USAID
FROM THE AMERICAN PEOPLE

SESSION 2:
INTRODUCING THE LOCAL CONTEXT

Dakar, Senegal • June 2018

ENVIRONMENT – THE BIG PICTURE

WHAT IS ENVIRONMENT?

Webster's defines it as "The **totality of circumstances** surrounding an organism or group of organisms, especially:

- The complex of **physical, chemical, and biotic factors** (e.g. climate, soil, and living things) that affect and influence the growth, development, and survival of an organism or an ecological community
- The complex of **social and cultural conditions** affecting the nature of an individual or community.

QUESTION:

What are some "big-picture" environmental trends affecting human health and livelihoods in the Sahel Region?

FOOD INSECURITY

- In 2015, 20 million people affected by food insecurity
  - Including 6 million children affected by malnutrition
- Main causes – impacts of drought, changing rainfall patterns and and temperature increases on agriculture
  - By 2100, Chad and Niger may lose entirety of rainfed agriculture; Mali cereal harvest may fall by 30%
- Exacerbated by conflict and civil insecurity
  - Nearly 4.9 million refugees and internally displaced people

LAND DEGRADATION

- Deforestation

  - Between 1975 and 2013, forest cover was reduced by 37% in West Africa.

- Desertification

  - Sahara Desert expanding southward at 1-10km per year resulting in sand dunes replacing arable land and biodiversity loss

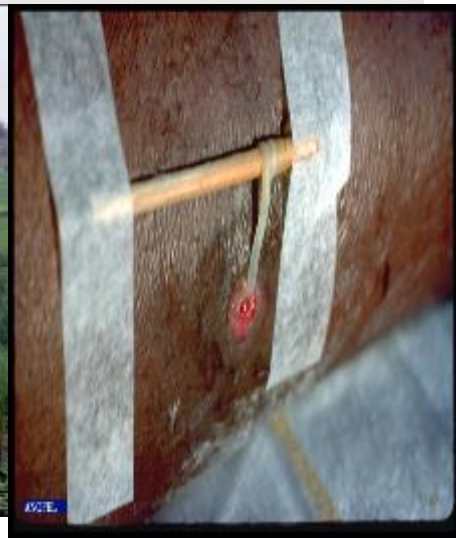
- Agricultural intensification and population growth
- Overgrazing

