

UNCCD Action on SDS Policy Advocacy Framework

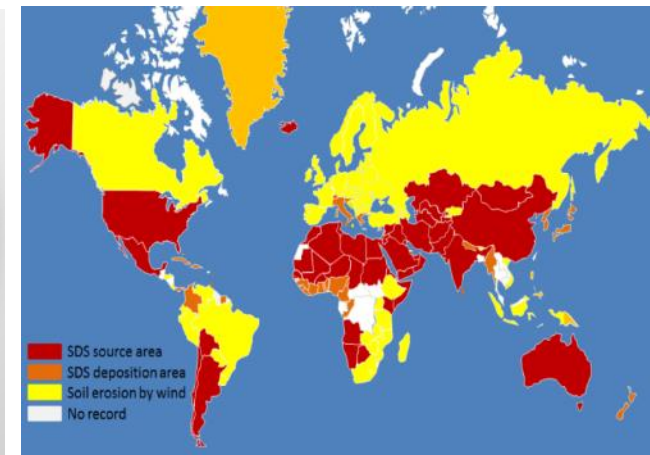
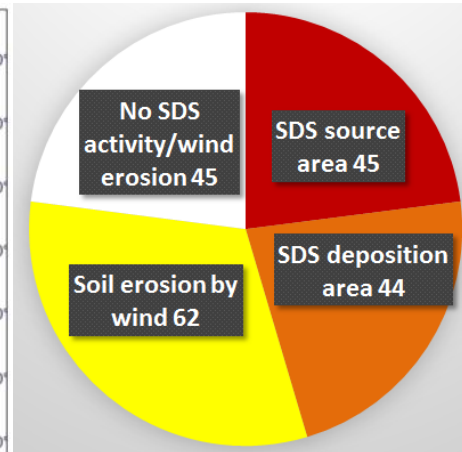
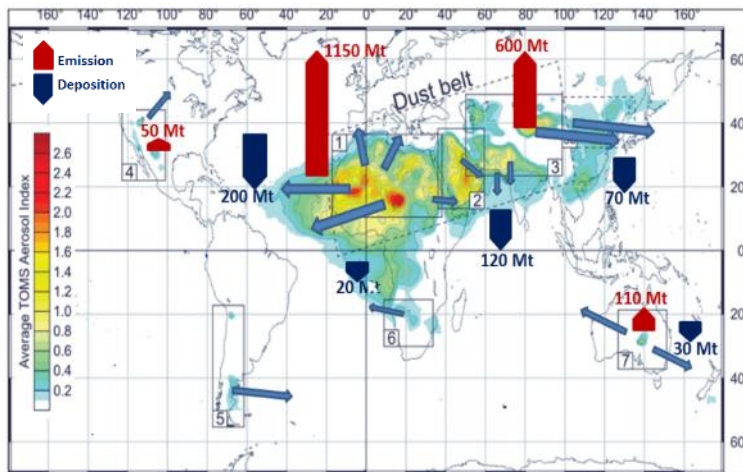


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Sand and Dust Storms (SDS) Context

- SDS in UNCCD: “Mineral dust” coming from bare land
- 2,000 million tons of dust is emitted from land surface annually
- Globally 151 UNCCD country parties (77%) are affected by SDS
- Transboundary problem



Sand and Dust Storms (SDS) Context

- Loss of 12.7 Billion USD in GDP per annum in the MENA region alone
 - Minimum ann. cost estimation is USD 190 M in oil production and exploration (Kuwait)
- Wind erosion = hazard in many environments (ex. Agricultural land)
- Treat to health: meningitis, cardio-vascular and respiratory disease
- DLDD is a driving force of the SDS hazards

