

02 An Outreach Program Of The GFMC And The ISDR Global Wildland Fire Network: Regional Subsahara Wildland Fire Network

BACKGROUND

Fire is a widespread seasonal phenomenon in Africa. In south of the equator, approximately 150 to 170 million hectares burn annually. Savanna burning accounts for 50% of this total, with the remainder caused by the burning of fuel-wood, agricultural residues, and slash from land clearing. Fires are started both by lightning and humans, but the relative share of fires caused by human intervention is rapidly increasing. Pastoralists use fire to stimulate grass growth for livestock, while subsistence agriculturalists use fire to remove unwanted biomass while clearing agricultural lands, and to eliminate unused agricultural residues after harvest. In addition, fires fuel by wood, charcoal or agricultural residues are the main source of domestic energy for cooking and heating.

In most African ecosystems fire is a natural and beneficial disturbance of vegetation structure and composition, and in nutrient recycling and distribution. Nevertheless, substantial unwarranted and uncontrolled burning does occur across Africa, and effective actions to limit this are necessary to protect life, property, and fire-sensitive natural resources, and to reduce the current burden of emissions on the atmosphere with subsequent adverse effects on the global climate system and human health. Major problems arise at the interface between fire savannas, residential areas, agricultural systems, and those forests which are not adapted to fire. Although estimates of the total economic damage of African fires are not available, ecologically and economically important resources are being increasingly destroyed by fires crossing borders from fire-adapted to a fire-sensitive environment. Fire is also contributing to widespread deforestation in many southern African countries.

Most southern African countries have regulations governing the use and control of fire, although these are seldom enforced because of difficulties in punishing those responsible. Some forestry and wildlife management agencies within the region have the basic infrastructure to detect, prevent and suppress fires, but this capability is rapidly breaking down and becoming obsolete. Traditional controls on burning in customary lands are now largely ineffective. Fire control is

also greatly complicated by the fact that fires in Africa occur as hundreds of thousands of widely dispersed small events. With continuing population growth and a lack of economic development and alternative employment opportunities to subsistence agriculture, human pressure on the land is increasing, and widespread land transformation is occurring.

The prevailing lack of financial, infrastructure and equipment resources for fire management in Subsahara Africa goes along with a lack of human resources adequately trained in fire management. The gap between the decreasing fire management resources and the increasing fire problems in Subsahara Africa requires immediate response through capacity building.

OBJECTIVES

Considering the recent progresses made by cooperation in wild-land fire science and management, including wild-land fire disaster mitigation and response, it is necessary to provide individuals as well as officials from SADC countries with an updated and comprehensive advanced fire management training / capacity-building package. The Training Centre activities cover (a) introduction to African fire ecology, (b) fuel and fire management, (c) fire prevention, (d) fire-use, (e) fire fighting, (f) fire behaviour prediction, (g) fire monitoring using remote sensing tools, (h) fire early warning systems and application, and (i) international cooperation in wild-land fire management. A strong focus lies on sustainable fire education in and for the rural communities and the communities living in the urban-wildland interface (Community-based Fire Management - CBFiM).

ACTIVITIES

The programme was initiated in 2002. Since then the Training Center conducted a number of short and long term training programmes in cooperation with local and international role players (GFMC: Global Fire Monitoring Center) UN-ISDR, FAO, UNU-EHS, NDMC, NEPAD, WoE, ARB Botswana, USFS, DNRC Montana), most importantly the *Advanced Wildland Fire*

Management Course, A Joint UN Inter-Agency Training Course for the SADC Region (sponsored by the German Foreign Office, Office for the Coordination of Humanitarian Assistance, and jointly conducted with the United Nations University, Institute for Environment and Human Security - UNU-EHS) and the *FAO / GFMC / UNU Training Course for Instructors in Community Based Forest Fire Management* (CBFIM), both held in 2004.

ACHIEVEMENTS


The Training Center managed to start with a regional outreach in most of the SADC countries. Especially when operating in long term projects the change of community behaviour towards fire is significant. The empowerment and upliftment of people who felt helpless and overwhelmed by wildfires previously is an encouraging achievement.

