

## MINIMISING THE RISK AND IMPACT OF ANOTHER MEGA-FIRE IN SOUTH AFRICA

### *Knysna Fires of 2017: Independent disaster report released*

Cape Town - 06 June 2019: An in-depth authoritative and independent report, commissioned by short-term insurer [Santam](#), into the devastating fires that struck the Knysna area in June 2017 has found that the risk of so-called 'mega-fires' recurring in South Africa remains high.

*The Knysna Fires of 2017: Learning from this disaster* report makes a number of recommendations for government, communities, the insurance industry and other stakeholders towards minimising the risk of future 'mega-fires' – and the remedial steps to be taken in reducing the social and financial impact of such disasters should they occur.

Key among these recommendations are: managing or controlling the presence of fire-prone vegetation and other combustible or flammable material on tracts of land, usually referred to as fuel loads; attending to all fire callouts -even if they don't appear threatening; greater focus on public education and awareness programmes on the risks associated with wildfires.

Santam commissioned the report from the Council for Scientific and Industrial Research (CSIR), the Research Alliance for Disaster and Risk Reduction (RADAR) and the Fire Engineering Research Unit (FireSUN) at Stellenbosch University.

The Knysna fires were the worst wildfire disaster in South African history. The report found that its' severity was caused by a cocktail of factors including drought, low atmospheric humidity, strong winds and abundant fuel.

John Melville, Chief Underwriting Officer at Santam says that unfortunately, these conditions remain prevalent in many parts of South Africa.

"Our goal was analyse the causes of the Knysna fires and to find out why it was so severe, but more importantly the purpose was to establish how we can reduce the risk of recurrence and the severity of such fires should they reoccur. While we can't do anything about conditions created by climate change, we can take steps to reduce the frequency and magnitude of wildfires."

He added that the report found responders were remarkably successful in saving lives.

“However among other critical factors, the report showed that there were gaps in the training of the suppression of wildfires, incident command and evacuation and as well as in response planning.”

Among the key recommendations outlined in the report includes the necessity for government to better manage and control fuel loads on municipal land - especially along wildland-urban-interfaces (WUIs). The report states that fires need heat, oxygen and fuel to burn.

“With fuel being defined as combustible materials, this is a good place to start for all parties – government, business and communities – in terms of fire prevention and control. Municipalities can play a role in managing fuel loads on municipal land, particularly on land bordering vulnerable communities. Similarly, communities can do so on private land,” says Melville.

Authorities were also urged, among other actions, to strengthen the fire danger index component of the national fire danger rating system, strengthen their capacity to respond to wildfires and plan post-fire environmental recovery and rehabilitation properly.

The report urged the insurance industry to help build the capacity of municipal fire services to deal with wildfire prevention and response. Melville says the report also urged insurers to support prescribed burning by extending insurance cover for the execution of such preventive measures.

“Insurers can help by requiring policy-holders to undertake measures to reduce risk – for example reducing flammable materials and creating defensible spaces around homes.”

Another key recommendation was that insurers develop more affordable insurance products for the so called ‘missing middle’, the households which are not sufficiently impoverished to be supported by government welfare but who are unfortunately not able to afford insurance.

Communities could also join the local Fire Protection Association (FPA), the report said, and participate in setting up FireWise communities. Residents and landowners should work together with FPAs to map and monitor the extent and densities of invasive alien plant regrowth accurately; this is fundamental to determining the amount and duration of funding required to control the

massive regeneration of invading plant species after fires. The report also encourages all residents to regularly check that they are adequately insured against fire.

ends

Note to editor:

**COMPREHENSIVE SUMMARY OF THE RECOMMENDATIONS FROM THE KNYSNA FIRES OF 2017:  
LEARNING FROM THIS DISASTER**

**RECOMMENDATIONS FOR GOVERNMENT**

**REDUCING THE RISK AND IMPACT OF WILDFIRES:**

- The authorities must commission research to assess the risk of damaging wildfires to vulnerable communities along the WUI in settlements across South Africa.
- Municipalities should ensure that they manage fuel loads on municipal land along the WUI. They should protect vulnerable infrastructure through zonation or restrictions and fire-proofing of structures.
- Municipalities should consider introducing by-laws to promote fire risk reduction and explore measures to enforce existing legislation. They should also incorporate fire-risk reduction into the planning of new developments.
- Municipalities should work with FPAs to effectively educate the public so they have a far better understanding of fire risks and what they can do to reduce them. They should find ways of maintaining awareness during wildfire-free periods. Education activities should include people living in informal settlements along the WUI. FPAs must be remunerated for their efforts.
- Municipal fire and rescue services should take pre-emptive action to deal with naturally occurring fires if they are within inhabited landscapes, regardless of whether they present an imminent threat. Provincial government should assist with additional training and resources where needed.
- District Municipalities, in collaboration with FPAs, should develop and adhere to standard operating procedures for remote-area and lightning-strike ignition monitoring and suppression.

