



Improving access to services

PRACTICAL ACTION
Technology challenging poverty



The cycle of poverty

Without clean energy, water and sanitation, adequate shelter, or transport people inevitably suffer. No access to energy means businesses and homes can't be powered. With limited transport systems, children struggle to get to school, and markets are harder to reach; making it difficult for farmers to sell their produce. Long trips frequently endured by women and children to collect water or firewood hamper productivity. For slum dwellers the lack of services presents huge environmental and health problems. Without adequate housing and access to clean water and sanitation poor people – particularly children and the elderly become more susceptible to diseases.

Lack of access to services can be both a cause and a consequence of poverty. Some of the reasons why poor people don't have adequate services are linked to poverty. Without money to pay for services or the political voice to campaign for change, nothing much will alter for poor people. Equally, where people live can result in a lack of services – be it a remote rural area or inner city slum, where land rights are in dispute or land is too over-populated to install services. In many countries, services are still only available to the rich. Big utilities often see service provision to poor people as unprofitable, and more trouble than it's worth.

The link between poverty and services is recognised, and the Millennium Development Goals – aim to halve by 2015 the proportion of people without access to safe drinking water and basic sanitation, and improve the lives of 100 million slum dwellers by 2020.

The number of people living in extreme poverty is huge. While our world is being transformed by rapid developments in new technology, millions live without access to the most basic technologies that have been around for centuries:



Micro hydro powerhouse in Peru showing water channel and transmission lines.

- 2.4 billion people are without access to adequate sanitation.
- 2 billion people are without access to electricity.
- 1.5 billion people live in inadequate shelter.
- 1 billion people are without access to safe water supplies.
- 50 per cent of urban waste in developing countries is not collected.

It is not just the number of services that are important – services also have to be appropriately designed, well operated and maintained or they become useless. For Winny, living with her disabled husband and young family - the latrines in the Maili Saba informal settlement on the fringes of Nairobi are all but useless. These latrines are dark, smelly, not suitable for children and need to be emptied and maintained regularly or they become full and unusable. When Practical Action talks about accessible services, we mean just that: something that is appropriately designed, affordable, and managed to the benefit of the whole community.

Hand in hand: finding a solution together

Only when poor people work together with governments, professionals, NGOs and businesses to plan, deliver and sustain infrastructure services can appropriate, long-lasting solutions be found.

By working with poor people to find the right technical solutions to their problems, we can be sure that the services they need will keep on working for them for the future. Sometimes a simple credit loan scheme is all that is needed to help people begin to access the right equipment and knowledge.

To plan and deliver affordable services that will continue to meet their needs, poor communities need to be able to negotiate with service providers (public utilities or private companies). By helping them to become better informed, Practical Action can help them move into a stronger position.

Effective partnerships need to be all inclusive – and at community level that means that all voices are heard. So Practical Action works hard to ensure that poor communities represent the views of women, children and other marginalised groups.

All the right moves

Practical Action's simple, sustainable and innovative technologies have helped to improve poor people's health, livelihoods and living conditions. That is why our work continues within communities across the world in Bangladesh, Kenya, Nepal, Peru, Sri Lanka, Sudan and Zimbabwe.

Practical Action has helped people of isolated villages in Sri Lanka to build their own roads. Working in participation with local communities and using simple labour-based technology, the local people's skills were harnessed and developed. The completed roads have dramatically improved their access to schools, health care, building materials and other goods.

Small scale businesses that need energy, transport or water to operate often have to fight for survival. Yet decentralised energy

options such as micro-hydro can help to power development – and provide cleaner, lasting, affordable solutions, using local resources. By supplying valuable services such as water, collecting waste, and running community transport facilities, small scale business providers can create income and employment for their own communities.

In Nairobi, Kenya, waste collection is a serious problem. Over 70 per cent of the daily rubbish mountain is simply left to rot where it falls. To reduce this Practical Action is working on technologies for separation and recycling; as well as on different systems for small businesses to collect the waste.

Practical Action's work on indoor air pollution has shown how smoke from cooking fires is a silent killer of millions of people in the developing world. For example we have been working with a community in Nepal monitoring and developing appropriate methods to reduce the levels of smoke. An appropriate metal smoke hood has been designed and modified that can be made out of thin sheet metal by local blacksmiths. Home insulation has also been improved to keep in the fire's warmth during winter.



Women spreading a fine gravel as the surface layer of a community road which will be rolled later

Spreading the word

In some areas, word has spread and examples of Practical Action's technologies and ideas are being used far and wide. But the challenge remains to ensure quality, and that effective systems are in place to ensure this happens.

To help the process on its way, we plan to record and share these experiences, and work with government officials and NGOs to help them introduce our technologies in energy and transport and shelter.