LESSONS

The Training Center found a huge number of highly motivated people in all affected societies of the SADC region. The future challenge is to identify these individuals and organisations and to create with these persons a common spirit to deal with wildfires in a regional coordinated strategy.

FUTURE

The main challenge for the coming years is to secure funding to enable the knowledge and technology transfer into the communities, organisations and governments of the SADC region, with main emphasis on (a) establishment and implementation of a regional strategy, (b) dealing with the problem of cross border fires, (c) exchange of resources in bilateral assistance and exchange programs for the SADC countries.



CONTACT DETAILS

The Global Fire Monitoring Center (GFMC)
Georges-Koehler-Allee 75
D - 79110 Freiburg, GERMANY
Tel: +49-761-808011
Fax: +49-761-808012
info@gfmc.org
GFMC website:
<http://www.fire.uni-freiburg.de>
Regional Subsahara Wildland Fire Network and WFCTA Websites:
<http://www.fire.uni-freiburg.de/GlobalNetworks/Africa/WFTCA.htm>
<http://www.fire.uni-freiburg.de/GlobalNetworks/Africa/Afrifirenet.html>

03 Governmental Learning Activities To Mitigate Earthquake Impacts In Algeria During The Period 1980-2004

BACKGROUND

This paper presents the case study of the different earthquake disaster prevention and post-disaster measures taken by the government of Algeria between 1980 and 2004. It details the measures learning activities taken at the country level as well as those involving the co-operation of international organizations.

In Algeria, as amazing as it may appear, before the last earthquake disaster of El-Asnam (actually Cheliff) in the twentieth century, which occurred on the 10th of October 1980, the government and the population both alike did not consider earthquakes as a threat. The destructive El-Asnam earthquake, of magnitude Ms7.3, of 10 October 1980 occurred in the Central Cheliff Valley affecting a rather densely populated region where about 900,000 people living within 8,000 square km. It caused 3,000 deaths, injuring more than 8,500 persons and they made about 400,000 homeless people: by destroying or seriously damaging at least 60,000 housing units in 24 towns and villages. This earthquake seriously affected all levels of the regional economic development. Also, the social and economic impacts were felt throughout the entire country. One important conclusion that can be drawn from this event is poor earthquake-resistance performance of the Algerian buildings and other facilities. Whether modern construction or traditional gourbis (local house), buildings are potentially vulnerable to the recurrence of destructive earthquakes. Then, On Wednesday, May 21st, 2003, at 18 hours 44 minutes UTC (19:44 local time), a destructive earthquake, of magnitude Ms6.6, occurred in the provinces (wilaya) of Algiers and Boumerdes affecting a rather densely populated region of about 3,000,000 people within 1,000 km². The main shock caused the loss of 2,278 lives, injuring more than 11,450 others, making about 200,000 homeless and 45 people missing; it destroyed or seriously damaged at least 128,000 housing units. These last two destructive events have shown that large earthquakes, particularly in northern part of the country could be very destructive and also they have proved that additional loss-reduction measures are needed to potential earthquake-induced losses. These are not the first catastrophes of its kind to have struck Algeria and there is no knowledge of when and where a similar disaster may strike again? Thus, there should be implementation of effective disaster risk reduction measures and sound disaster management to cope with such emergencies.

OBJECTIVES

The goal of the whole training program is to reach an acceptable disaster risk reduction level for the country. The main objective is to educate and train people for a better a disaster risk reduction.

ACTIVITIES

Activities undertaken during the last two decades are to raise awareness of the civil society, reduce disaster risk and to manage disaster effectively. Also, these learning actions or "training on job" are meant to train decision makers, professionals and also civil society on disaster risk reduction and disaster management.

