Institutional and Policy Framework for Sustainable Land Use Planning and Management to Combat DLDD

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Water Use Efficiency and Rural Livelihoods"

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Outlines

--Introduction DLDD
--Land degradation, a Global Challenge
--Causes of land degradation
--Consequences of land degradation
--UNCCD Strategy
--Institutional framework (Nat. level)
--Policy Framework (Nat. level)
--Conclusion

Desertification ?

Desertification means **land degradation** in arid, semi-arid and dry sub-humid areas resulting from various factors" (Cf. the UNCCD);

"**Land degradation** = Long-term loss of ecosystem function and productivity caused by disturbances **from which the land cannot recover unaided**

Could be measured by **change** in climate-adjusted net primary productivity (NPP = **the rate at which vegetation fixes CO2 from the atmosphere** less losses through respiration) (Cf. G LADA – Global Assessment of Land Degradation & Improvement)

"The state of land degradation is worsening dramatically including in the world agricultural prime land. We are witnessing a rapid environmental change and a decline in the productivity of our natural resource base".

In the context of the GLADA Report, the second global assessment of land degradation and land improvement issued few months ago, experts and scientists compiled 23 years of available satellite data, and concluded that from 1981 to 2003, an additional 24% of the global terrestrial area has been degraded, impairing further our abilities to cope with global threats such as the food crisis, the water scarcity, the environmentally induced migrations, the worsening state of the climate, etc.

Land Degradation: Facts & Figures

(from IFAD Database)

Loss of potential productivity due to soil erosion is estimated as equivalent to some

20 million tons of grain per year

One third

of the world's cropland has been abandoned in the past 40 years because Land Degradation has made it unproductive

