

they deal. Whether the context is protected areas, ecosystem services, trade in wildlife, invasive species or fisheries, decision makers must grapple with poor or incomplete data, inherent unpredictability, and ignorance. How decision making responds to this uncertainty has a major impact on its success in achieving environmental and sustainable development objectives. Waiting until evidence of impending harm or damage is clear and unambiguous will often mean it is too late to prevent serious, costly or irreversible environmental harm. The Precautionary Principle urges action in advance of certainty about threats, supporting anticipatory, preventative action against potential harm. The Guidelines include guidance on topics such as the relationship of the Principle to other rights and principles, turning the abstract principle into operational measures, the relationship of precaution to scientific, indigenous and traditional knowledge, the need for participation in precautionary decision making, characterizing uncertain threats, allocating responsibilities for providing evidence, and adaptive management. They are the product of an international consultative process carried out from 2002 to 2005, involving a wide range of experts and stakeholders from different regions, sectors, disciplines and perspectives. This process included three regional workshops, an international set of 27 case studies, discussions within international policy fora, and a final international review workshop. The Guidelines are available in English, Spanish and French at <http://www.pprinciple.net>, and a colour brochure with further background information and illustrative cartoons is available in English only. Contact Barney Dickson (barney.dickson@fauna-flora.org) or Rosie Cooney (rosie.cooney@gmail.com) for further information.

FrontlineSMS – a text messaging system for NGOs

Uptake of mobile phones in both developed and developing countries continues unabated. The African continent alone has witnessed growth rates in excess of 100% in the past 12 months. In many cases mobile telephony has become people's only means of telecommunication in areas where landline infrastructure is generally poor. Mobile phones are now considered a key tool in closing the digital divide and rates of ownership, even among

some of the poorest members of society, are surprisingly high.

As mobile phone ownership grows, so does access to, and use of, text messaging (SMS). Unlike costly voice calls, text messages allow people to communicate both nationally and internationally at relatively low cost. The potential of mobile phones, and SMS in particular, to provide some of the poorest people in the world with local, relevant information has not gone unnoticed, and many NGOs are beginning to look closely at the potential of this technology.

Patients now receive SMS reminders to take their medicine, saving time and money travelling to local clinics. Farmers receive details of market prices and demand for their products before heading off to market. National parks communicate details of dangerous animals, providing an early warning system to mitigate against human/wildlife conflict. Young people living in the slums of Nairobi receive texts alerting them to job opportunities in the city. The breadth of use of SMS is staggering.

Until now many NGOs have independently implemented SMS systems, some going as far as designing and developing their own applications. This is of little use, however, to the wider community. FrontlineSMS was launched towards the end of 2005 specifically to bridge this gap, aiming to provide an affordable, standalone, turnkey SMS solution for NGOs. FrontlineSMS gives access to 'bulk' SMS technology and provides the facility to carry out small- to medium-scale trials before embarking on larger projects. Although SMS systems do exist, few if any have been designed with the NGO sector in mind and almost all require reliable internet connectivity, a problem in many developing countries. FrontlineSMS works off a laptop, a cable and most standard GSM mobile phones, giving true portability, and users are encouraged to share views, experiences and ideas via an online forum, providing feedback for future versions of the product.

A number of trials are currently underway, with the product available to the wider NGO community from January 2006. Further details are available at <http://www.frontlinesms.com>

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