**REDUCING FUEL LOADS:**

- The National Disaster Management Centre (NDMC), DEADP and other relevant role-players should explore ways of addressing disincentives that favour risk aversion and hinder adaptive management both within and between organisations.
- Municipalities must support FPAs to develop collaborative local networks among organisations working on fire-related issues to build trust, an understanding of how to reduce fire risk and how to turn this understanding into action.

**ENHANCE THE FIRE DANGER INDEX COMPONENT OF THE NATIONAL FIRE DANGER RATING SYSTEM:**

- The NDMC together with South African Weather Service should consider including the Canadian FWI in the National Fire Danger Rating System in addition to the LFDI currently in use.

- The NDMC together with South African Weather Service should consider including the Canadian FWI in the National Fire Danger Rating System in addition to the LFDI currently in use.

#### **STRENGTHEN PLANNING AT THE MUNICIPAL AND DISTRICT LEVEL:**

- Provincial Disaster Management Centres should train and equip resources to better deal with complex, multi-stakeholder responses.
- Municipal disaster management and/or the fire and rescue services must give top priority to the development of evacuation plans. These should incorporate responses under different conditions and provide for the simultaneous loss of electricity and ICT infrastructure.
- Municipal disaster management centres should work with the fire and rescue services and municipal managers to identify and include critical role-players to be included in disaster planning. Scenario exercises and training will help identify critical role-players, establish roles and responsibilities and build relationships. Planning activities should include both civilian role-players and emergency responders.
- Municipal disaster management centres and/or the fire and rescue services should establish agreements to facilitate inter-governmental cooperation and resource mobilisation. The National Incident Management System (NIMS), which promotes the Multi-Stakeholder Coordination System, provides a framework for strengthening collective action at this level.
- Municipal disaster management centres and/or the fire and rescue services should also establish Memorandums of Understanding with agencies such as SANParks and Cape Nature to define their roles and responsibilities.
- Disaster management and the fire services should engage with municipalities to explore how to better integrate municipal funding and oversight mechanisms. Municipalities should explore the potential for expediting extraordinary procurement and funding during emergencies.

#### **STRENGTHEN CAPACITY TO RESPOND TO WILDFIRES:**

- The national disaster management centre must prioritise capacity-building in the fire and rescue services, particularly with respect to training and equipping municipal firefighters to respond to wildfires, particularly on the WUI.
- The WCDMC, and other provincial disaster management centres, should develop the logistical and institutional capacity to support the implementation of the ICS, especially for extended incidents. ICS training should also be considered for municipalities' senior management and communications teams.
- Municipal fire and rescue services must work with FPAs to ensure that communities become more self-sufficient and self-organised to be better prepared for wildfires. This should include providing guidance on defending properties, developing evacuation plans and identifying safe refuges when there is no way out.
- Municipal disaster management centres must ensure that communities have access to early warnings and are able to act on warnings. This should be linked to evacuation planning.
- Municipal planning departments and the relevant municipalities must ensure that towns, suburbs and developments have enough access routes for efficient access and egress, especially for emergency services. This must include roads to access natural vegetation in areas behind secure estates because walls and fences will not prevent fire from spotting into the estate or finding continuous fuels. Knysna Municipality must consider building an additional road to provide alternative routes into and out of Knysna if the N2 is closed.
- Municipalities must fire-proof critical infrastructure and ensure that sufficient water is available for firefighting, even in the event of fire damage.

- Municipalities, in collaboration with FPAs, should review policies relating to the use of back-burning during an incident. Approval by the incident commander should be granted based on the current and foreseen fire behaviour.
- Municipal fire services must strengthen coordinated information gathering and fire behaviour analysis capacities to improve situational awareness and intelligence in the incident management team. A person dedicated to documenting, in detail, the progress, behaviour of the fire and the responses must be present in the Situation Unit at the Incident Command Post.

#### **STRENGTHEN HUMANITARIAN RELIEF MANAGEMENT:**

- Municipal disaster management centres at both the district and local level must work with the WCDS to identify and engage with prominent NGOs to define roles and responsibilities and minimum standards of relief during disasters. The guidelines being developed by both the WCDS and the GRDM provide an opportunity and framework for engaging with a broader suite of NGOs.
- Identified NGOs need to be included in coordination structures to ensure information-sharing and alignment of activities. They should also be included in response planning and exercises.
- Municipalities also need to explore arrangements for accepting financial donations. One option could be to establish agreements with humanitarian NGOs such as the SARCS that would allow them to accept, administer and disburse donations on the behalf of government.