Land Degraded or lost for crop production

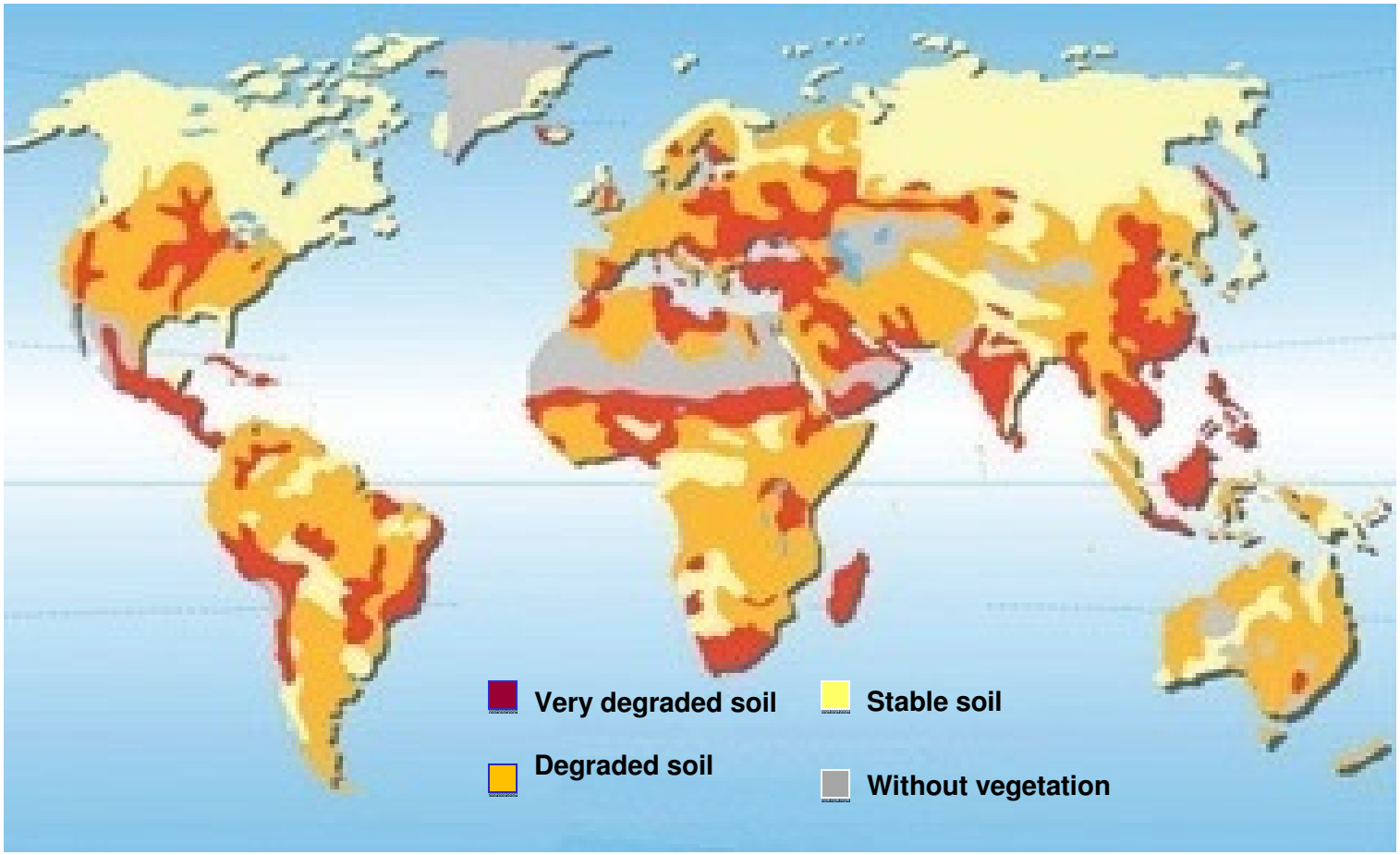
every year = 20 million ha

Total land degradation affects some

1.9 billion ha of land worldwide

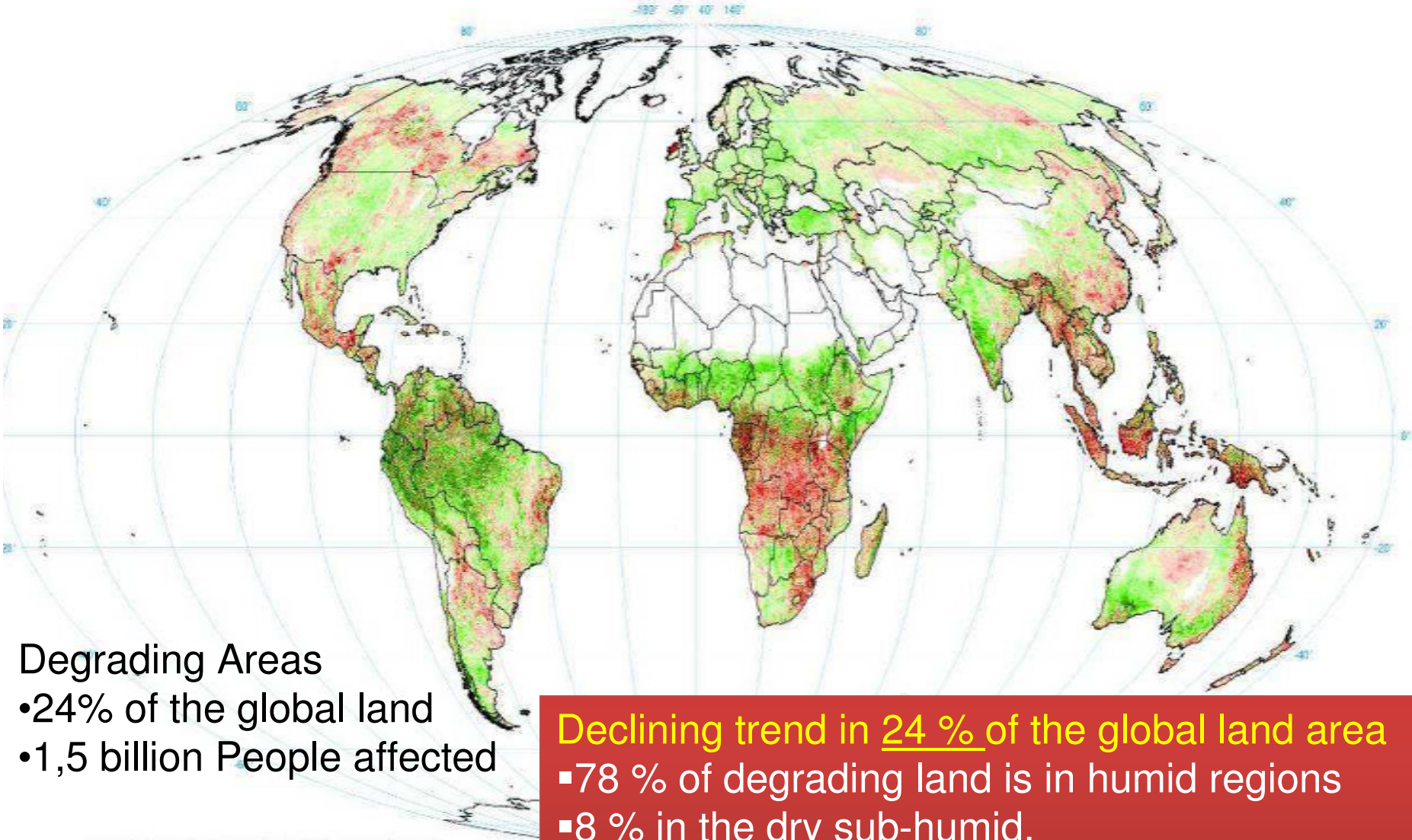
Land & Soil degradation are under-recognized threats to global well-being