ACHIEVEMENTS

- **1980:** New mission is given to the Centre of Research in Astronomy, Astrophysics and Geophysics (CRAAG), by the decree 2 February 1981; the CRAAG became responsible for the management of the entire Algerian seismological network.
- **1981:** Appearance of the first Algerian seismic design code (RPA 81)
- **1982:** Meeting of Arab Ministers of Construction in June 1982 in Algiers where a program for the management of the seismic risk the Arab World (PAMERAR) was recommended, with the co-operation of the UN specialized agencies.
- **1982 – 1984:** Realization of a seismic micro-zoning study in the El-Asnam region
- **1983:** Appearance of a new version of the seismic design code (RPA 1983)
- **1985:** The Algerian Parliament adopted a law 85-231 of August 25, 1985, which establishes disaster relief and civil defense organizations
- **1985:** Appearance of the recommendations from strengthening, reinforcement and repair of damaged earthquake constructions.
- **1985:** With the co-operation of UNESCO, UNDRR, UNDP and AFESD, the National Centre for Applied Research in Earthquake Engineering (CGS) was created and located at Algiers.
- **1985:** The Ministry of Construction has appointed a special governmental permanent commission to update the regulations for earthquake resistant design and construction
- **1988:** Appearance of a new seismic design code (RPA 88)
- **1988:** Participation of Algeria to the program

for seismic risk reduction in the Mediterranean region (SEISMED).

■1990: New mission to CRAAG to seismically monitor the whole Algerian territory and to pass under the authority of the Ministry of the Interior by the decree of 17 April 1990.

■1990 – 1993: Revision and analysis of the seismicity of Algeria and adjacent regions during the twentieth century by Benouar in 1993 This has led to a complete, homogeneous and as accurate as possible earthquake catalogue for the Maghreb region.

■1994: Publication of the earthquake Maghreb catalogue during the period 1900-1990 (Benouar).

■1995: Earthquake hazard mapping of the Maghreb region (Algeria, Morocco, Tunisia)

■1981 –2000: Numerous learning activities as seminars, symposia, conferences, training courses and workshops have been taking place in Algeria in order to update the knowledge of Algerian scientists and engineers engaged in earthquake engineering.

■2003: Algeria proposes to the League of Arab States the creation of an Arab Observatory for earthquake Prevention and disaster management It was accepted by the all the Arab States and is to be located at Boumerdes (Algeria).

■2004: Revision of the Algerian seismic design code (RPA 99) and added some recommendations and changes in zones with higher design accelerations.

■2004: National Assembly passed the bill for Disaster Risk Reduction and Disaster Management This law will allow the creation of an integrated agency in the government structure for disaster management in Algeria; it will be under the authority of the head of the government (To be established in 2005).

■2004: Creation of a National Agency for earth Sciences under the authority of the head of the government This agency is responsible for the whole national program for establishing all the tools (as maps) for disaster risk reduction.

■2004: Establishment of a natural disaster insurance fund compulsory for all the owners of buildings, industrial plants, houses, etc for the whole country.

■2004: Introduction in the cursus of the primary, middle and secondary school levels of natural disaster prevention measures

■2004: Preparation of a University Cursus for the Sciences of Risk to be taught at the Algerian Universities from 2006 and will lead to Master of Science (2 years) and a Professional Master (3 years).

■2004: The Centre for Earthquake Engineering (CGE), a governmental organisation, has conducted a training program for professionals, decision makers and civil society for the new earthquake design code (RPA99 revised) in the whole provinces of the northern Algeria, during

about eight months.

■2004: The Centre for the Control of Constructions (CTC), a governmental organization, has also conducted for professionals, decision makers and civil society across northern Algeria, a training program on best practices in earthquake design and construction.

■2004: The Algerian Red Crescent (ARC) has also conducted a wide training program in disaster management across northern Algeria for the civil society.

LESSONS

Many difficulties were faced to implement seriously the seismic code particularly for private owners. Also, training the decision makers was not an easy task since these people were used to take decisions and calling them to be trained was, at the beginning of the program, for them like just a break from their duties. It was with time and perseverance of the trainers and educators that the interaction with all the trainees became serious and productive. It is important that these activities be permanent to have a sustainable disaster risk reduction and disaster management strategies.

FUTURE

Focusing on educating and training the civil society in terms of disaster risk reduction.



CONTACT DETAILS

DJILLALI BENOUAR

Vice-President GADR

USTHB, Faculty of Civil Engineering

BP 32 El-Alia, Bab Ezzouar, Alger16111,
ALGERIA

Tel: +213 71 842 428

Fax: +213 21 247 914,

dbenouar@yahoo.com