



# MAKING CLIMATE FINANCE WORK FOR AFRICA

## Using NDCs to Leverage Climate Relevant Innovation System Builders (CRIBS)

**AUTHORS: DAVID OCKWELL, ROB BYRNE, JOANES ATELA, MBEVA KENNEDY AND MAKOMERE REUBEN**

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### Training brief 2: Using CRIBs (Climate Relevant Innovation-system Builders) to implement NDCs

#### Key messages

- 1** Low and middle income countries should implement CRIBs - nationally nested, internationally networked institutions that can leverage international climate finance and deliver their NDCs under the Paris Agreement..
- 2** Regional coordination in implementing CRIBs to deliver NDCs represents a key opportunity for East African countries to show international leadership (which will likely be followed by other developing countries).
- 3** CRIBs are an evidence based policy vehicle/ institution through which innovation system building around climate technologies can be achieved.
- 4** CRIBs can ensure a nationally determined, needs based approach; fuelling green growth, de-risking innovation, informing enabling policy environments, engaging national stakeholders and mainstreaming a focus on women, youth and other marginalised groups.
- 5** Regional and inter-regional coordination in lobbying for international climate finance will significantly increase lobbying power and the efficacy of CRIBs in delivering NDCs.

#### CRIBs for building innovation systems & delivering NDCs

CRIBs are institutions that can be established in developing countries to act as key platforms for developing innovation systems around nationally appropriate climate technologies (for detail on the importance of innovation systems for delivering NDCs please refer to the [sister](#)

[briefing note](#) to this one: "Training brief 1: Why focus on building innovation systems?" (<http://www.acts-net.org/cribs>)

CRIBs will create capacity to understand existing local capacities and gaps in capacities, identify opportunities to connect actors up across projects and programmes

and sectors and linking up with and understanding technology users<sup>1</sup>. In this way, CRIBs can address all of the concerns identified by East African stakeholders at a recent workshop on innovation system building<sup>2</sup>, including:

- Underpinning green growth
- De-risking innovation
- Convening a national knowledge platform on climate technology needs and opportunities
- Engaging national stakeholders
- Proving a platform for regional and inter-regional knowledge sharing and collaboration
- Championing a needs based focus to international climate technology initiatives in-country, including mainstreaming women, youth and other marginalised groups

The CRIBs approach is based on in-depth empirical analysis in Kenya, Tanzania and China. It also learns from best practice in other contexts, for example Fundacion Chile<sup>3</sup> – a not for profit organization geared towards facilitating access to relevant international innovations and increasing indigenous innovation capabilities (see case study below).

Ideally CRIBs will be established via existing national institutions that have the capacity, or potential capacity, to take on this networked, national climate technology platform role.

### Nationally nested, internationally networked institutions & relationship to UNFCCC

It is critical that CRIBs are nationally nested institutions. A key shortcoming of the existing UNFCCC architecture is the fact that its Climate Technology Centre and Network (CTCN) has no, or very limited, national capacities. All that exists at present are the Nationally Designated Entities (NDEs) that liaise with the CTCN. These NDEs are often only a small percentage of a (often already over worked) civil servant's time. This doesn't come anywhere close to providing the national capacity that is essential, particularly within low and middle income country contexts, for meaningful, nationally determined, needs based climate technology actions.

<sup>1</sup> Note: The CRIBs approach is arguably much closer to Professor Ambuj Sagar's original vision for what later became the Climate Innovation Centres and was exactly what was intended in the Sussex Energy Group's proposal for the Copenhagen UNFCCC COP. In the end, Climate Innovation Centres and their focus on private sector entrepreneurship only cover a small, later part of the technology cycle.

<sup>2</sup> See <http://steps-centre.org/publication/building-innovation-systems-for-climate-change-technology-transfer-perspectives-from-east-africa/>

<sup>3</sup> See <http://fch.cl/en/>

At the same time, however, a key strength of the CRIBs approach is that CRIBs can fit seamlessly with the existing UNFCCC architecture. Essentially, CRIBs will add capacity that NDEs usually lack, providing a more solid, nationally nested platform to understand technology needs and identify opportunities. They also easily align with existing GEF funded efforts within the various development banks at adopting centre based approaches to nurturing climate technology transfer and development. By connecting with the UNFCCC's CTCN and the various development bank convened technology centres, CRIBs also provide the missing part of the jigsaw to connect upwards to existing regional and international networking efforts.

### The power of regional & inter-regional coordination

Coordinating CRIBs' implementation and activities at regional scales could also significantly add to countries' lobbying power for leveraging international climate finance. It also enables regional and inter-regional coordination of actions, potentially enhancing the climate adaptation and mitigation impacts as a result.

For example, early interest amongst the countries of East Africa in adopting the CRIBs approach and focussing on leveraging climate finance for building innovation systems represents a key opportunity for East Africa to demonstrate international leadership. If the countries of East Africa coordinate in the implementation of CRIBs for delivering their NDCs under the Paris Agreement, it is highly likely that other low and middle income countries, as well, perhaps, as rapidly emerging economies, will follow suit.

### Ensuring a nationally determined, needs based approach

One key consideration that must be kept at the forefront of CRIBs approaches is the need for them to reach out and understand the self defined needs of local women and men, including youth and other marginalised groups, as much as engaging with the private sector and government. Examples of climate technology adoption with transformative potential (e.g. pay as you go financing for solar PV) usually owe their success to long term efforts at understanding the context-specific needs of potential technology users. Reaching out through NGOs and more directly to communities to help define climate technology needs from the bottom up will be material to the future success of CRIBs in underpinning long term economic growth and broader sustainable development.