Map of Global Soil Degradation – GLASOD 1991

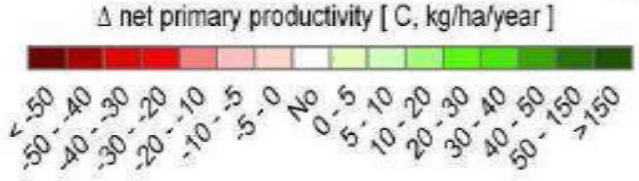


From UNEP/GRID–Arendal Maps and Graphics Library (http://maps.grida.no/go/graphic/global_soil_degradation).

Global change in NPP, 1981-2003 – Cf. GLADA Report 5



Degrading Areas
- 24% of the global land
- 1,5 billion People affected



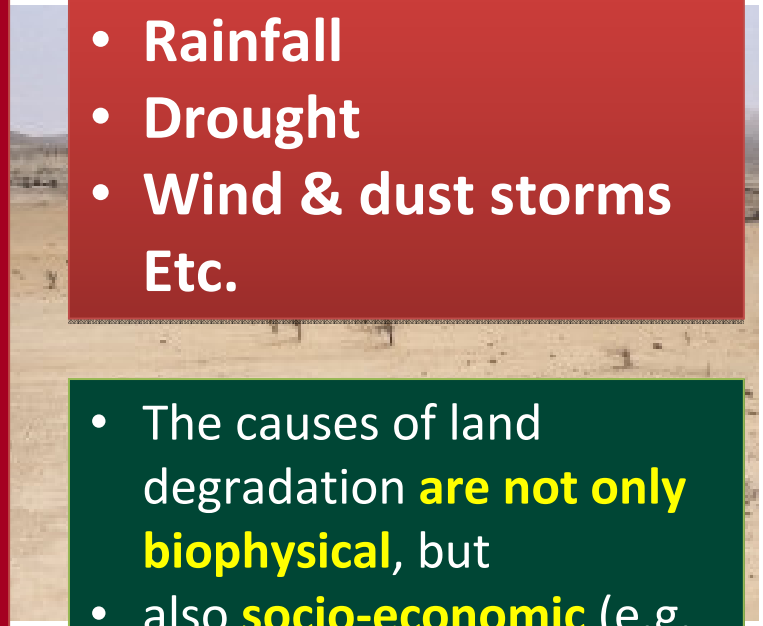
Declining trend in 24 % of the global land area
- 78 % of degrading land is in humid regions
- 8 % in the dry sub-humid,
- 9 % in the semi-arid
- 5 % in arid and hyper-arid regions

Improvement in 16 % of the global land area

Main Causes of Land Degradation

Land degradation involves two interlocking, complex systems:

- **Climatic factors** through periodic stresses of extreme and persistent climatic events, **and**
- **Anthropic factors** through human use and abuse of sensitive and vulnerable dry land ecosystems.



The Climatic factors

- **Rainfall**
- **Drought**
- **Wind & dust storms**

Etc.

- The causes of land degradation **are not only biophysical**, but
- also **socio-economic** (e.g. land tenure, poverty, etc.)
- and **political** (e.g. public policies).

