Beyond Technology Transfer
Protecting Human Rights in a Climate-Constrained World

Summary and Recommendations
ABOUT THE ICHRP

The International Council on Human Rights Policy (ICHRP) was established in Geneva in 1998 to conduct applied research into current human rights issues. Its research is designed to be of practical relevance to policy-makers in international and regional organisations, in governments and inter-governmental agencies, and in voluntary organisations of all kinds. The ICHRP is independent, international in its membership, and participatory in its approach. It is registered as a non-profit foundation under Swiss law.

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Beyond Technology Transfer
Protecting Human Rights in a Climate-Constrained World
Summary and Recommendations
In June 2008, the International Council on Human Rights Policy (ICHRP) published *Climate Change and Human Rights: A Rough Guide*, tracking the main human rights concerns raised by climate change and exploring possible areas of synergy in law and policy. As a first attempt to broach a topic of growing policy importance, the report met a broad need and has been in high demand since publication.

As a follow-up to this initial research, the ICHRP launched a second project, choosing technology transfer as the theme for further research because of its evident and far-reaching human rights implications that have so far not been examined or fully articulated.

The means by which technology moves between states takes us into the heart of international legal and commercial processes that are not, for the most part, constructed in a way conducive to reducing the impact of climate change. Technology transfer is needed both to help poorer and more vulnerable countries and communities adapt to the now inevitable consequences of climate change in the short term, and to assist them in moving on to low-carbon development pathways in the longer term. Human rights are relevant to the technology questions that arise in both these policy areas: adaptation policies in the short term and mitigation measures over the long term. Highlighting the human rights benefits of technological interventions may create a space for re-framing and circumventing the unsustainable dynamic that has largely characterised debate of this subject to date. In this regard, human rights offer a strong ethical and legal basis from which technology transfer might be approached.

*Beyond Technology Transfer: Protecting Human Rights in a Climate-Constrained World*, addresses issues that are central to technology policy at a critical time and aims to explain the concerns of environmental activists and of human rights advocates so that common principles might be found and a common position forged. Technology transfer has generally been conceived of as a means to address a central injustice associated with climate change – that activities that have primarily benefited the denizens of the world’s richest states will disproportionately affect those living in the world’s poorest states. It has long been recognised as an indispensable element of a stable future and a global deal. The ICHRP report shows that it is more than that, however: it is also a principal means by which basic human rights standards might still be attainable for the world’s most vulnerable people in a climate-constrained future.

This *Summary and Recommendations* is a supplement to the full report, condensing the key themes discussed in the report into a broad overview and providing a concise list of the report’s recommendations for further action.

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1. EXECUTIVE SUMMARY

Beyond Technology Transfer: Protecting Human Rights in a Climate-Constrained World\(^1\) argues that international climate change technology policy can – and must – take human rights concerns into account if it is to function justly and effectively.

The report also suggests that the urgency of the threats climate change poses to human rights can play an important role in kickstarting technology policy, which has long been stalled at the international level.

The report starts from two premises, each of which is now widely shared. The first is that any solution to climate change depends upon robust technology policies.

There are no quick technological fixes to climate change. Of course, but technology development and diffusion is an indispensable element in all available scenarios for addressing climate change. Still, although it has been a key principle of the climate change negotiations for almost two decades, there has been very little progress in implementing the technology provisions of the United Nations Framework Convention on Climate Change (UNFCCC).

The report suggests that human rights can help move technology policy forward. Human rights can provide the minimal platform of agreement on policy steps regarding technology at the international level.

The second premise is that climate change has profound human rights implications, and that solutions to climate change will only be effective if they integrate human rights concerns.

The report suggests that human rights can help move technology policy forward. Human rights can provide the minimal platform of agreement on policy steps regarding technology at the international level. They can do so in the context of both mitigation and adaption policies.

Climate change mitigation requires a dramatic shift towards low-carbon technologies in every walk of life – a shift that must ultimately take place globally. Among other things, this means that countries that lack access to low-carbon technologies will find their development options increasingly limited. This in turn will have predictable deleterious effects on a host of human rights. To avoid this scenario, renewable energy technologies will need to be gradually universalised.

Climate change adaptation is of greatest urgency in the developing world, where the worst effects of climate change are already being felt. Here too, access to technologies is critical. In these cases, threats to human rights can function as a kind of early warning system, helping locate where technologies will be most useful and are needed most urgently. Examples include technologies relating to seawalls, desalination, seeds and agricultural techniques, vaccines, and so on.

