

## European Year for Development 2015

### AMESD fire receiving station changes the way Namibia monitors and deals with fire

"African wildlife can hear, feel and smell a fire from a long distance", says Marthin K. Kasaona, a conservation scientist based in Etosha National Park in Namibia, a protected area almost the size of Belgium. Etosha, means 'place of dry water'. As the name suggests, it is a dry area, but the grasses, bushes and trees that grow here are adapted to the low rainfall and the park, provides food and a safe haven for plants and wildlife, including the threatened black rhino, zebras and even elephants.



"Because it is so dry and parts of the park are very remote, bush fires can be a real threat to people and animals", explains Marthin, "but bush fires are not all bad" he adds. Fire forms part of the natural ecosystem and is needed to clear old dry grasses to make way for new fresh green grass. Some seeds in fact need fire to germinate and fire can increase biodiversity. Some fires are started by lightning strikes,

*We use fire to fight fire and promote biodiversity, but in a controlled way.*

*Marthin Kasaona*

but these days, bushfires are more often started by people, on purpose or by accident. "Here in the park we use fire to fight fire and promote biodiversity" says Marthin.



He and the Etosha park wardens in their neat khaki uniforms show the blow torches they use to set fire to the dead grass. "By reducing the amount of biomass in a controlled way, we can prevent the dangerous uncontrolled fires from becoming unmanageable later in the season", explains Marthin.

While the burnt areas look inhospitable, they can in fact provide shelter for animals during big bushfires. "Uncontrolled bush fires can otherwise have devastating effects, and that is what happened in here", says Martin and shows some harrowing photos of scorched earth and blackened rhino carcasses from a few years back. Marthin frowns when he remembers the fire which erupted at a nearby charcoal farm and spread into Etosha National Park. The flames raged through the park, charring 370,000 hectares of vegetation and killing at least 32 rhinos, 25 elephants and other numerous animals. "It took us over two weeks to bring the fire under control", says Marthin.



*"Bushfires are part of life in Namibia, but the AMESD fire receiving station has changed the way we monitor and deal with fire, not just in Etosha National Park but in Namibia".*

Marthin Kasaona

But this was then, since 2012 we have access to satellite technology through the African Monitoring of the Environment for Sustainable Development (AMESD) and Monitoring for Environment and Security in Africa (MESA) projects to help us monitor vegetation, weather and fire in the park, and we have also started a controlled burning system. As a result, the disaster fires have decreased significantly and there were no animal deaths because of wildfires in 2012 or 2013.

*"The satellites pick up fires on the ground every 15 minutes"*, says Marthin and points at the computer monitor where red and orange dots keep popping up, indicating outbreaks of fire. During April to August, the dry season, there are a lot of fires in northern Namibia.

The fire station is linked to a big satellite dish, placed outside the office. The satellite sensors don't just show you where there is a fire, but it will tell you when it started, how intense it is, which way it is moving and measure the burnt area after the fire has been put out. This is invaluable when coordinating fire fighting activities.

The satellite dish is also used to collect weather information and the status of the vegetation on the ground. *"We can combine this information into fire danger forecast maps"*, says Marthin. For example, if there is a lot of dry vegetation and strong winds are forecast, there is a great risk of runaway fires, so we warn people in and around the park that they must be very careful with fires. Or if the conditions are right we tell them today is a good time for controlled burning of farmers' fields for example.

*"Bushfires are part of life in Namibia"* says Marthin but the AMESD fire receiving station has changed the way we monitor and deal with fire, not just in Etosha National Park but in the whole of Namibia. This will help us save both human and animal lives in the future, while allowing fire to do its natural job. .

### **AMESD and MESA**

African Monitoring of the Environment for Sustainable Development (**AMESD; 2009-2013**), and the follow-up programme Monitoring for Environment and Security in Africa (**MESA; 2013-2016**) are two EU funded programmes designed to facilitate access to environmental satellite data in Africa.

The information is aimed at planners and decision-makers to assist them in planning for disaster risk reduction planning and sustainable development.

The programmes include provision of infrastructure, development of information services and a large training component.

Fire is one of the information areas, but the programmes also covers monitoring of agriculture, land degradation, floods, drought deforestation and various marine issues.