Consequences of desertification

1. **Desertification reduces land's resilience to natural climate variability;**
2. **Soil becomes less productive;**
3. **Vegetation becomes degraded or damaged;**
4. **Desertification contributes to famine;**
5. **Desertification has enormous social costs;**
6. **Desertification is a huge drain on economic resources;**
7. **Desertification and land degradation contribute to air pollution (e.g., dust and sandstorms) and health problems.**

Vegetation destruction and soil erosion in Nepal

Drought has multiple impacts on global agricultural, hydrological, environmental and social-economical systems

DLDD cause negative effects to Sustainable Development

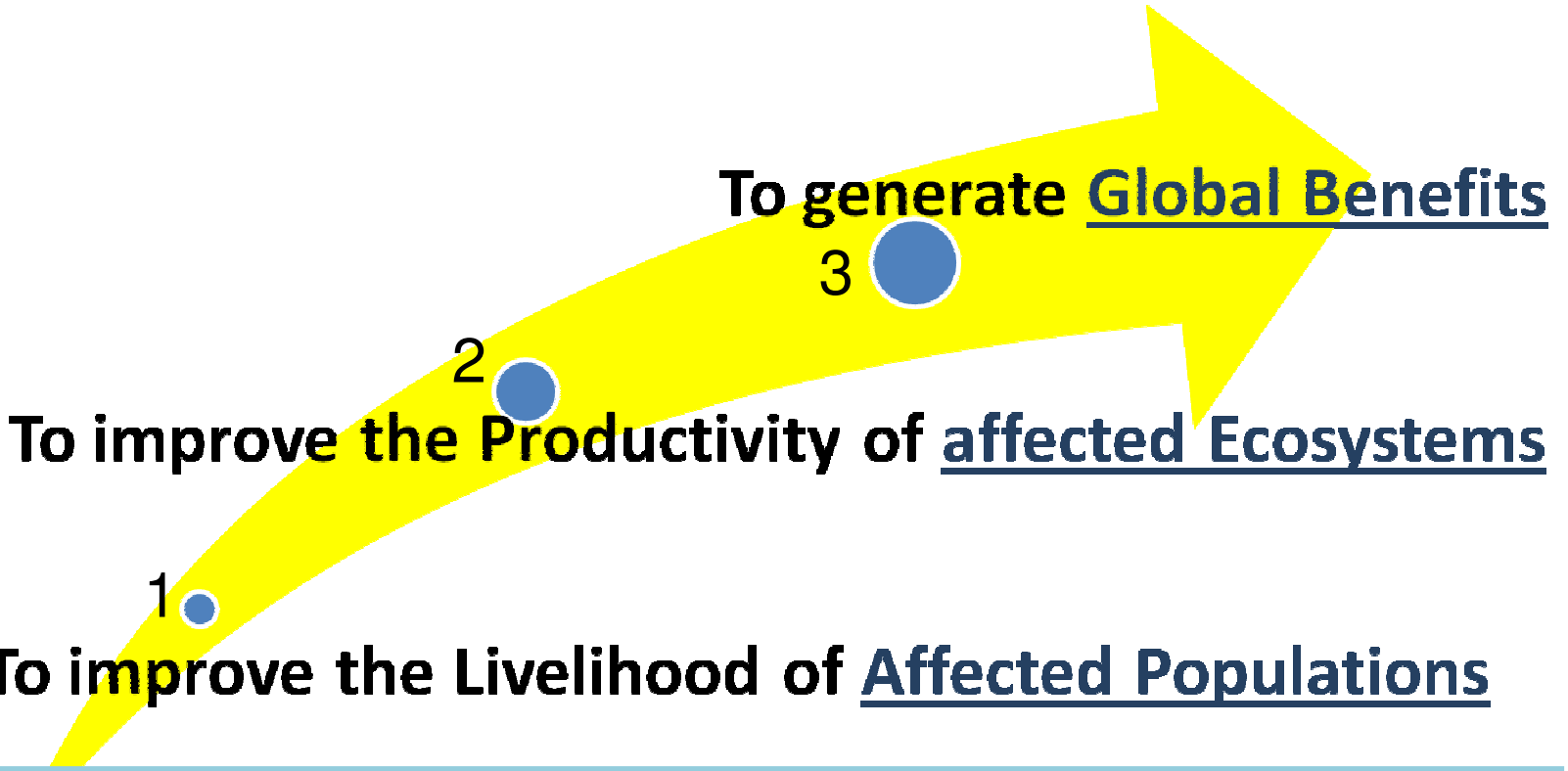
DLDD: particularly in dryland areas and fragile ecosystem, have continued to worsen.

