

Using broadband to ensure environmental sustainability

The Millennium Development Goal on ensuring environmental sustainability spans a wide range of targets, from the provision of safe drinking water and basic sanitation facilities to reducing biodiversity loss and improving the lives of slum dwellers.

In all these areas, broadband networks can make an important contribution. They can swiftly transmit information from ground sensors or satellites to monitor the effects of climate change or impending natural disasters such as drought or floods. They can provide early warning systems that reduce vulnerability to disasters. Combined with GPS-enabled mobile phones, they can support emergency communications and medical assistance when disaster strikes. And by enhancing environmental surveillance, they can help policy-makers devise suitable response strategies and make more efficient use of resources.

Broadband-powered GPS-based applications can also help monitor environmental abuses in real-time, such as illegal logging or ships illegally washing out their tankers at sea (according to technology developed by the firm Astrium), and transmit that information to regulatory authorities and advocacy groups. And they can facilitate knowledge exchange and networking among policy-makers, practitioners and advocacy groups, boosting public awareness and promoting environmental activism.

In Uganda, sophisticated mapping techniques overlaying data from a variety of sources are enabling policy-makers to better manage the country's wetlands – a critical economic resource for its people – and to prioritize water and sanitation projects. Expanded broadband coverage would enable these maps to be continuously updated and more easily disseminated.

An international partnership, involving the Global Humanitarian Forum, the World Meteorological Organization and telecoms companies Ericsson and Zain, has begun to deploy up to 5,000 automatic weather stations at mobile phone transmitting stations across Africa, where fewer than 300 are reporting today. The project aims eventually to provide information directly to farmers and fishers via mobile phones, enabling them to predict and manage erratic weather patterns due to climate change. Broadband capability would enhance the system even further, to support more sophisticated modelling and faster information sharing.

Innovative ICT projects have already proved their worth in improving the lives of slum-dwellers in such countries as Brazil, India and Kenya, for example, through providing access to employment and training. But broadband internet can do far more than this, enabling the delivery of government services online and giving small business in slum areas the opportunity to participate in e-commerce.

Perhaps most importantly of all, broadband can empower slum-dwellers, often excluded from the political process, by giving them access to information and providing a means for them to communicate, share their concerns and mobilize for change.

In a pioneering move, Rio de Janeiro is aiming to connect the entire city, including the favelas (shanty towns), with free wireless broadband. “The digital inclusion that we are promoting today will enable more families to truly enter the 21st century,” said Sérgio Cabral, Rio’s state governor. One early spin-off of this ambitious project will be enhanced video surveillance to improve security in some of Rio’s poorest areas.