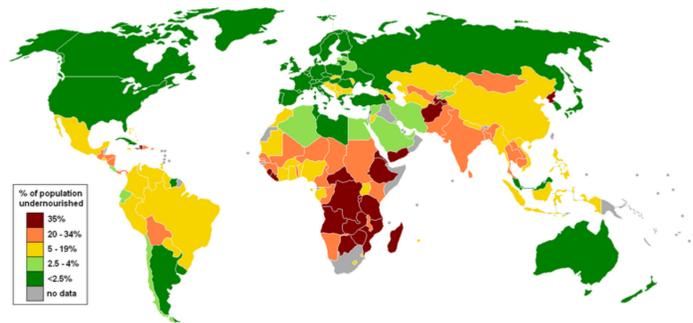


Breaking Down Barriers to Appropriate Technology for Sustainable Development

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Introduction

The purpose of this study was to examine barriers standing in the way of more collaborative appropriate technology philosophy for aiding in sustainable development. To find solutions key organizations working in the field of appropriate technology (AT) were interviewed in summer of 2010. The results of the interview show that among biggest barriers to collaborative AT are a mix of: 1) *social barriers*, 2) *communication and information specific barriers*, 3) *barriers to open source technology*, 4) *barriers to technology (AT or in general)*, and 5) *social and technical barriers connected*. Biggest barriers by far were the need for better communication and access to information, followed by problems of technological dissemination and design of appropriate technology.



“The issue for developing countries is not a trade-off between high and low technologies: it is a trade-off between appropriate and inappropriate technologies”

- Ian Smillie, *Mastering the Machine: Poverty, Aid and Technology*. 2000

Definition of Appropriate Technology (AT)

Appropriate technologies can be defined as such which fit local geographic, social, political and economic conditions and are easily utilized by local communities to meet their needs.

- Buitenhuis, Pearce and Zelenika; 2010

Appropriate Technologies can include: water purifiers, biodigesters, food grinders and processors, efficient cooking stoves, electricity generation, lighting solutions and etc.

Interview Participants

21 respondents working within AT and open data development (2010)

Academic Researchers:

Arizona University, Cooper Union, Hope College, St. Thomas and Western Washington University



Non-Governmental Organizations:

American Society of Mechanical Engineers (ASME), the Appropedia Foundation, Appropriate Technology Collaborative (ATC), Appropriate Infrastructure Development Group (AIDG), Compatible Technology International (CTI), Digital Green and Practical Action



Governmental:

International Development Research Center (IDRC)

Entrepreneurial:

AYZH and Kopernik

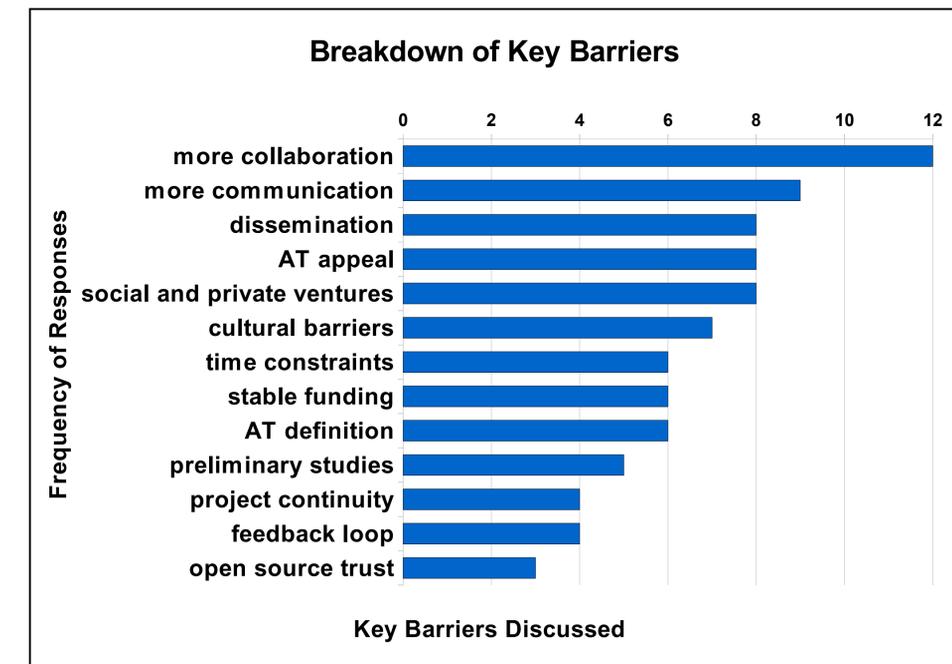
Independent Activists:

David Eaves (Open Data Activist) Vinay Gupta (Hexayurt and Development Activist)



“All technologies carry with them risks, be they foreseen, unforeseen, or little understood. Conversely, the benefits of technologies may be far greater than we can foresee. We respond to these uncertainties by attempting to maximize the benefits and minimize the risks of technological change.”

- James Smith, *Science and Technology for Development*. 2009



Interview Results and Conclusion

The interviews confirmed a large number of barriers identified and well discussed in the literature review such as technological dissemination, AT social stigma of low tech, institutional support and funding, as well as problems with rural development.

In addition, interviews also showcased the need for more collaboration and access to information of those working within the development field. Enabling more innovation through collaboration, sharing information via open access/ open source platforms and building appropriate technology knowledge databases can help develop solutions faster and expedite the progress of sustainable development.

Future Work Outlined

- Improving collaboration and networking between agencies
- AT critical mass building
- Establishing online databases for knowledge commons
- Engaging service learning and University collaboration
- More non-proprietary technological innovation
- Open source/ open access participation
- Demand-led innovation
- Participatory design and collaboration with local communities