Technology is essential to any long-term climate settlement

International efforts to address climate change have consistently framed technology policy through the key notion of “technology transfer”. This term was enshrined in the UNFCCC and has reappeared in every major document since. It signals that it is not enough to develop technologies to tackle climate change. The technologies must also be available where they are needed.

What is technology transfer? The UNFCCC says: “The developed country Parties … shall take all practicable steps to promote, facilitate and finance … the transfer of, or access to, environmentally sound technologies and know-how to … developing countries, to enable them to implement the provisions of the Convention.”

This provision has an obvious ethical dimension. At the time of negotiation, wealthier countries recognised both their greater contribution to climate change and their greater capacity to deal with it, and agreed to make technologies available to poorer countries to help them manage the impacts of climate change and transit to low-carbon economies. Under the UNFCCC, until technology transfer is “effective”, poorer countries are not required to accept emission reduction targets.

Technology transfer in the UNFCCC also has a practical dimension – it is impossible to imagine dealing effectively with the global problem of climate change if advanced technologies are not made available where they are most needed.

But this provision also has a political dimension. From the beginning, technology transfer has been part of the deal by which poor countries too agree to pull their weight for a problem they did not cause. Technology is the quid pro quo of global solidarity on climate change.

Yet despite decades of debate, there has been very little practical movement on technology transfer. There are many reasons for this, but the main one has to do with the international protection of intellectual property (IP) rights.

This is a polarised debate. In very brief, one side claims that strong IP rights are needed to support technological investment in developing countries. The other side claims that the international protection of IP rights poses an obstacle to public policy in this domain. Neither side has proved its case and the evidence remains inconclusive.

The full report tackles this complex debate in more detail. Here it is enough to point out that the long debate over IP rights has itself become an obstacle to technology policy. Indeed, the argument over IP rights is largely a distraction from the main problem – which is simply a failure to systematically pursue the technology provisions of the UNFCCC. The full ICHRP

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\(^1\) The detailed report is available from the ICHRP, November 2011. This workbook provides a short summary and specific recommendations gleaned from the information in the full report.
report concludes that it is time to move on – and indeed the Cancún Agreements provide an opportunity to do so by introducing a new “Technology Mechanism”.

That said, it is nevertheless useful to recall the main legal points of the UNFCCC provision on technology transfer:

- Technology transfer involves an obligation under the Convention;
- The obligation is on “developed” countries and owed to “developing” countries;
- The obligation is “to promote, facilitate and finance” technology transfer;
- Technology means hardware, but it also covers “know-how” and presumably training;
- Transfer indicates something more than “trade” or business as usual: it is proactive.

The precise nature of this legal obligation is not crystal clear, however, and it is probably unproductive today to approach technology transfer as a simple matter of rights and duties. Technology policy will only succeed if based on international cooperation.

There are a number of points upon which everyone is agreed:

1) The greater responsibility for climate change, both historical and current, of the world’s wealthiest countries provides the practical and moral basis for technology transfer.

2) Without concerted action to effect technology transfer, climate change will wreak havoc that might otherwise be avoided, particularly in the least developed countries (LDCs).

3) Technology transfer cannot be a “passive” process between North and South. Policy must reflect the priorities of both sending and receiving countries and private actors.

4) Technology transfer is not a coercive process. It involves channelling the power of private initiative into a shared and urgent public interest.

**Human rights can mobilise and inform technology policy**

At Cancún, for the first time, the working climate change text recognised the importance of “fully respect[ing] human rights” in “all climate change-related actions”. Technology, which is one of the four pillars of the Bali Action Plan, is clearly one of the “climate change-related actions” to which human rights are relevant. But what does this mean?

At first glance, it involves recognising the degree to which human rights are impacted by the failure to move on technology transfer. The delay on technology policy is itself a cause of human rights harm.

**Human rights provide an appropriate way to organise and orient technology policy and to prioritise needs and objectives in both adaptation and mitigation.**

But beyond this, we are called to take account of human rights in constructing technology policy.

How might that work? At present, most developing countries have produced Technology Needs Assessments (TNAs), in which their critical technology needs for both mitigation and adaptation are listed. This has been an immensely valuable process and begins to set a compass for technology policy internationally.