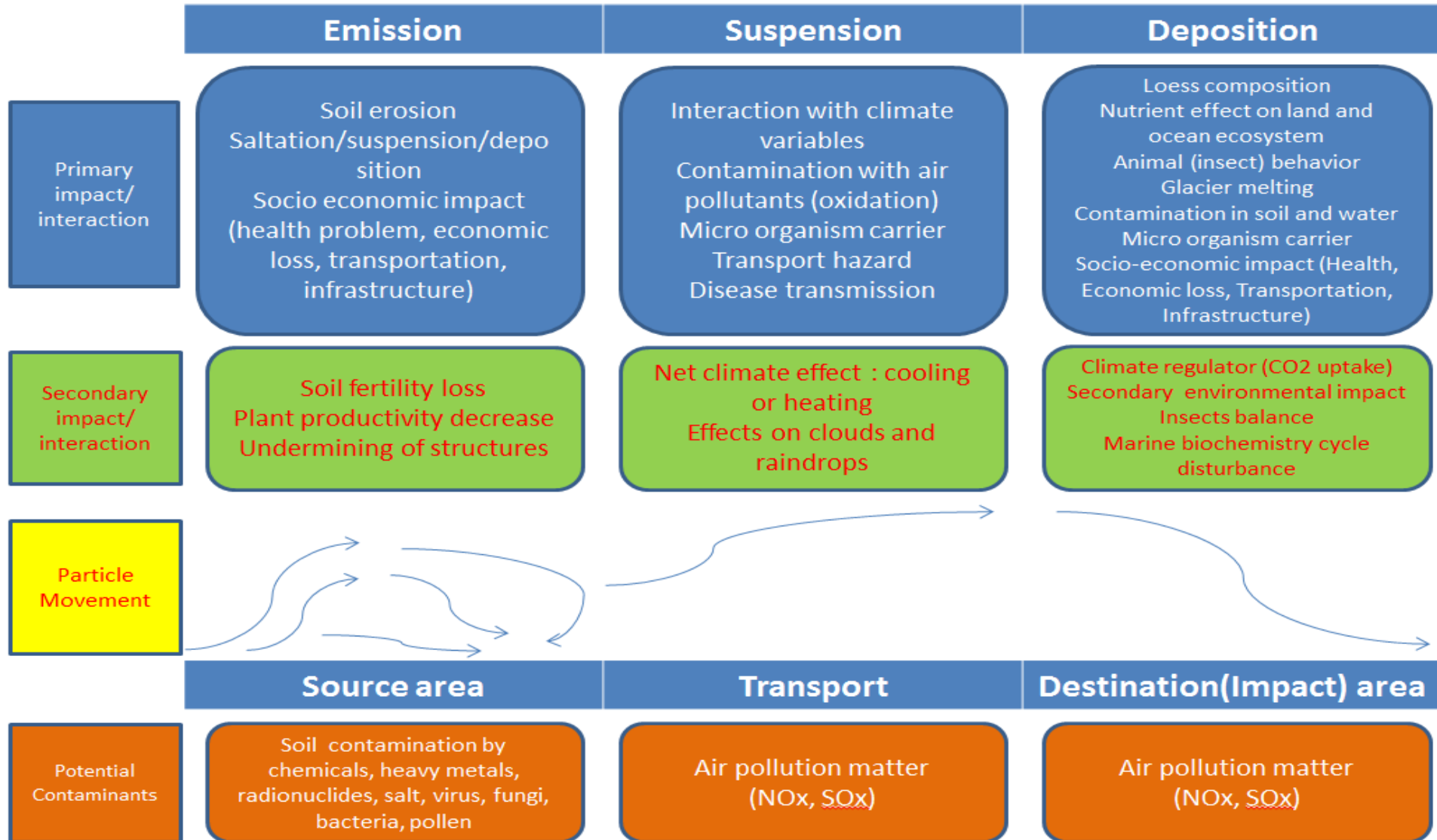


Sand and Dust Storms (SDS) Context

- SDS are natural processes
 - Global-scale coupling between the lithosphere and the atmosphere, biosphere, hydrosphere, cryosphere
 - Dust plays a critical role in the Earth System
 - Algal blooms
 - Climate change
 - Desert varnish formation
 - Ocean sedimentation
 - Sediment input to streams
 - Soil erosion
 - Plant nutrient gain
 - Salt deposition and groundwater salinization
 - Calcrete development
 - Coral reef deterioration
 - Loess formation
 - Glacier Mass budget alteration
 - Rainfall acidity/alkalinity
 - Soil nutrient gain



Sand and Dust Storms (SDS) Context



Global interventions related to SDS

- **2015**
 - UNCCD COP decision 3/COP.12
 - UNGA resolutions 70/195
 - World Health Assembly resolution on air quality and health
 - Sendai Framework for Disaster Risk Reduction 2015-2030
- **2016**
 - UN Environment Assembly II resolution 2/21
 - UNGA resolution 71/219
 - UNESCAP resolution on regional cooperation to combat SDS
- **2017**
 - UNCCD COP decision 31/COP.13
 - UNGA resolution 72/225



Sand and Dust Storms as Hazards

- **Composite hazards: sand, dust, storm (wind) and other factors**
- **Slow on-set vs. rapid on-set (i.e. haboob)**
- **A single hazard can be defined by the factors**
 - **special coverage(or magnitude), intensity, duration and frequency**
- **Magnitude of scale: local vs. global**
- **Low salience**
 - **not positioned in mainstream natural hazard or disaster research**
 - **local and regular SDS are considered as part of life**
 - **low physical impacts, fragmented research, lack of hazard assessment**
- **Natural vs. human induced (i.e. dust bowl)**