LAND DEGRADATION LEADS TO BIODIVERSITY LOSS, INCREASED POVERTY AND VULNERABILITY OF THE POOR

this needs the attention of the environment and development sectors

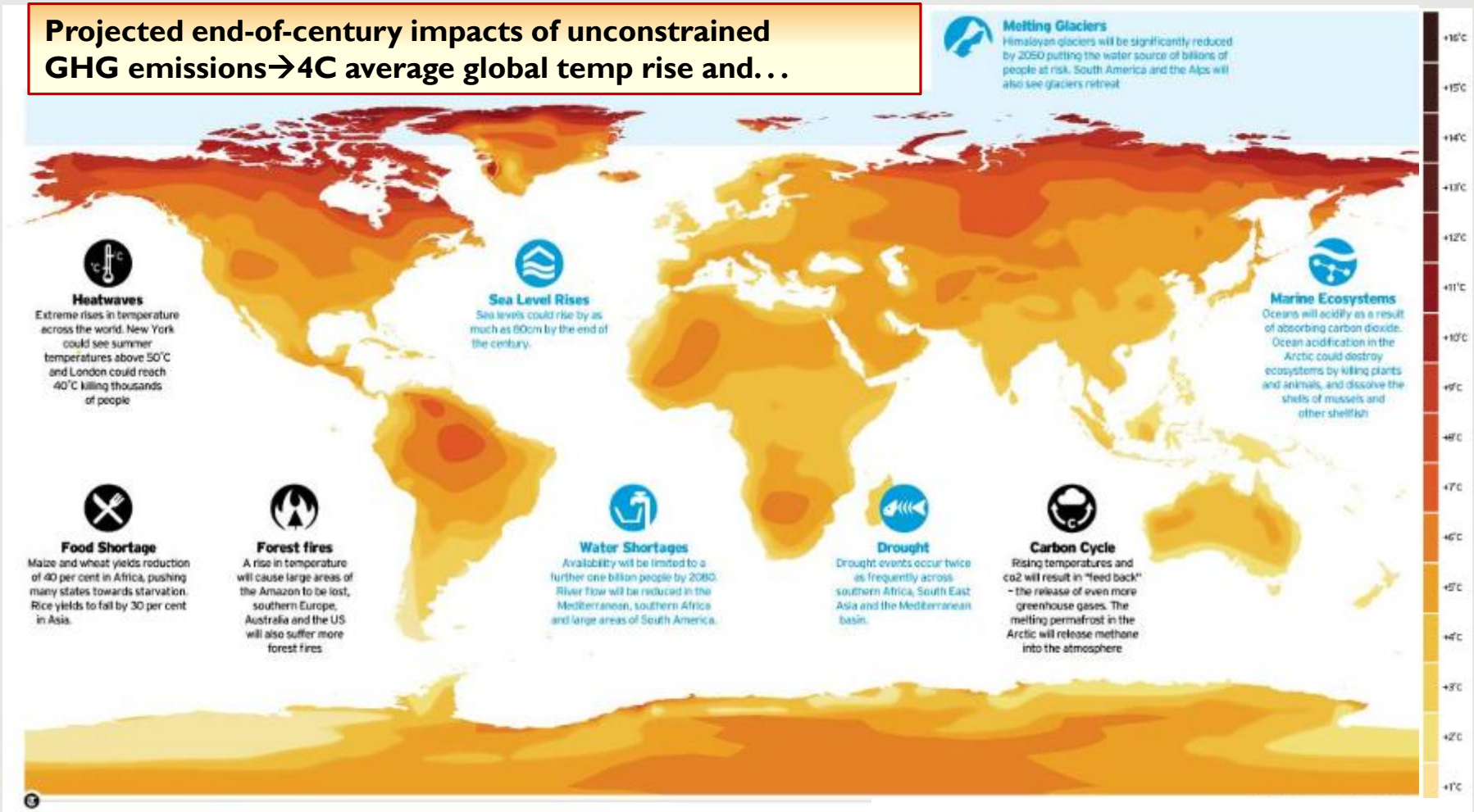
ACCESS TO POTABLE WATER

- Pollution
- Over-extraction
- Open defecation
- Implementing water and sanitation projects without an understanding of the social cultural issues have led to some of the facilities being disused;
- Unequal availability of surface and groundwater resources (e.g., in the arid and semi arid regions).



GLOBAL CLIMATE CHANGE

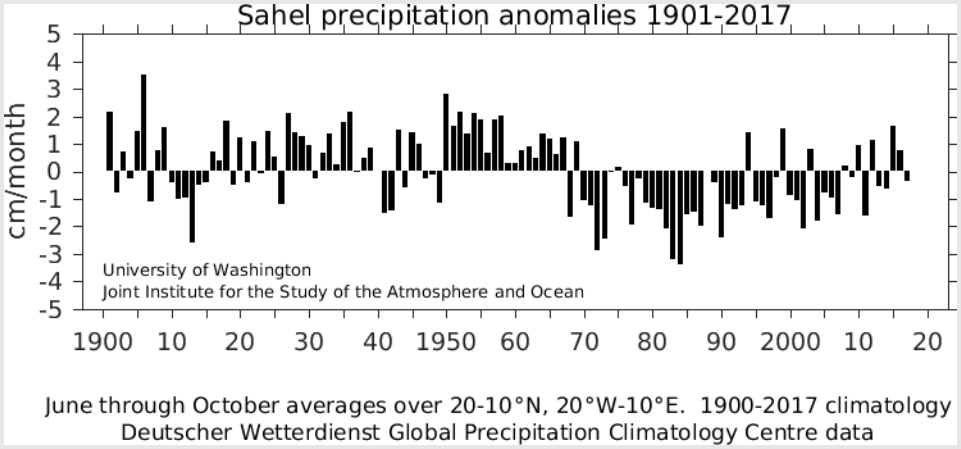
Projected end-of-century impacts of unconstrained GHG emissions→4C average global temp rise and…



Temperature rise over pre-industrial climate baseline

RECURRING DROUGHTS

- Between 1970 and 1993, the Sahel region experienced 20 years of drought, with alternating drought years from 2005-2012
- Lengthening of the dry season
- Projected inter-annual rainfall variation with overall reduction in cumulative rainfall



Sahel Precipitation Index 1901 - 2017

CONFLICTS AND VIOLENCE

EXAMPLES:

- Mali
  - 2012 Coup d'Etat
  - Jihadist and rebel interventions in northern Mali
- Chad - Darfour crisis in Western Sudan
- Niger
  - Rebellions and coups

CONTRIBUTING FACTORS:

- Poor governance
- Limited resources (water, oil, pasture, land)
- Lack of economic opportunities
- Inter-clan rivalries/ethnicity
- Politics and religious issues