Drylands are being degraded under continuous pressures of over-grazing, over-cultivation, deforestation and poor irrigation practices contribute to the degradation. Such over-exploitation is generally caused by drought, economic, social and environmental pressures, ignorance, conflicts and crisis.

Poverty is the direct consequence of DLDD: Prime resources-fertile topsoil, vegetative cover and health crops-are the first victims of desertification. The people themselves begin to suffer when food and water supplies become threatened.

Desertification is primarily a problem of sustainable development. It is a matter of addressing poverty and human well-being, as well as preserving the environment. Social and economic issues, including food security, migration, and political stability, are closely linked to DLDD.

Strategic objectives of the UNCCD, 2008-2018



4 **To mobilize resources** to support implementation of the Convention **through building effective partnerships** between national and international actors

The Convention as a response to global challenges and crisis.

Climate change--UNCCD as a framework for adaptation, mitigation & resilience;

Food crisis--Land improvement at the core of long term strategies;

Energy crisis--New opportunities for people living in degraded lands;

Forced migrations--Avoiding forced migrations through improving land productivity;

Poverty eradication--Generating income through pro-poor policies on SLM.

Institutional Framework in Land Use Planning and Management (Case of China)

1. **Re-direction/re-orientation of existing institutions at both central and local government levels: including R&D, training, monitoring and extension service centre;**
2. **Institutional arrangement for capacity building via CSOs and various stakeholders: academic, technical, legal, administrative, consultative, productive, private sectors;**
3. **Reinforcement of education programmes/project task managers or division/units in university, college, national/local institutes, state departments/provincial agencies;**
4. **Development of technical assistance projects; bilateral/multilateral partnership cooperation and volunteer donations;**
5. **Extension services (from labs to field); free tuition; scholar exchange and occupational/vocation schools; on the ground survey and assessment; site-observation systems and on-site study tours;**
6. **Annual report and meetings/seminars, information sharing and mobile education.**

Institutional Framework in Land Use Planning and Management (Conti.) (Case of Thailand)

- **Chain of command allow efficiency;**
- **Much greater autonomy for beneficiaries;**
- **Horizontal structure for greater efficiency and flexibility;**
- **Networking structure for better communication and information-sharing;**
- **Interdisciplinary teams;**

Policy Framework in Land Use Planning and Management (Case of China)

Special policies:

--Policy on environment protection and sustainable development;
--Policy on investment;
--Policy on intelligent force;
--Policy on advancement of science and technology;
--Policy on price and taxation;
--Policy on crop-farming and animal husbandry.

Policy Framework in Land Use Planning and Management (conti.) (Case of China)

Incentives for raising public funds and social participation

- **Preferential taxation policies especially for protecting eco-environment;**
- **Taxation Law: tax free for foreign enterprises oriented on rehabilitation of degraded lands;**
- **Offering state-born interests to projects and development for mitigating DLDD in affected regions;**
- **Central government provides cash and food supplies, as the substantial supports to local villagers, to re-maintain croplands, to re-vegetate the degraded grasslands and to re-afforestate deforested areas;**
- **Use right auctioning for managing and developing wastelands;**
- **Organizing volunteer tree plantation and it should be legally endorsed to encourage citizen at age of 15-65 yrs should plant individually 3-5 trees each year or bear the cost to entrust others to do so;**
- **Create State Green Fund or Desertification Fund.**

Policy Framework in Land Use Planning and Management (Conti.) (Case of Thailand)

- **Response to national development strategy (five-year Plan);**
- **Meeting local development needs and values;**
- **Compromise conflict of interests groups (public vs private);**
- **Increasing responsiveness to global concern**
  e.g. Climate Change, poverty reduction and disaster mitigation;
- **Decentralization of power in making decision on land use;**
- **Wider social participation and grass root awareness raising;**
- **Effectiveness of law and enforcement;**
- **Punishment and rewarding measures;**
- **Monitoring of policy implementation and readjustment.**

In Conclusion …

- Land & Soil degradations are **under-recognized threats to global well-being** which are aggravated by climate change, **so desertification is a global issue that requires a global action**.

