Title of case study*	ClimaGrid - Brazil
Date of submission*	28/05/2013
Name of organization(s)*	EDP Energias do Brasil
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.*	Through the analysis of historical data and the identification of relevant meteorological variables, ClimaGrid aims to reduce climate change risks for society, improve the services provided and enhance energy efficiency.
Actions* *Describe the activities to meet the case study objective, highlighting organizations, communities and/or experts to be engaged.*	ClimaGrid was born and developed through a partnership between EDP - Energias do Brasil and INPE - National Institute of Space Research. Sooner, EDP participated in the construction of BrasilDAT. The system created a net of sensors to detect cloud to ground and intra-cloud flashes. This is an important tool for generation of information. This information and historical data registered by INPE enabled the creation of a mathematic model able to monitor climate variables that influences power grids. INPE developed the meteorological model WRF - Weather Resource Forecast with spatial resolution of 5km for predictions of 24hours of variables as: precipitation, speed and wind direction, temperature, humidity and atmospheric pressure. This information are available daily and automatically, through information M2M (Machine to Machine). The WRF produces a variable called PLR (Probability Lightning region) that is a global innovation launched by INPE/EDP in December of 2012. The model was integrated with the pioneer Smart Grid systems developed by EDP. New investments are planned to increase data collection, and to improve continuously the accuracy of ClimaGrid outputs.
Expected results* *Describe the envisaged outputs/benefits of the case study/*	Among several ClimaGrid known benefits and outputs. The most important to EDP is mapping the risks and opportunities. The historical Data allows the planning of short, medium and long term company´s assets. The real time and prediction data helped to improve the

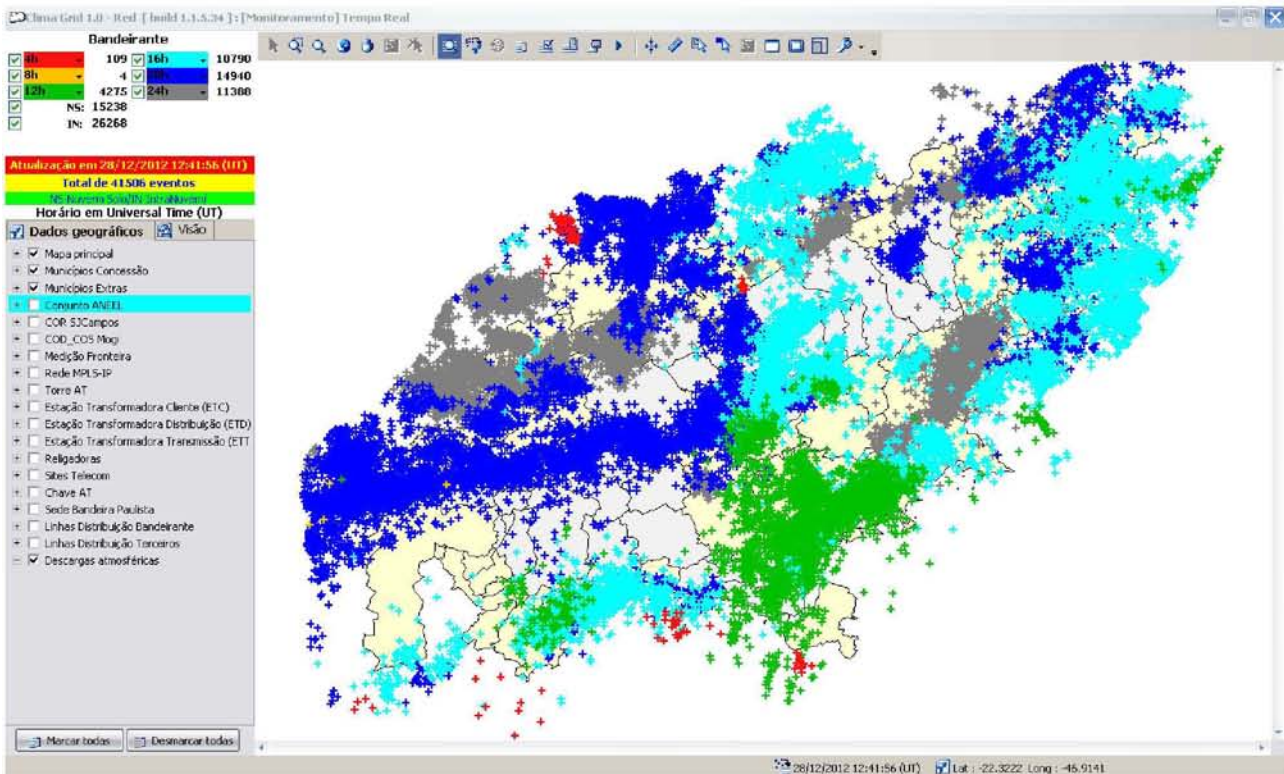|	
	emergency team action during the extreme events. The most important opportunities are in energy supply and energy consumers, because through the data we can find opportunities of micro-generation and climate variables influence industrial and residential consumption.
Indicators of achievement* *Describe any quantitative and/or qualitative indicator to show that the objective of the case study has been achieved.*	The indicators of achievement are DEC (Equivalent of Continuity Duration) that indicates how many hours, in average, the consumer stay off energy for year and FEC (Equivalent of Continuity Frequency) that indicates an average of how often the energy fails per consumer.
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 x Research institute ☐ UN organization/agency
Adaptation sector relevant to case study*	☐ Capacity building, education and training X 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