Two-fold approach for SDS management



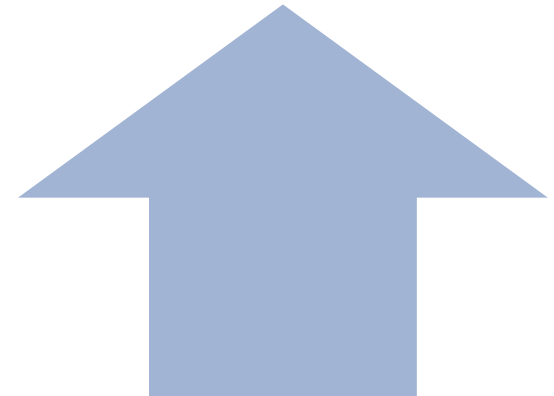
Impact mitigation

- SDS monitoring and early warning
- Risk/impact/vulnerability assessment & mapping
- Adaptation/preparedness strategy



Source mitigation/management

- Sustainable land management
- Integrated landscape management
- Integrated water management



UNCCD Policy Advocacy Framework for SDS

- **Goal**

- Reduce societal vulnerability to SDS by mitigating the impacts of wind erosion and SDS

- **Focus areas**

- post-impact crisis management (emergency response procedures)
- pre-impact governance to strengthen resilience, reduce vulnerability and minimize impacts (mitigation)
- preparedness plans and policies.



United Nations
Convention to Combat
Desertification

UNCCD Advocacy Policy Framework for SDS

- **Objectives**

- To develop national SDS policy based on the philosophy of risk reduction
- To enhance north-south and south-south cooperation
- To strengthen SDS early warning systems and information dissemination
- To reduce the number of people affected by SDS
- To reduce the economic losses and damage caused by SDS
- To **strengthen resilience** and reduce SDS impacts on basic services
- To reduce erodibility and the extent of anthropogenic SDS source areas
- To enhance scientific understanding of SDS
- To enhance coordination/cooperation among stakeholders in SDS action
- To increase financial opportunities



UNCCD Policy Advocacy Framework for SDS

- **Principles**
 - establish a clear set of principles or operating guidelines to govern the management of SDS and its impacts;
 - be consistent and equitable for all regions, population groups bearing in mind gender, and economic sectors, and consistent with the SDGs;
 - address dust sources occurring in various environments including drylands, agricultural fields, coastal areas and high latitude;
 - be coordinated in international and regional contexts;
 - be driven by prevention rather than by crisis.



UNCCD Advocacy Policy Framework for SDS

Early warning

- SDS monitoring and early warning/forecasting
- Health early warning

Impact mitigation

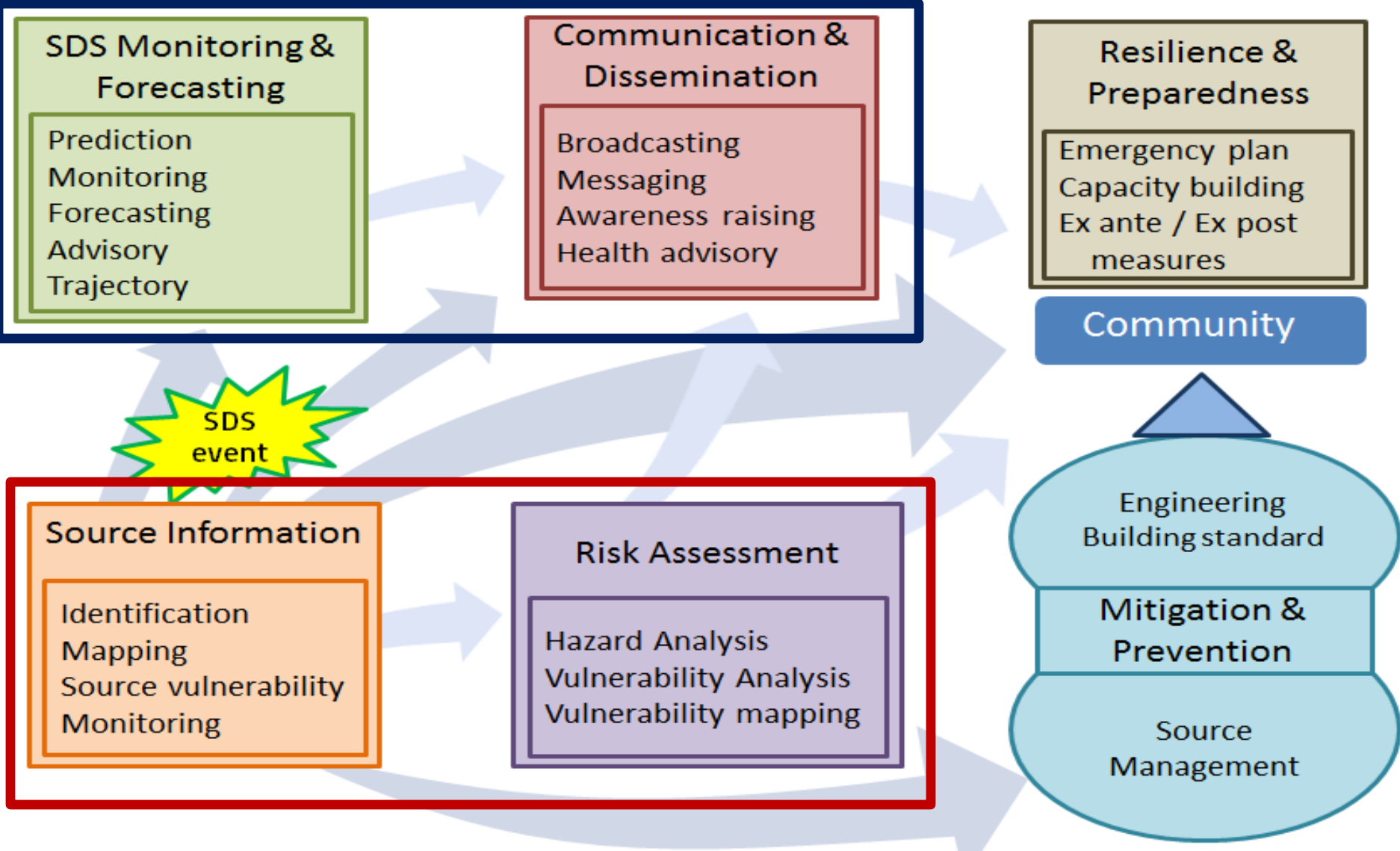
- SDS risk management
- Vulnerability and resilience
- *ex ante* and *ex post* measures for impact mitigation