TNAs have not, and cannot on their own, provide the impetus for a proactive technology policy that must ultimately be set in technology exporting countries, albeit with the active participation and agreement of technology importers.
The full report proposes that human rights provide an appropriate way to organise and orient technology policy and to prioritise needs and objectives in both adaptation and mitigation. Among the many points raised by the report, six key issues bear mentioning:

I. A focus on human rights can help decide on which technologies to concentrate national policies.

The identification of particular human rights threats caused by climate change provides a sound basis for prioritising the technologies best suited to meeting those threats. For example, human rights standards could be mainstreamed into the TNAs, by focusing on the vulnerability of particular persons in certain sectors (such as health, food security, water availability, housing security, cultural integrity and so on).

II. Human rights can help international coordination of technology policy.

If properly coordinated, TNAs can identify common human rights concerns across many countries. The fact that human rights embody generally agreed standards is key here: persons vulnerable to human rights threats constitute, in principle, a priority for international as well as domestic law and policy.

The full report says more about what such policies might involve. They could include multilateral mechanisms to incentivise, subsidise and mobilise technologies across borders. They may also involve the creation of patent pools and exemptions.

III. Making clean energy universally available is vital to protect human rights as climate change encroaches.

At present, 1.4 billion people live without access to electricity and at least 2.7 billion depend on biomass burning for their cooking and heating. A recent report by a special advisory group to the UN Secretary-General makes clear that universalising access to modern and clean energy technologies is affordable, manageable and urgent.

Such a policy is also indispensable if the world’s LDCs are to adapt to climate change in the near-term and to contribute to global mitigation efforts over the longer term.

IV. Least developed countries must constitute a priority for technology policy.

The countries most vulnerable to climate change harms and least well equipped to address them must be a starting point for international policy on both mitigation and adaptation technologies. These countries are vulnerable to more than the effects of climate change alone. Once global mitigation measures are even partly successful, carbon-based energy and transport will become increasingly expensive – whereas renewable equivalents will likely remain expensive through the mid-term.

LDCs will, rightly, not be required to take on emissions targets in the near term. As a result, they might find themselves stranded with high-carbon low-efficiency infrastructure, increasingly out of step with a low-carbon global market. This must be avoided, all the more so as these countries begin to experience human rights deterioration and resource pressures caused by climate change.

V. The human rights principles of participation, consultation, accountability and access to justice provide a key resource in the construction of international policy.

These principles are best articulated at the international level in the Aarhus Convention on public participation in decision-making on environmental matters, which, although it lacks universal ratification, is nevertheless signed by a majority of the Annex 2 states. Abiding by these principles will help avoid many of the pitfalls associated with technology transfer in the past, where in some cases technologies were delivered without attention to local capacity to absorb or use them, leading to disuse or misuse, and giving the principle itself a bad reputation.

VI. A human rights focus can help the technology transfer debate transcend the old and worn-out arguments about intellectual property.

Technology transfer has been stalled on the issue of IP rights for too long. The debate is increasingly academic and abstract. It is time to move on.

There are a number of reasons to encourage a change of gears on this subject:

1) Policy on technology need not pivot entirely on IP rights – many of the technologies in question do not involve significant patent royalties.

2) The combination of climate change and human rights concerns are sufficiently pressing that they must encourage state-led coordination on technology development and diffusion, involving incentives and subsidies. In return, the inclusion of patent pooling or open licensing requirements will not only be appropriate, it will also be efficient and will fit well within existing IP protections.

3) There is scope within the UNFCCC negotiations to tackle this problem head on and to ensure the international legal context is prepared for IP rights reform. Should it be thought helpful to do so, human rights concerns provide an appropriate impetus. Should it be thought helpful to do so, human rights concerns provide an appropriate impetus.
Despite almost 20 years of negotiation and accumulating evidence of climate harms, there is as yet no actionable international policy on technology transfer. Without access to a variety of technologies, the human rights of hundreds of millions are at risk from climate change. Mobilising technology transfer policy is therefore crucial to the future security of human rights and, more broadly, to global security generally. Agreement on an international technology regime is of fundamental importance to the success of climate change policy and must be prioritised. It need not wait for prior agreement on binding targets. Future rounds of negotiations must attend to the construction of a robust technology regime, drawing on the considerable work carried out by the Expert Group on Technology Transfer (EGTT) and others.

The decision at Cancún to create a Technology Mechanism, consisting of a technology executive committee and technology centre and network, is an important step in actualising technology policy. The Mechanism must build on the work of the EGTT, but it will nevertheless be uniquely positioned to bypass the long-running obstacles in this area and focus on a vision of technology transfer that will do justice to the longstanding hope invested in it.