Making ourselves heard

Practical Action continues to lobby governments to reform policies, regulations and procedures, and adopt new policies that work to benefit poor communities. Sometimes legislation can threaten the choices open to poor people. Giving poor people a voice is central to our strategy. In many of the countries where we work, important policy reforms are underway; seeking to reduce the role of the state and increase the role of the private sector in a range of services. At the same time, powers are being decentralised to local government levels.

Project in Action



Women from the Kipsongo Spring Women's Group at the spring they manage

The spring of life

In western Kenya lies Kitale, a small town with a rapidly growing population. Some residents are refugees from Turkana, driven out of their traditional lands by conflict and hunger. They eke out a living by scavenging in the town. Cut off from their pastoral way of life, many have a deep sense of hopelessness.

Practical Action brought key decision-makers together with the community to find ways to improve the area. The residents identified water and sanitation as their most important needs. The first task was the rehabilitation of the local spring, heavily polluted by the nearby river. The Kipsongo Spring Women's Group was formed with the support of Practical Action and its members now take a week in turn to ensure the newly protected spring stays clean. This has given them and the rest of the community a new sense of direction.

Now the health of the community has improved and the incidences of cholera and diarrhoea are reducing. Monica Ekirata, a member of the group comments: *"Now we have clean water, which everyone wants, more and more people are coming to our spring. When we walk in the neighbourhood we feel dignified and proud; we have uplifted the reputation of Kipsongo."*



Goods being transported to the upper station of the gravity ropeway

Project in Action

What goes up, must come down!

In remote areas of Nepal - the mountainous terrain and steep contours make road building expensive and almost impossible. For the communities living in these areas transporting their goods to market can be exhausting and dangerous - and during the monsoon the mountain trails become treacherous and accidents frequently occur.

With the help of Practical Action the installation of the gravity ropeway has been life-changing for communities living in two districts of Nepal – Dhading and Mustang. Using no external power makes the ropeway simple and inexpensive to operate. Each ropeway consists of two trolleys attached to separate cables, which operate solely by gravitational force – when the full trolley comes down pulled by the weight of its load, the empty one goes up!

For vegetable grower, Dharma and his family living in the hilly village of Janagaon in the Dhading district the gravity ropeway has transformed his life. He says: *“It takes two hours to get down the mountain trail to the main road, and during the monsoon, accidents are frequent. Now we have the gravity ropeway, the time saved means I can earn three times as much from selling my vegetables. With that extra money I can afford to farm animals, too. But I’m not just glad for me – the whole village is prospering thanks to the ropeway”.*

And its not just Dharma’s family that are enjoying the benefits, it’s the whole community. People are utilising their wasteland for farming and market demand has increased. As a result a local market centre has been developed, which collects and sells the villagers produce. This in turn has increased the marketing knowledge of the poor people in previously isolated villages.

Photography: Practical Action/Front Cover/improved drain, Karen Robinson, Practical Action/micro hydro, Colin Palmer, Practical Action/road building, Rachel Berger, Practical Action/Kipsongo, Lucy Stevens, Practical Action/Goods transportation, Upendra Shrestha,

Practical Action brought together slum communities and local authorities to work towards changing the rules for improving informal settlements. In an innovative case, the Mavoko Municipal Council near Nairobi introduced new regulatory guidelines on housing to assist more poor people gain access to land and much-needed community managed services, such as piped water.

Increasing public support

Your voice and support can bring about great changes. Lobbying governments, in the UK and developing countries, can bring issues to the top of the political agenda. Working with the World Health Organisation, Practical Action has successfully lobbied the UK government to do more to tackle indoor air pollution from cooking fires. We are also looking at how sustainable energy can be a solution to reduce poverty worldwide. These solutions don’t cost the earth and are becoming increasingly linked to the current debate on Climate Change.

Future directions

We at Practical Action are proud of what we have achieved, but we know it’s only the beginning. We look forward to working alongside poor communities the world over, to improve access to essential services.

Future plans include:

- Empowering local communities to help them participate in prioritising, allocating resources to, installing and operating infrastructure services.
- Continuing to work with communities to test and introduce technology that improves access to locally-managed waste, energy, water and sanitation services.
- Applying the approaches we have used in our work on indoor air pollution, to other issues affecting health in the home.
- Forming more partnerships with those responsible for delivering services to encourage and enable them to take up our ideas in energy, transport and shelter on a larger scale.

Further information

If you would like to find out more about our work improving access to services in developing countries, or Practical Action’s work in general, please contact:

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Whilst stories in this leaflet are true, names and photos may have been changed to protect the identity of the individuals.

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