## Case study: Fundacion Chile

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| <p>Fundacion Chile is an excellent example of some of the kinds of activities that CRIBs will undertake.</p> <p>This centre based, not for profit institution has been material to the success of Chile in many of its leading industries, through to the present day and Chile's OECD accession status, e.g. Chile's world leading success in salmon farming and wine production, as well as various renewable energy and climate adaptation examples.</p>   |  |
| <p>Fundacion Chile receives funding from the Chilean government and ITT Corporation (based in the US) and has been highly successful in sustaining its funding base via a process of leveraging private sector funding and involvement. This has the knock-on benefit of more sustained private sector adoption of the innovations. With the injection of international climate finance, low and middle income countries could easily emulate this approach.</p>  |  |
| <p>Fundacion Chile's key aim is to identify innovations internationally that might be of relevance to improving the performance (including environmental performance) of Chilean industry. It then uses a number of methods to adapt, demonstrate and roll out these innovations thus reducing risk and encouraging uptake amongst Chilean firms. The approach is based on three stages.</p>  |  |
| Stage 1   | <p>First opportunities for innovation (often adaptive innovation) are identified based on careful assessments of international and domestic capabilities and in close consultation with the private and NGO sectors.</p>   |
| Stage 2   | <p>The next stage involves obtaining, developing or adapting the technology via three approaches. These include:</p> <ul style="list-style-type: none"> <li>• Transferring and adapting a technology obtained from an outside supplier;</li> <li>• Developing a technology using Fundacion's own in house R&amp;D capabilities;</li> <li>• Developing a technology via collaboration with an established network of indigenous R&amp;D institutions.</li> </ul>  |
| Stage 3   | <p>The third stage involves scaling up and disseminating the technology via a number of approaches which include:</p> <ul style="list-style-type: none"> <li>• Creation of innovative companies, always with strategic partners (usually private sector, but could equally be the not for profit sector). Fundacion usually sells its share in these companies once they are self sustaining and then reinvests the funds in new initiatives;</li> <li>• Sale and licensing of technologies (when new technologies become available via its in-house R&amp;D or its collaborations with external, indigenous R&amp;D centres);</li> <li>• Supply of technological services across the different key areas that it works;</li> <li>• Certification and implementation of standards;</li> <li>• Broad dissemination through training, seminars, publications and internet websites.</li> </ul> |
| <p>Fundacion Chile has a unit that specifically focuses on human resources. It therefore fully recognises and operationalizes the transfer of knowledge, including tacit knowledge, as part of the technology transfer process.</p>   |  |
| <p>Fundacion Chile is widely seen to have had a profound influence on increasing innovative capabilities within the Chilean economy and has had some large successes with developing new industries, including the Chilean salmon industry, and remains proactive in developing potential new clean initiatives such as biomass palletisation from Chilean forestry waste. The approaches outlined above all conform to best practice in terms of maximising impacts on indigenous capabilities and leveraging additional funding</p> |  |

This provides an excellent, working case study of the kinds of roles CRIBs will take on, albeit hopefully with a broader, socially focussed remit appropriate to delivering broader, human development goals simultaneously to economic development goals.

### Further reading (all free open access)

1. [Training brief 1](http://www.acts-net.org/cribs): Why focus on building innovation systems? (<http://www.acts-net.org/cribs>)
2. David Ockwell and Rob Byrne (2015) Improving technology transfer through national systems of innovation: Climate Relevant Innovation-system Builders. (CRIBs) Climate Policy 16 (7): 836-854 (available OPEN ACCESS here <http://www.tandfonline.com/doi/full/10.1080/14693062.2015.1052958> )
3. David Ockwell and Rob Byrne (2015) CRIBs (Climate Relevant Innovation-system Builders): An Effective Way Forward for International Climate Technology Policy STEPS Working Paper 76, Brighton: STEPS Centre - ISBN: 978-1-78118-211-6 <http://steps-centre.org/publication/cribs-climate-ockwell-byrne/>
4. David Ockwell and Rob Byrne (2014) CRIBs (Climate Relevant Innovation-system Builders): Policy Recommendations on Fostering National Systems of Innovation under the UNFCCC. STEPS Working Paper 76, Brighton: STEPS Centre - ISBN: 978-1-78118-210-9 [http://steps-centre.org/publication/cribs\\_policy/](http://steps-centre.org/publication/cribs_policy/)
5. D. Ockwell and R. Byrne (2016) Sustainable Energy for All: Technology, Innovation and Pro-Poor Green Transformations, Routledge, Abingdon <http://steps-centre.org/publication/sustainable-energy-for-all-innovation-technology-and-pro-poor-green-transformations/>



African Centre for Technology Studies, Gigiri Court, Off United Nations Crescent  
P.O. Box 45917 - 00100, Nairobi, Kenya

**Telephone:** +254 020 7126895; +254 020 7126890; +254 020 7126889; +254 020 7126894

**Cell Phones:** Airtel: +254 737 916566;

Safaricom: +254 710 607210

**Email:** [info@acts-net.org](mailto:info@acts-net.org) **website:** [www.acts-net.org](http://www.acts-net.org)

**For further information Contact:** [J.Atela@acts-net.org](mailto:J.Atela@acts-net.org) / +254 721 761 869