A working and coherent definition of “technology transfer” is vital. The definition must recognise that “technology” is not limited to hardware, but also involves know-how and IP, and that “transfer” is not limited to facilitation of trade and markets but involves proactive public policy measures to ensure technologies move between countries to those who need them most and are deployed in a manner that does not pose undue risks to human rights, security, the environment or livelihoods.

Human rights standards can fulfil a number of roles in moving climate technology policy forward:

i) They can serve as indicators for identifying technologies needed in specific locations.

ii) They can provide a means of coordinating international policy on priority technologies, priority destinations and technological risks.

iii) They can serve as a basis to guide and monitor the manner in which technologies are transferred and deployed in practice.

iv) They can provide an effective moral, legal and rhetorical impetus for more clearly defining the rights and obligations with respect to technology transfer.
IP rights have long posed a significant obstacle to progress in technology transfer. It is time to move on from this debate, as the increasingly pressing human rights concerns make clear:

i) IP rights may not pose a practical obstacle for all relevant technologies. Policy can move forward swiftly, for example, on the transfer of energy-efficiency techniques, established adaptation measures, and some renewable energy technologies that do not incur prohibitive royalties.

ii) Governments can move forward proactively with incentives and subsidies to promote patent pools and open licensing in the development of technologies for both adaptation and mitigation.

iii) Multilateral agreements and programmes, including public-private partnerships and partnering between developed and developing countries, will be increasingly vital.

iv) In extreme cases, where human rights emergencies arise due to climate change, states can lawfully turn to compulsory licensing to ensure that technologies reach those most in need, should IP rights pose an obstacle.

To Annex 2 Country Governments

In its provisions on technology transfer, the UNFCCC speaks of " Annex 2 and other developed country parties". Although this does not constitute a clearly defined duty-bearer, the specific countries named in Annex 2 nevertheless have legal obligations in this domain. The following recommendations are thus aimed at the various groupings that comprise non-Annex 1 countries, and in particular the LDCs.

Annex 2 countries are explicitly obliged under the UNFCCC to facilitate, finance and promote the transfer of environmentally sound technologies to non-Annex I and developing countries. Annex 2 country governments are also well-placed to mobilise technology transfer and generate economies of scale for technology developers and producers worldwide. To date, however, Annex 2 countries have done little to fulfil this obligation. It is now urgent that they take the lead.

Given the threat climate change poses to human rights in vulnerable countries, Annex 2 country Governments must now take proactive steps to mobilise climate-relevant technologies between countries. A constructive approach will resist casting technology transfer solely in narrow terms of open markets, IP rights and enabling environments. It will recognise that without decisive action by and agreement among states, technology movements will be too few and too late.

Annex 2 Governments are well-placed to contribute technological expertise and financial support, including through multilateral mechanisms for the effective transfer of technologies. The creation of mechanisms such as technology pools, including patent pools, will involve agreements on subsidies, investment incentives, research and development, IP rights, open licensing and technology dissemination.

All Annex 2 measures must necessarily be responsive to the goals outlined in recipient country TNAs, National Adaptation Plans of Action and Nationally Appropriate Mitigation Activities, as well as to the instructions of the COPs to the UNFCCC and to the human rights obligations of all parties.

Annex 2 countries should incorporate their UNFCCC technology obligations into their development policies and into those of the international financial institutions. Human rights provide a means of assessing and orienting development policy with regard to climate technologies for adaptation and mitigation. The Aarhus Convention is among the relevant treaties in this regard.

To Non-Annex 1 Country Governments

Although named in the UNFCCC as the beneficiaries of its provisions on technology transfer, non-Annex 1 countries do not constitute a bloc or shared set of interests, economically, legally or politically. The following recommendations are thus aimed at the various groupings that comprise non-Annex 1 countries, and in particular the LDCs.

Non-Annex 1 Governments would benefit from an assessment of the degree to which expected climate harms will have human rights impacts in their countries. These evaluations should inform the identification of technologies in country TNAs, national adaptation programmes of action, nationally appropriate mitigation actions and national target programmes, with a view to providing clear recommendations to the international community, and to donors and financial institutions, on the prioritisation of adaptation and mitigation technologies for addressing climate change.

