Technical Expert Meetings on Mitigation
Speaker Information
Session 5: IRENA

Speaker Biography

Chris Henderson is Practical Action's Senior Policy and Practice Advisor in Agriculture. He provides technical advice and support on agriculture development policy for Practical Action's national and regional offices in Africa, Asia and Latin America, as well as for the organisation in the UK.

As an agricultural researcher, development worker and programme manager he has spent over 25 years in developing countries where he has worked for NGOs, donors and National Governments. He has been an agricultural researcher in Ghana and the Solomon Islands and supported National agriculture and rural development policy and planning in Ghana, Namibia and the Philippines. He has led country sector programmes for donors in Namibia, Jamaica and Nigeria.

Within Practical Action he is applying his experience to making agriculture work for struggling smallholder farmers. This builds on the fact that success for smallholder farmers, especially women and young people, is essential to achieving the Sustainable Development Goals.

Speaker Work/Project

1. What is your experience regarding how conducive policy frameworks can help to achieve socio-economic benefits using innovations available to rural areas?

    a) Using tools such as Participatory Market Systems Development to identify and facilitate changes that work for all actors in the system.

2. Where do you see the critical interface of renewable energy and smart water use in the agri-food chain?

    a) At present the interface is limited (historically with wind and hydro power, and recently with solar powered systems), but new technology and the changing economics of renewable energy, notably solar power, is changing this.
    b) However for solar powered irrigation a wide range of contrasting opportunities/interfaces have emerged. These vary greatly depending on the scale, design, and underlying objectives of the systems. For example, there is a great difference in the challenges and opportunities coming from mini-grids (which can also be powered by hydro, biogas and other sources), to opportunities from small (or even portable) solar powered systems for pumping water.
        - In mini-grids the opportunity comes from adding agricultural activities to an off-grid renewable energy powered system designed to enable off grid users to benefit from access to electricity. Such systems are usually promoted and designed by the energy sector who see the agriculture and an opportunity for "productive uses" and means of

repaying the capital/set-up cost, as well as diversifying the benefits from improved access to electricity.
    - In contrast systems that have been established to specifically provide irrigation have usually been designed or promoted by agriculturalists and do not optimize the opportunities that the renewable energy can provide.

c) There is also a large opportunity, and political desire, for renewable energy to replace diesel or petrol powered irrigation in existing schemes. This however has its new challenges such as timelines, reduces volumes, and need for storage.

3. What policy recommendations would you give to governments and what can stakeholders do better?

a) To find better ways of bringing agriculturalists and energy professionals together. Currently they operate in sectoral silos. This is also the case within actions on climate change where in developing countries mitigation is the focus of most energy sector professionals, whist adaptation is the major preoccupation of most agriculturalists.
b) To develop business models that can take solar powered irrigation technologies to scale. E.g.: blended finance or policies that incentivize or facilitate change.
    - Enabling smallholders to access the technology, including new entrants
    - Incentives for the private sector to work with farmers in remote locations and in marginal environments
    - Addressing establishment costs, including capacity and knowhow as well as equipment
c) New technologies (renewable energy, drip irrigation, …) should be superimposed onto sound practices – maintaining soil moisture, biodiversity (Inc. synergies), controlling erosion, management of the watershed (Inc. ground water), … - sustainability, mitigation and adaptation, protecting natural capital for future generations
d) Irrigated agriculture is only <u>part</u> of the farming system – the farm business plan, livelihoods from/within the farm, landscape, watershed …