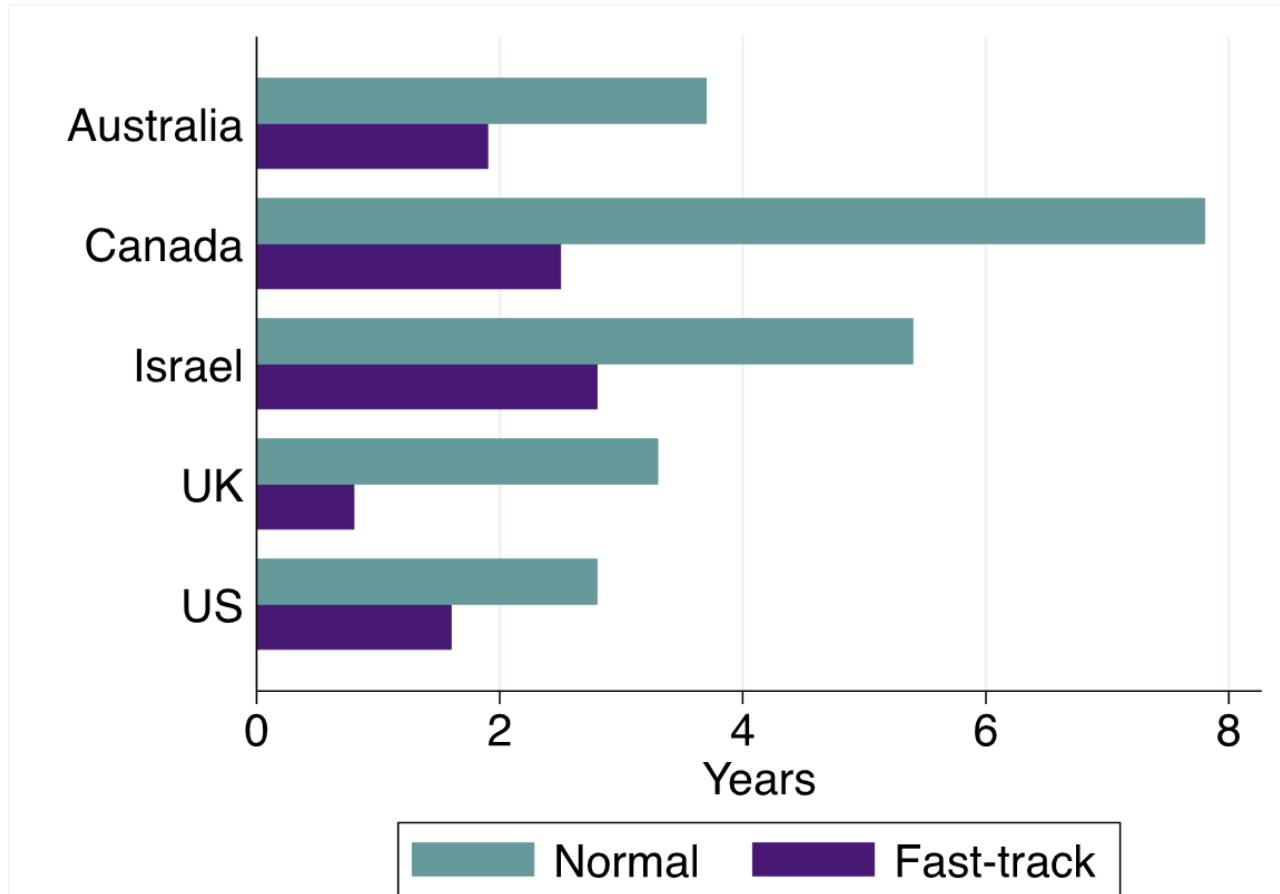
IPRs are important for the licensing-out of CETs from developed to developing countries, but there are other equally important factors.

Willingness to offer more favourable terms when licensing to developing countries