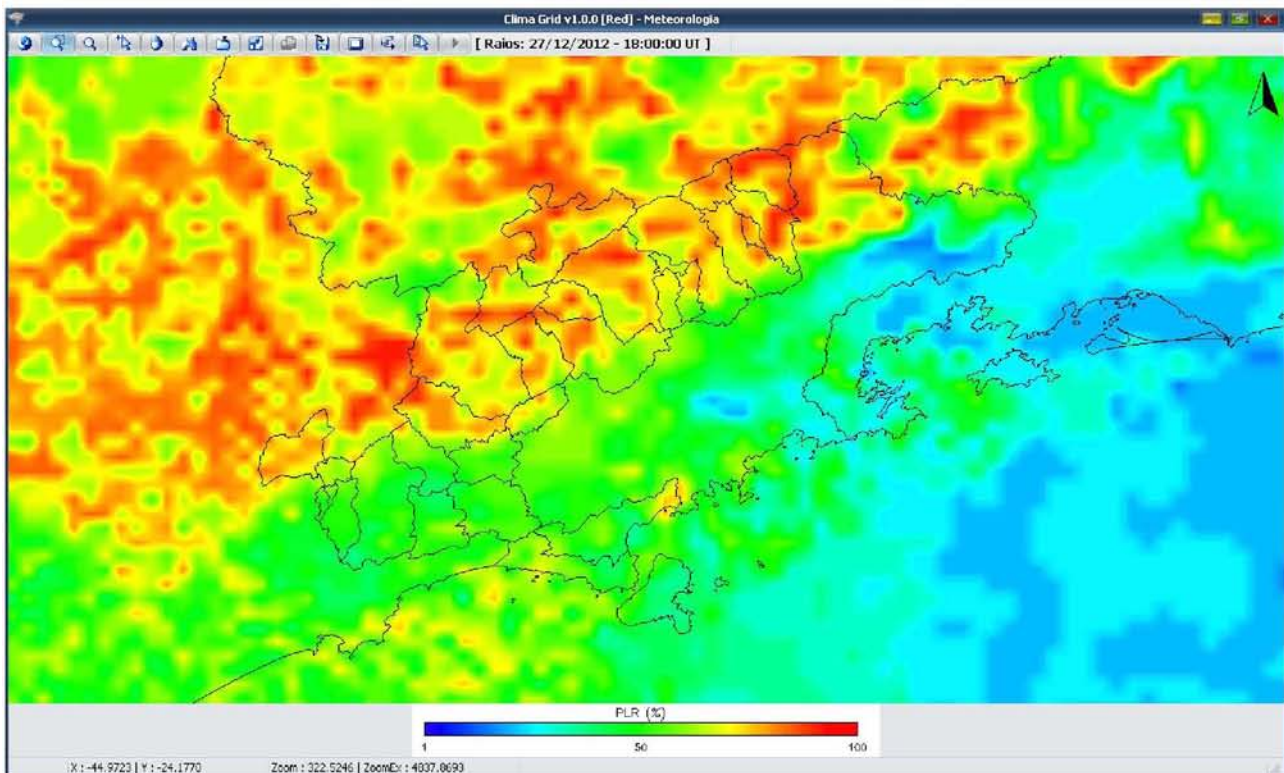|	
Adaptation activity delivered by case study*	☐ Capacity building ☐ Climate-resilient development planning ☐ Communications and awareness-raising x Disaster risk reduction ☐ Early warning systems ☐ Education ☐ Financial support ☐ Humanitarian assistance x Knowledge management x Monitoring and evaluation X 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.*	x Adaptation planning and practices ☐ Climate modelling, scenarios and downscaling ☐ Climate-related risks and extreme events ☐ Data and observations ☐ Economic diversification x Methods and tools x Research ☐ Socio-economic information X Technologies for adaptation
Target group*	X Academics ☐ Children ☐ Communities ☐ Policy makers ☐ Practitioners X Private sector ☐ Women
Link *Further information on relevant websites.*	http://www.energiasdobrasil.com.br/
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.*	The ClimaGrid is an innovative tool in deployment in Smart Grids in Brazil, inserting the new concept of grid: enables the convergence of space-time and also information about climate and environmental variables, providing the "3D" vision for the smart grid. ClimaGrid is an automation platform able to anticipate climate variations that can potentially affect power grids, supporting pro-active solutions and avoiding and minimizing the interruption of the energy transmission and distribution.

Descargas registradas em 27.12.2012

Previsão da Probabilidade de Raios em 27.12.2012