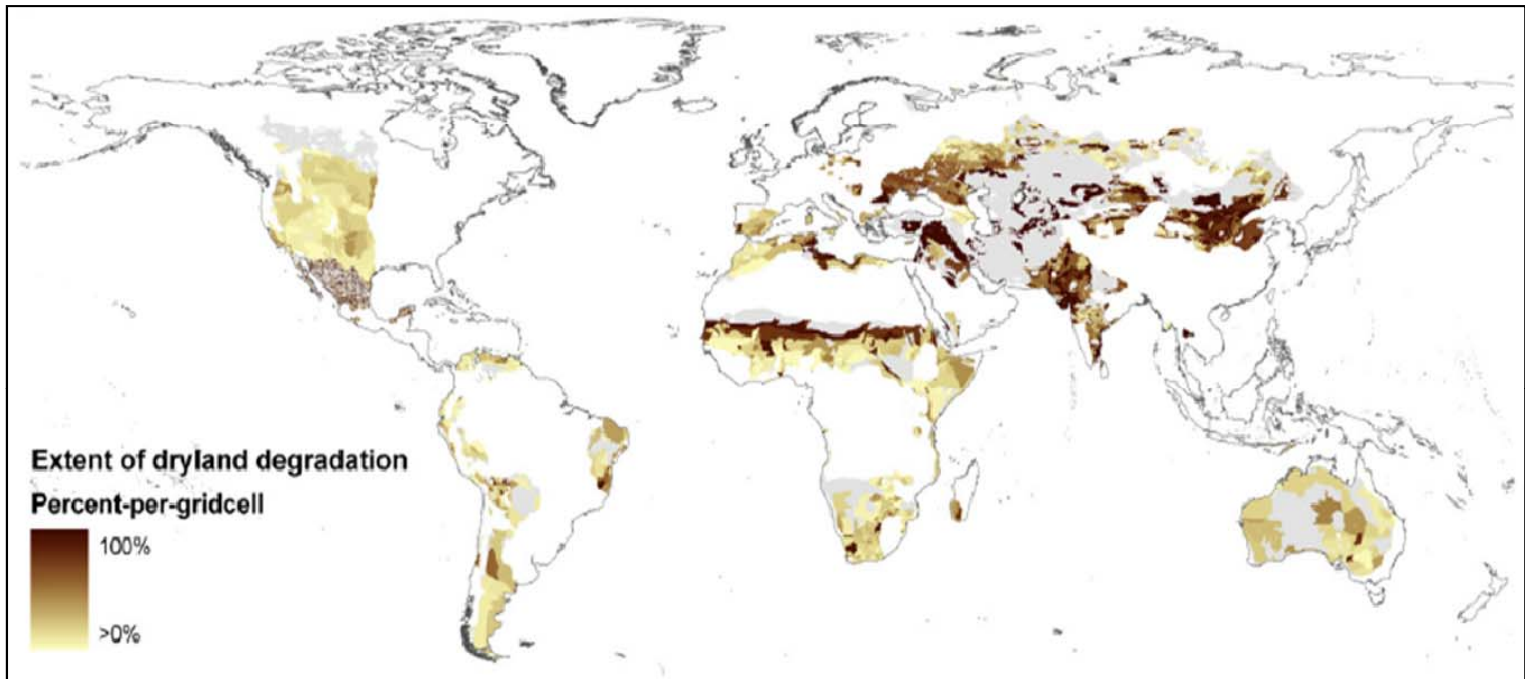




Fact Sheet Desertification

Global



The extent of dryland degradation in percent per grid cell (10*10 km at the equator) according to the compiled map COMSDAD (grey color displays zones with a lack of data; Zika and Erb, 2009: 312)

Area affected by desertification:

Zika and Erb 2009
areas

Globally 11.8 million km² of dryland (excluding hyper-arid areas) are subject to desertification; i.e. 23.2% of the total drylands.

Global desertification between 1981 to 2003:

Bai et al. 2008

6 million km², i.e. 13% of the world's drylands including hyper-arid areas and 15% excluding hyper-arid areas were affected by degradation (reduced net primary production) between 1981 and 2003.

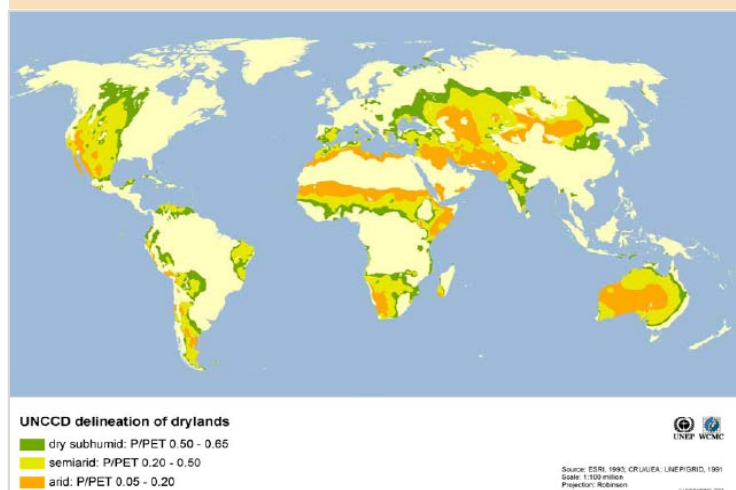
Downside for drylands population:

Adeel et al. 2005

Dryland populations, at least 90% of whom live in developing countries, on average lag far behind the rest of the world in human well-being and development indicators

Area classified as drylands susceptible to desertification according to UNCCD: Sørensen 2007

total:	5.2 billion ha
arid:	1.6 billion ha
semi-arid:	2.3 billion ha
dry sub-humid:	1.3 billion ha



UNCCD delineation of drylands; Source: Sørensen 2007



Fact Sheet Desertification

Global

Net primary production (NPP) losses on agricultural land due to desertification:

Zika & Erb 2009 NPP loss on agricultural areas accounts for 965 Tg C/ yr; i.e. 4.92% of total NPP with COMSDAD as reference level.

Recent hot spots of desertification:

Zika & Erb 2009 Central Asia and the Russian Federation (26% of total NPP losses) and Sub-Saharan Africa (22% of total NPP losses)

Drylands population:

CISIEN 2004 2.1 billion \approx 35.5% of the global population

Population affected by desertification processes:

Eswaran et al. 2003 2.6 billion \approx 44% of the global population

Extent of desertification: *Zika & Erb 2009*

total:	11.8 M km ²
arid:	4.5 M km ²
semi-arid:	4.8 M km ²
dry sub-humid:	2.5 M km ²

Status of desertification in agriculturally used drylands: *(Dregne 1991)*

Type of land use in drylands	Total (million ha)	Degraded (million ha)	Degraded (%)
Irrigated lands	146	43	30
Rainfed cropland	458	216	47
Rangeland	4,556	3,333	73

Cumulative loss of productivity as a result of global soil degradation (not limited to drylands):

(Oldeman 1998)

Cropland (%)	Pasture land (%)	Crops and pastures (%)
12.7	3.8	4.8 – 8.9

Worldwide economic costs:

Gross annual income loss due to desertification (US\$ billion)	42.3 <i>(Dregne 1991)</i>
Gross annual income loss due to salinization (US\$ billion)	11 <i>(WIR 2000)</i>

Note: Reliability, validity and accuracy of the presented data are subject to debate. Objective of this data compilation is to provide a brief overview of the most significant facts on the magnitude and dimension of desertification-related problems. For more detailed information see the referenced literature.