Source mitigation

- SDS source monitoring
- Mitigation of anthropogenic sources
- Regional/global cooperation



Elements of comprehensive SDS management



Agencies and Authorities

Coordination and cooperation for comprehensive SDS management

Disaster
management

Meteorological
service

Land and Water
management

Health
Authority

Emergency
response

Others

Iterative
process

Community
Increased Resilience & Preparedness

Iterative
process

**Enhanced knowledge and information
for a better SDS policy**

Scientific Communities, Academia, Practitioners

- SDS source mapping and monitoring
- SDS trajectory
- Early warning and advisory (health, agriculture)
- Comprehensive impact and risk assessment
- Vulnerability assessment and mapping
- Integrated land/water management
- Land/water use regulation
- Engineering/building standard
- Ante/post measures
- Technical cooperation (data collection and accessibility)

UNCCD COP 13 decisions on SDS

- COP adopted 4 decisions related to SDS
 - SDS Policy Advocacy Framework, partnership Capacity building, LDN
- Parties;
 - to use the Policy Advocacy Framework
 - to mainstream SDS in national disaster risk reduction
 - to explore options to integrate SDS in voluntary Land Degradation Neutrality (LDN) target setting
 - to promote cooperation and facilitate information exchange, knowledge sharing and transfer



UNCCD COP 13 decision on SDS

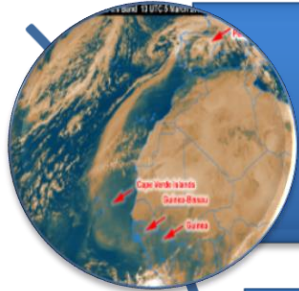
Secretariat's mandate:

- Collaboration with other relevant organizations in assisting parties to implement SDS policy and activities on SDS
- Participation in UN system-wide coordination, if appropriate
- Fostering partnerships for capacity development for mitigation of the impacts of SDS
- Science-Policy Interface engagement in SDS relevant documents

- Invited UN entities and concerned parties to assist affected countries in developing and implementing national and regional SDS policy



Key pillars of SDS action 2018-2019 & beyond



Early Warning & Data/Information Sharing
- Partnership (WMO) and capacity building (regional, national)



Vulnerability and resilience
- Technical guide
- Vulnerability mapping, Risk/Economic impact assessment



Source mitigation
- Source mapping as baseline for mitigation (JRC, UNOOSA)
- LDN integration and innovative financing for transformative projects (?GM)



SDS technical guide – a tool kit for national policy making

- **SDS disaster risk reduction**
- **SDS policy advocacy framework**
- **Methodology framework of risk assessment**
- **Methodology framework of economic impact assessment**
- **Methodology framework of vulnerability mapping**
- **Comprehensive early warning systems for SDS**
- **Framework for SDS source management under the LDN context**



SDS management contributes to achieving SDGs



THANK YOU!



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