FAO Regional Conference for the Near East

Thirty-fourth Session

Side Event: *"The Challenge of Sand and Dust Storms in the Near East and North Africa Region"*

8 May 2018

Concept Note

Background

Sand and Dust Storms (SDS) are highly complex environmental phenomena, governed by both human-induced and natural factors. The phenomenon has gained growing attention in past decades due to its transboundary impacts on the environment, climate, health, livelihoods, agriculture and socioeconomic well-being of societies. There is increasing concern that the threat of SDS may undermine the achievement of the Sustainable Development Goals (SDGs) in developing and developed countries.

Responding to the growing risks of SDS and the call of United Nations' Member States for international attention to the challenge, the United Nations has adopted a number of resolutions which acknowledge that SDS present a severe impediment to the sustainable development of affected developing countries and the well-being of their peoples. The resolutions call for stronger regional and global collaboration and exploration of funding opportunities and have resulted in a global assessment of the phenomenon by the United Nations Environment Programme (UNEP), the World Meteorological Organization (WMO) and the United Nations Convention to Combat Desertification (UNCCD).

SDS are the result of a series of reinforcing natural and anthropogenic drivers. They occur when strong and turbulent winds sweep across arid and semi-arid regions, erode soil particles and lift them into the atmosphere.[1] This is accelerated by anthropogenic factors such as loss of land cover, overgrazing, deforestation, inappropriate soil cultivation methods and unsustainable water management. In addition, unsustainable mining, oil extraction, destruction of soil biological crusts by vehicles and intensive military conflicts are worsening the situation. Any factors that lead to unsustainable land use and removal or reduction of vegetation cover in susceptible areas increase SDS risk. Climate change is an important potential driver of future wind erosion and SDS risk.

The Near East and North Africa (NENA) region is among the most affected regions from SDS, with Iran (Islamic Republic of), Iraq, Jordan, Kuwait, Saudi Arabia and Syrian Arab Republic being the most affected countries of the region. The region loses about USD 13 billion in Gross Domestic Product (GDP) every year due to dust storms.[2] There has been a significant increase in the frequency, intensity, scale and geographical coverage of SDS in the past 15 years. A paper published in 2013, reported that Iraq witnessed 122 dust storms and 283 dusty days in one year and suggested that the country could witness 300 dusty days and dust storms per year in the next ten years.[3] There is growing evidence that SDS are spreading into geographical areas which have not experienced SDS in the past. In March 2018, a massive dust storm hit throughout North Africa affecting even Cairo City, which is very unusual, causing considerable disruption in normal life and suspension of air traffic. The increased frequency and intensity of SDS in the region may jeopardize livelihood systems in affected areas, leading to escalated movement of rural people from their home areas.

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[1] IPCC. 2012. Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation, Chapter 3, section 3.5.8: Sand and Dust Storms. https://www.ipcc.ch/pdf/special-reports/srex/SREX_Full_Report.pdf

[2] 2013. Sissakian, V. K, Al-Ansa, N and Knutsson S. Sand and dust storms events in Iraq.
At https://file.scirp.org/pdf/NS_2013101014315787.pdf

[3] https://file.scirp.org/pdf/NS_2013101014315787.pdf

The relationship between SDS and agriculture is twofold. On the one hand, SDS negatively affect agriculture by reducing crop and animal production, increasing soil erosion and accelerating land degradation. On the other hand, all forms of unsustainable agricultural practices that lead to land and water degradation can act as a source for SDS and or aggravate their impacts. Sustainable agricultural practices such as conservation agriculture, agroforestry and other forms of agroecological practices in which land is sustainably managed are essential and must be promoted to mitigate the effect of SDS.

There is little that can be done to alter the natural occurrence of sand and dust storms, but awareness of the driving forces and understanding the probability and variability of SDS events is essential in building responsive measures. There is considerable uncertainty about the future of dust emissions and whether SDS will increase in frequency and intensity and how much is due to human causes. In order to better respond to current and future threats of SDS, monitoring of dust emissions and further research is critical to ensure informed decision making in the short and long term. Furthermore, there is a need to build national capacity in SDS preparedness and emergency response across different sectors building on the experience from different regions and countries and early warning systems, such as the WMO Sand and Dust Storms Warning Advisory and Assessment System (SDS-WAS). Prevention and mitigation measures on the local level that promote sustainable land and water management are essential to mitigate the negative effects of SDS.

Objectives of the side event are to:

1. Raise awareness on the effect of SDS on the region's ecosystems, livelihoods and well-being of its people and sustainable development of the countries in general and on its effects and linkages with agricultural sector;
2. Enhance dialogue and discussion between SDS-affected countries in the region on the collective actions that countries can take to mitigate the effects of SDS, including through the implementation of the Sendai Framework for Disaster Risk Reduction (SFDRR);
3. Encourage regional, subregional and interregional cooperation and networking for sharing information, experiences and best practices for managing and mitigating SDS effects.

Main Speakers and Themes:

Agenda

Speaker	Topic	Time (minutes)
CB-ADG	Opening Remarks	5
Mr Mohamed Hussein Emadi, Ambassador, Permanent Representative of the Islamic Republic of Iran at FAO	Opening remarks	5
Mr Stephan Baas FAO	SDS in Near East and North Africa region	15
Mr Robert Mr. Robert Stefanski, Chief, Agricultural Meteorology Division, WMO	An overview of WMO work on SDS	15
Mr Mohamed Hussein Emadi, Ambassador, Permanent Representative of the Islamic Republic of Iran at FAO	Iran experience and actions undertaken to address SDS	15
Plenary	Discussion/interventions by participants	30
Moderator Mr Abdel Hamied A Hamid, FAO, RNE	Wrap -up and recommendations for follow-up actions	5

Expected Results and Follow up Actions

1. Deepen the understanding on SDS phenomenon and its environmental and socioeconomic impacts on NENA countries.
2. Better understanding of the linkages between SDS and agriculture; as a victim and/or as a contributing source or mitigating factor.
3. Discuss possible entry-points to mitigate anthropogenic drivers of SDS in the region, in particular the agriculture sector.
4. Develop practical recommendations for strengthening collective actions, enhancing regional and subregional cooperation and facilitating networking and experience sharing.