United Nations Framework Convention on Climate Change

Private Sector Initiative actions on adaptation

Title of case study*	Vivo Clima
Date of submission*	31/05/2013
Name of organization(s)*	Telefônica Brasil S.A.
NWP Objective* *Select the objective(s) of the NWP that the case study responds to.*	The objective of the Nairobi work programme is to assist all Parties, in particular developing countries, including the least developed countries (LDCs) and small island developing States (SIDS), to: x **improve their understanding and assessment** of impacts, vulnerabilities and adaptation to climate change; and x **make informed decisions on practical adaptation actions and measures** to respond to climate change on a sound scientific, technical and socio-economic basis, taking into account current and future climate change and variability.
Objective of case study* *Describe the specific objective of case study.*	The aim of this case study is the implantation of a pluviometric data collection network which allows the increase in the warning and monitoring system of extreme meteorological events. The rain season in Brazil is characterized by extreme weather events that can cause plenty of natural disasters such as flooding, landslides and buildings collapse. This occurs mainly in irregular urban occupation areas which are usually related to the poorest people.
Actions* *Describe the activities to meet the case study objective, highlighting organizations, communities and/or experts to be engaged.*	The project consists of the implementation of pluviometers (rain gauge equipment) in telecommunication sites that are located in risk areas throughout Brazil. The data captured by these devices are sent through the mobile phone network (3G/GPRS) to telefonica's m2m platform called Vivo Clima and to the information monitoring platform of the National Center of Natural Disasters Monitoring (CEMADEN) which is part of the Ministry of Science, Technology and Innovation (MCTI) of Brazil. By sending the pluviometric data in real time to both platforms, the response time to potential emergency situations, in case of extreme weather events, is significantly lower than the current emergency response scenario. In this way, we are able to protect people who live in risk areas. This project has been carried out by a public-private partnership between the brazilian government through MCTI and Telefonica. In June of 2012, pilot project has been initiated in a risk area located in Mauá, into the metropolitan region of São Paulo. The results of this project were evaluated by the government of Brazil and its success was a relevant factor to decide for the expansion of the project throughout the country. By the end of 2013, 1500 pluviometers connected to the monitoring platforms mentioned will have been installed.

Expected results* *Describe the envisaged outputs/benefits of the case study/*	The implementation of 1500 pluviometers throughout Brazil. This will capture in real time the data of rain precipitation in risk areas; Quickness on the warning system of extreme weather events to the affected communities; Prevention of from material losses and, especially, the reduction of in death toll caused by landslides, drowning and burials.
Indicators of achievement* *Describe any quantitative and/or qualitative indicator to show that the objective of the case study has been achieved.*	The main indicator is the measure of the local rainfall which is measured in millimetres. This represents the height of water accumulated over an area of 1m ². All data collected by the pluviometers will be measured in real time in order to compose a picture of the conditions of rain precipitation in Brazil. With the aim to warn for, the speed with which the amount of rain increases in a specific region will be also taken into account.
Region(s) relevant to case study*	☐All regions ☐Africa ☐Arab States ☐Asia ☐Caribbean ☐Central America ☐Europe ☐Least Developed Countries ☐North America ☐Pacific ☐Polar regions ☐Small Island Developing States X South America
Country(ies) relevant to case study	Brazil
Business sector of the organization(s)*	☐Intergovernmental organization ☐National/regional programme/initiative ☐Non-governmental organization X Private sector entity ☐Research institute ☐UN organization/agency
Adaptation sector relevant to case study*	☐Capacity building, education and training ☐Energy ☐Finance and insurance ☐Food, agriculture, forestry and fisheries ☐Human health ☐Oceans and coastal areas x Science, assessment, monitoring and early warning x Technology and Information & Communications Technology (ICT) ☐Terrestrial ecosystems ☐Tourism ☐Transport, infrastructure and human settlements

	☐Water resources
Adaptation activity delivered bycase study*	☐Capacity building ☐Climate-resilient development planning x Communications and awareness-raising x Disaster risk reduction x Early warning systems ☐Education ☐Financial support ☐Humanitarian assistance ☐Knowledge management x Monitoring and evaluation ☐Pilot adaptation programmes/projects x Risk/vulnerability mapping ☐Training
Work areas of the NWP*[1] *Select among the nine work areas of the NWP that apply to the case study.*	☐Adaptation planning and practices ☐Climate modelling, scenarios and downscaling x Climate-related risks and extreme events x Data and observations ☐Economic diversification ☐Methods and tools ☐Research ☐Socio-economic information x Technologies for adaptation
Target group*	☐Academics ☐Children ☐Communities ☐Policy makers ☐Practitioners x Private sector ☐Women
Link *Further information on relevant websites.*	http://www.telefonica.com.br/institucional/sobre-a-telefonica/rc-e-sustentabilidade
Description *Provide a title and brief description of the picture and of the case study. This information will appear with your image on the homepage of the NWP.*	Demonstration of the Vivo Clima system and the M2M (machine-to-machine) technology installed in the pluviometer.
Credits *Provide the name of the photographer or the copyright references.*	Photographer: Carlos Della Rocca

* Mandatory fields

[1] More information on the Nairobi work programme work areas is available at: <http://unfccc.int/nwp>

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Disclaimer: These business cases have been cited to raise awareness about the engagement of the private sector in climate change adaptation. The information in the business cases has been provided either directly by the organization or obtained from a public source. The UNFCCC Secretariat has not verified the information and takes no responsibility for it. Users are therefore advised to verify the information before they take any action relying on the information provided in the business cases.