#### **IMPROVING COMMUNICATION WITH THE PUBLIC:**

- Municipalities must ensure that communication personnel receive training on crisis communication, and that communication units are adequately staffed and resourced.
- Communications teams must identify high-profile social media influencers and enlist their support in spreading messages and directing users to information sources.
- Communications teams should engage as early as possible to proactively shape the conversation.

#### **PLAN POST-FIRE ENVIRONMENTAL RECOVERY AND REHABILITATION PROPERLY:**

- DEADP, in collaboration with FPAs, must get all relevant stakeholders (officials, business and knowledgeable private individuals) around the table as soon as possible after an event to plan and prioritise control efforts and thereby optimise the use of resources.

#### **ENABLE RESPONSIVE ACTION TO ADDRESS TIME-SENSITIVE REHABILITATION CONCERNS:**

- The WCDMC must engage with the NDMC and Treasury to explore quick-release funding mechanisms to enable time-sensitive recovery activities immediately after a disaster.

#### **DATA COLLECTION FOR RISK ASSESSMENT AND MONITORING TO INFORM RISK REDUCTION:**

- All municipal impacts should be recorded, independently of funding processes. There should be uniformity across all municipalities and sectors for calculating and presenting damage costs. These should be actual costs and not estimates.
- The WCDMC should establish a standard impact reporting procedure for municipalities and government departments. This includes the standardisation of electronic formats, and clear

designation of a focal point to consolidate information, as onerous reporting demands on technical personnel keep them from their core responsibilities.

- Impact reporting templates should include a description of damage and a spatial reference (i.e. GPS co-ordinates).
- Post-disaster assessment findings should be integrated into risk assessments as a measure of actual as opposed to possible impacts.

## **RECOMMENDATIONS FOR INSURANCE INDUSTRY**

### **REDUCING THE RISK AND IMPACT OF WILDFIRES:**

- The insurance industry can also assist in reducing fire risk by building the capacity of municipal fire services and FPAs to prevent and respond to wildfires.
- The insurance industry could also sponsor an annual WUI seminar to encourage sharing of experiences and the latest approaches and advancements in risk reduction and suppression.

### **REDUCING FUEL LOADS:**

- Insurers should support prescribed burning by extending insurance cover for the execution of prescribed burns. Companies should work with fire protection associations and fire and rescue services to determine the details of these policies.
- The insurance industry should also support risk reduction by requiring policy-holders to undertake measures to reduce risk, such as reducing flammable materials in the HIZ and creating defensible spaces around homes. Outside of the WUI, this could include requiring that policy-holders join their local FPA.

### **ENABLE RESPONSIVE ACTION TO ADDRESS TIME-SENSITIVE REHABILITATION CONCERNS:**

- The insurance industry could assist in the rapid mobilisation of resources by creating a Disaster Fund to assist in funding immediately-needed interventions in the interim.

### **CREATE INSURANCE PRODUCTS TO SUPPORT HOUSEHOLDS IN THE 'MISSING MIDDLE':**

- The insurance industry should explore developing more affordable insurance products to support households in the 'missing middle', who may otherwise be unable to afford insurance.

## **RECOMMENDATIONS FOR COMMUNITIES**

### **REDUCING THE RISK AND IMPACT OF WILDFIRES:**

- Residents can reduce the risk to homes by addressing risk in the HIZ, creating defensible space around structures and managing or modifying vegetation to reduce fire intensity and spotting.
- Residents should join their local Fire Protection Association.
- Residents should participate in setting up FireWise communities.

### **CONTROLLING INVASIVE ALIEN PLANTS AFTER FIRES**

- Residents and landowners should work together with FPAs to map the extent and densities of invasive alien plant regrowth accurately; this is fundamental to determining the amount and duration of funding required to control the massive regeneration of invading plant species after fires. DEADP must provide the necessary support.

**INSURANCE COVER:**

- Residents should check regularly that they are adequately insured for fire.

**RECOMMENDATIONS FOR ALL STAKEHOLDERS**

**ADOPT A LEARNING APPROACH:**

- It is often very difficult to get detailed information after fires on facts like who did what and when, what then happened and why. The real problem is that the opportunity for sharing the learning and for adapting is lost or, at the very least, delayed. Resolving this challenge is critical to inform a learning and adaptive approach to support more effective veldfire risk management.