South–South technology transfer, as practiced notably by Brazil, is an invaluable resource and may have a demonstration effect in showing how best to construct successful models of technology transfer. It is not, however, a substitute for the technology transfer provisions of the UNFCCC.

LDCs and other recipients of development aid are well-placed to negotiate the deployment of aid towards the fulfilment of human rights by virtue of Article 2.1 of the ICESCR. Climate
change-related aid in particular will be well targeted where it is oriented towards current or predicted human rights threats to food, water, health, housing and livelihoods, in particular, or to ward off forced migration.

Non-Annex 1 countries that are not LDCs may be well placed to take the lead on demonstrating climate-constrained developmental paths that can successfully incorporate human rights obligations, in part through investment in and research and development of indigenous technologies.

**To Civil Society Organisations**

Legal advocacy groups dealing with human rights or environmental law (or both) could explore the degree to which obligations undertaken through the UNFCCC, human rights treaties, or elsewhere may leave states or private entities liable for actions that have blocked or failed to facilitate technological transfer with human rights consequences.

Environmental organisations and especially climate change groups may benefit from incorporating human rights goals and standards into their work on climate change technology.

Human rights organisations must take seriously the threat of climate change and show an openness to public policy positions that might not fit easily within classical human rights discourse.

Social science and research institutions must forge a road ahead for technology transfer, by demonstrating where technologies can most usefully be adapted to different contexts and how they can most efficiently contribute to the twin goals of furthering human rights and development in the face of climate change. Research must also be undertaken into the legal and practical obstacles to climate change technology transfer.

**To UN and Other International Agencies and Bodies**

The UNFCC Secretariat should consider the creation of a working group on human rights and climate change with a view to informing the construction of the Technology Mechanism and other relevant bodies. It should further empower the existing human rights liaison at the Secretariat.

The UN Human Rights Council should continue to remain apprised of developments at the UNFCCC, to undertake its own investigations in this area, and to ensure that the human rights consequences of climate change are closely monitored and addressed. The Council should consider the appointment of a Special Procedure on climate change and human rights.

As the principal formal locus of research into the human rights effects of climate change, it is vital that the Office of the High Commissioner of Human Rights retain a presence in this research domain and continue to influence policy.

A number of UN Special Procedures have been following climate change developments, integrating it into their mandates and making valuable recommendations. These include the Special Rapporteurs on the Right to Adequate Food; on the Right to Housing; on the Right to Health; on Extreme Poverty and Human Rights; and the Independent Expert on the Right to Water and Sanitation. In each of these areas, and where other Special Procedures are touched by climate change, it would be valuable to undertake investigations into the role of technology in exacerbating or addressing the human rights harms of climate change and recommending policy orientations to governments.

The Committee on Economic, Social and Cultural Rights is ideally placed to seek information from countries on the degree to which their technology policies meet their human rights obligations with regard to the impacts of climate change or the manner in which the inappropriate deployment of risky technologies might compromise human rights.

Other UN bodies – principal among them UNEP, UNDP, UNCTAD and the WHO – will find it fruitful to integrate the technology–human rights nexus into their work. Studies might be undertaken within each agency with a view to making recommendations on the optimal mode of integrating climate technology exigencies in their particular mandates.

Technologies relevant to disaster preparation and early warning systems will be vital to humanitarian agencies such as the ICRC, IFRC and UNHCR. In each case, human rights language may provide a useful motivator for mobilising funding and energy towards creating the technological infrastructure to manage climate harms before they become catastrophic.

There is a role for agencies dealing with trade and IP, notably at the WTO and WIPO, to investigate the existing legal architecture in order to determine whether it helps or hinders the transfer of technologies necessary to mitigate the human rights impacts of climate change. Given its mandate, WIPO is particularly well-placed to explore multilateral approaches to options of patent pooling and open licensing in the climate technology domain.
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Coming at a critical time in the negotiations, this new report addresses issues that are central to technology policy. The report aims to translate between the language and concerns of environmental activists and those of human rights advocates, so that common principles might be found and a common position forged. Climate technology policy has generally been conceived as a means to address a central injustice associated with climate change – that activities that have primarily benefited the inhabitants of the world’s richest states will disproportionately affect those living in the world’s poorest states. As a result, “technology transfer” has long been recognised as an indispensable element of a stable future and a global deal, both practically and politically. The ICHRP report shows that technology transfer is more than this, however: it is also a principal means by which basic human rights standards can be reached for the world’s most vulnerable people in a climate-constrained future.

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