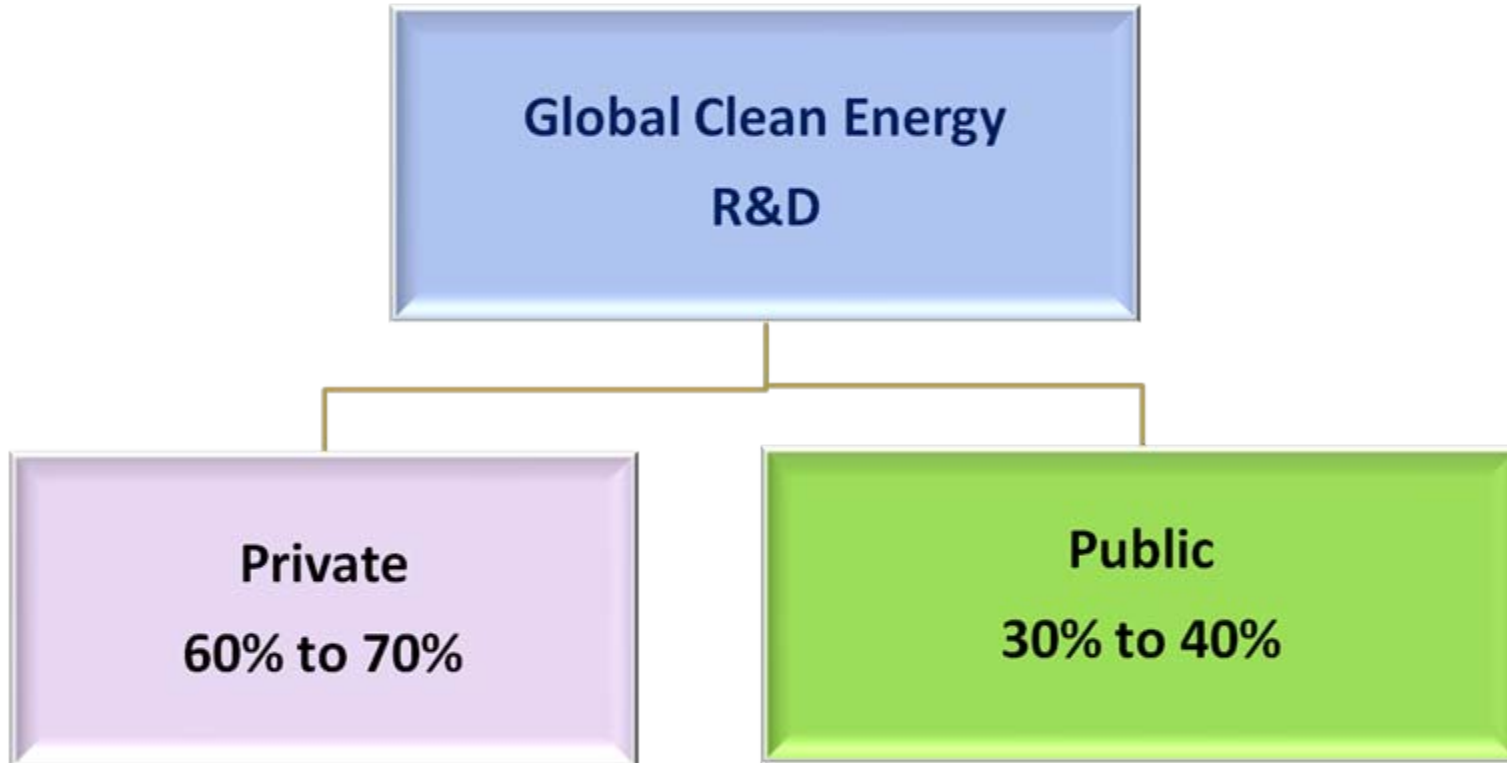
'When entering into an out-license agreement with parties that are based in developing countries, to what extent do the monetary terms of your license reflect your willingness to introduce greater lenience due to differences in the purchasing power of the parties?'



Fast tracking green patent applications: reduces time to grant



What about publicly funded research?



Challenges and limitations in relation to empirical evidence (1)