- **"Today's global challenges** such as the food crisis, the consequences of bio-fuels on land and food commodities, the water scarcity, the forced migrations, the climate change agenda, **are bringing the global community down to earth, down to the land; they are calling for sound and integrated policies including on sustainable land management."**

So …

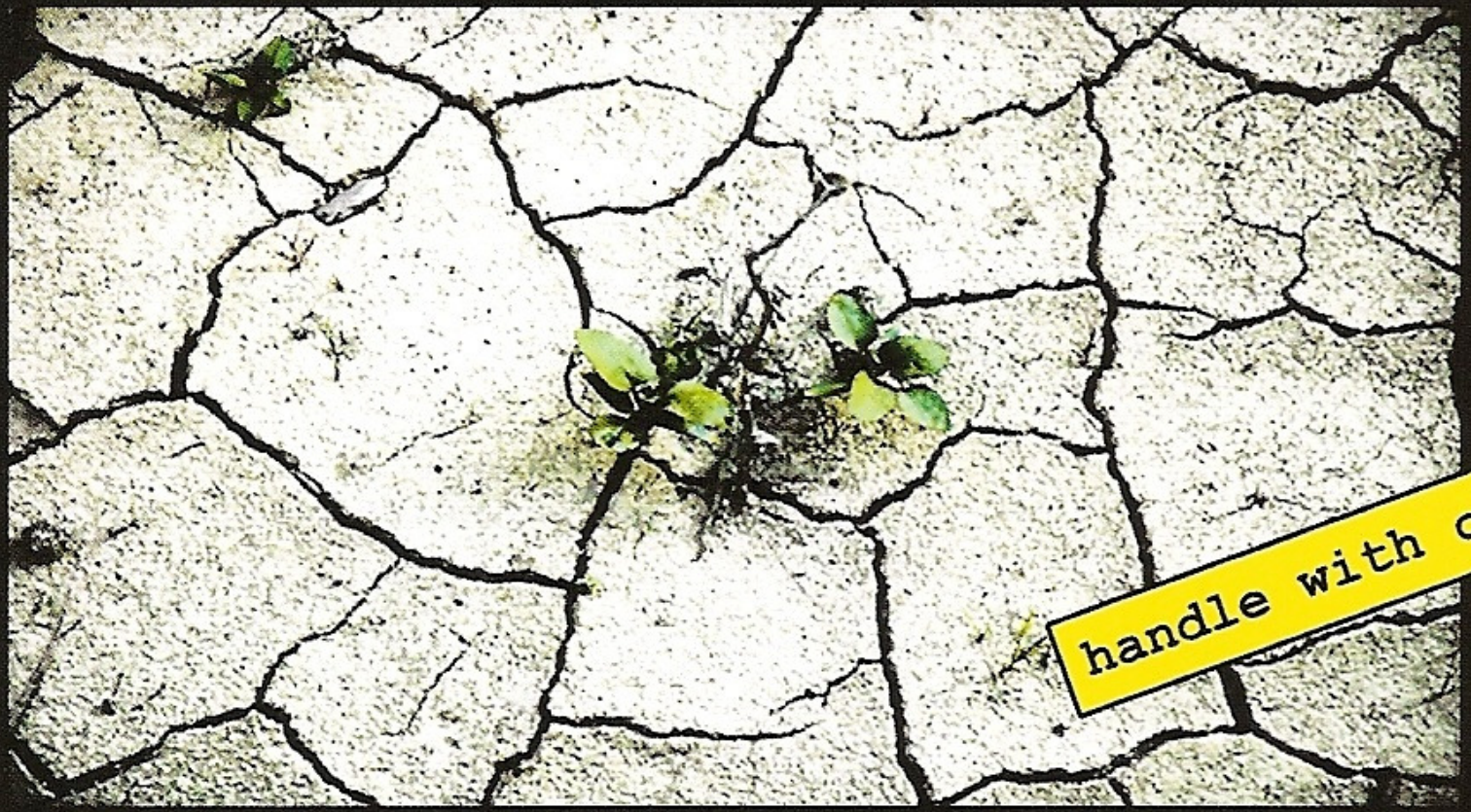
Let us not forget the following warning from a five-thousand years old wisdom:

"Upon this handful of soil our survival depends. Husband it and it will grow our food, our fuel, and our shelter and surround us with beauty.

Abuse it and the soil will collapse and die, taking humanity with it".

From Vedas Sanskrit Scripture – 1500 BC

Feed Me to Feed You



World Day to Combat Desertification
17 June