1) Extraordinary diversity of clean technologies

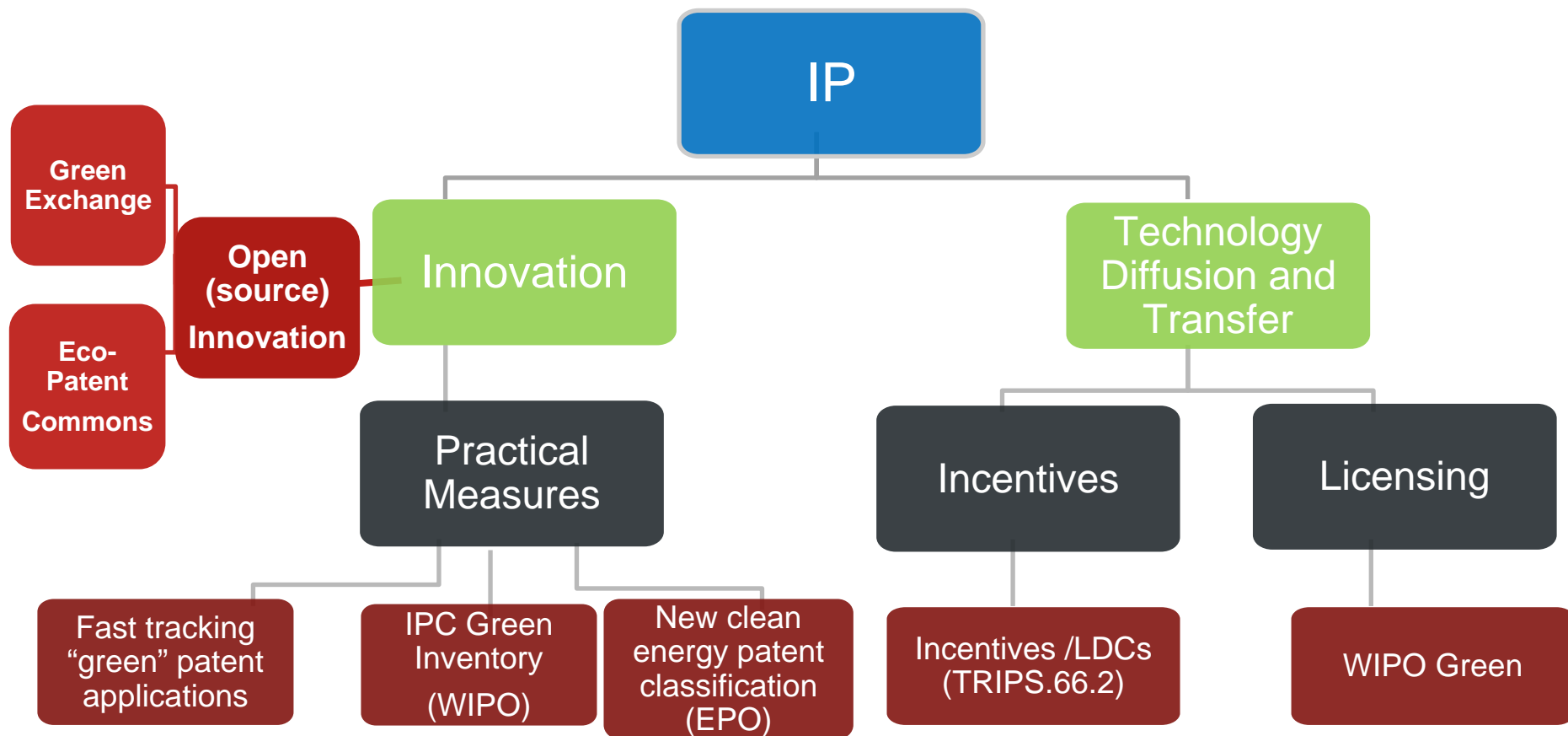


Challenges and limitations in relation to empirical evidence (2)

- 2) Most patent landscaping studies have been carried out in relation to **energy generation technologies**.
- 3) Most empirical evidence focuses on **emerging economies**, particularly India and China. There is a need for more comprehensive information about the needs of **technology demanders/recipients in developing countries**.
- 4) What type of technology are we looking at? First generation? Second generation?
- 5) Situation fast evolving and role of IP may change with the **evolution of market structure and** the increase in patenting of clean technologies.

Some developments and initiatives

IP, innovation and technology transfer



Lessons from bilateral cooperation on clean technology

US China Clean Energy
Forum

US-India Clean Energy
Partnership (PACE)

EU-India Solar Energy
cooperation

IBSA

China-India Climate
Cooperation Accord

**A possible way forward
for consideration by a future technology
facilitation mechanism**

Agreeing about the *importance* of the issue (1)

- Recognition of important role of IPRS in promoting technological innovation. At the same, recognition of the possibility that IPRs may have an adverse impact on the transfer of technologies to developing countries.
- Recognition that the urgency of addressing many environmental challenges requires considering measures in many regulatory areas, including IPRs.
- Recognition that in many instances the role of IPRs in the transfer of clean energy technologies, is often complex as it may vary according to technology, sector and country and thus makes it difficult to make absolute categorisations.
- Importance of IPRs either should not be over-estimated or underestimated. The issue and options to address it should be discussed.

Agreeing about *how* to discuss the issue (2):Elements

- Based on **existing international rights and obligations**, which includes TRIPS related flexibilities
- Based on **empirical evidence**
- Based on an **incremental approach** and starting by examining “**practical**” issues to build trust such as:
 - Improving availability of patent information on green technologies
 - Encouraging licensing of clean energy technologies to developing countries
 - Patent pools
 - Public private partnerships
 - Use of multilateral financial resources to mitigate costs of licensing in some cases
 - Fast tracking of ‘green patent applications
- Based on a **tailor made approach** where specific cases which require solutions are examined until consensus builds on the need for further international action.

Conclusion

- An international collaborative effort to promote the transfer of clean technologies to developing countries which doesn't address IPRs, may face credibility issues.
- At the same time, a **balanced approach** is needed that seeks to take into consideration different viewpoints on the issue taken into consideration the overall objective of enhancing the diffusion of clean technologies to developing countries on an affordable basis.
- The Rio+20 technology facilitation mechanism could provide a **much needed comprehensive approach** that could offer **guidance** to current fragmented efforts to address it.

Thank you

Ahmed Abdel Latif

ICTSD

aabdellatif@ictsd.ch

www.ictsd.org



Follow us on Twitter: **ICTSDIP**

Find us on Facebook: **Innovation, Technology and IP Programme (ICTSD)**