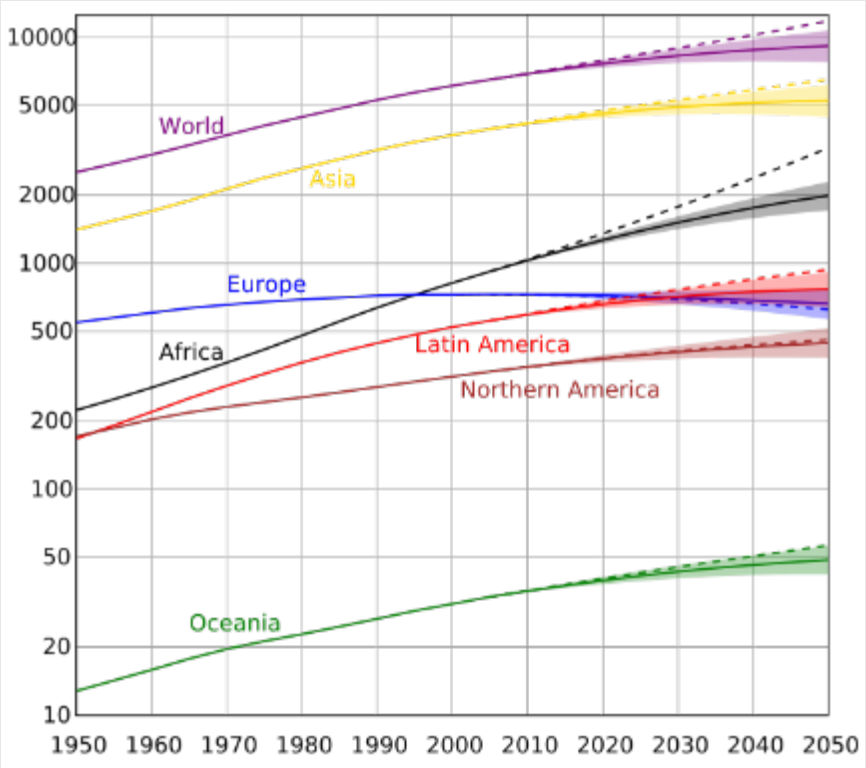
POPULATION GROWTH

UN Population estimates:*

	Today	2050	% change
World	6.9bn	9.15bn	+32%
Africa	1.02 bn	2.19 bn	+114.7%
Asia	4.16bn	5.14bn	+23.6%
M. East	200 mn	372.9 mn	+86.3%
LAC**	590 mn	751 mn	+27.3%
Less-Developed Regions	5.7bn	7.9bn	+40%
LDCs	863mn	1.74bn	+102%

* All data: "medium variant" projection.
UN Population Division http://esa.un.org/unpp

**LAC: Latin America and the Caribbean



Increasing Population in developing areas

LEADS TO

Increased demands for water, land, fish & timber, energy, infrastructure & social services. Increased waste production.

URBANIZATION

UN Population estimates:*

	Urban pop as % of total		% change in total urban population
	Today	2050	
World	48.6%	69.6%	+89%
Africa	40.5%	56%	+198%
Asia	42.3 %	66.1%	+93%
M. East	79%	84%	+97.4%
LAC**	79.5%	86.3%	+38.2%
Less-Developed Regions	45.3%	67%	+107%
LDCs	29.4%	55.5%	+280%
West Africa	44.5%	63.8%	+292%

* UN Population Division http://esa.un.org/unup/index.asp

**LAC: Latin America and the Caribbean

Urban population will grow more than 2X as fast as rural population for the foreseeable future

Most urban growth in the next 25 years in developing countries

LEADS TO

Increased urban environmental health hazards (given poor municipal sanitation, waste management capacity).

GENDER ISSUES

- Non-inclusion of women in key decision making, including NRM (in WA, the Constitutional in most countries requires % of each gender is yet to be realized).
- Land ownership (only few % of women own land in WA countries – women have access but not control, over land thus affecting their ability to make certain decisions).
- Gender gap is much wider among pastoral communities.
- Programming that is not informed by gender considerations may lead to failed projects.
- **What is the gender situation in your respective countries?**

QUESTION:

Relationship between Environment and Development

What examples can you give of development programs or projects that have been affected by the environment?

What examples can you give of where the environment has been affected by development programming?

ENVIRONMENT AND DEVELOPMENT:
TAKE HOME MESSAGES

- Environment and development are not separable
- Much of USAID's portfolio is a direct response to or directly affected by critical environmental trends
- Active programmatic responses to external environmental challenges are only half of the "environment and development equation" for USAID…

The other half of the "environment and development equation" for USAID…and our focus.

USAID has mandatory life-of-project environmental procedures to limit adverse impacts of USAID development activities on ecosystems, environmental resources and environmental quality—particularly as they affect human health and livelihoods.

Fires to prepare land for planting in SE Asia create a huge regional smoke plume. Image: NASA

Why be so formal?

Don't we know enough about development that we will "get things right" without a formal environmental review/compliance process?

And why worry in the case of smaller-scale activities anyway?

Getting things right isn't so easy, even when the issues are clear…

June 2011. An open pile of mixed medical waste behind Juba hospital drains to on-site agricultural fields behind the mortuary.

June 2011. Open-air abattoir with uncontrolled effluent & waste disposal features a USAID-branded gate.

KOH (highly corrosive) in jar

30+ yr-old obsolete USAID-branded pesticides (found during 2003-2004 FAO Survey). Proper disposal <u>starts</u> at $3,000 to $5,000 per ton. Costs rise for highly toxic pesticides. Costly site cleanup also needed after the barrels are removed

Getting things right is even harder when cause and effect are complicated

Photo: UNESCO-IHE

Photo: Stephen Lamm MD , Harvard Arsenic Project

Ponds excavated for fill to build-up ground level in villages for flood protection

Ponds provided a source of organic carbon which settles to bottom of pond, seeps underground and is metabolized by microbes

creates chemical conditions that cause naturally occurring arsenic to dissolve out of the sediments and soils and move into groundwater

Created conditions for mass arsenic poisoning when villages switched from surface water to "cleaner" tube wells.

Today ~3000 Bangladeshis die each year of As-induced cancer; 2 mn live with chronic As poisoning

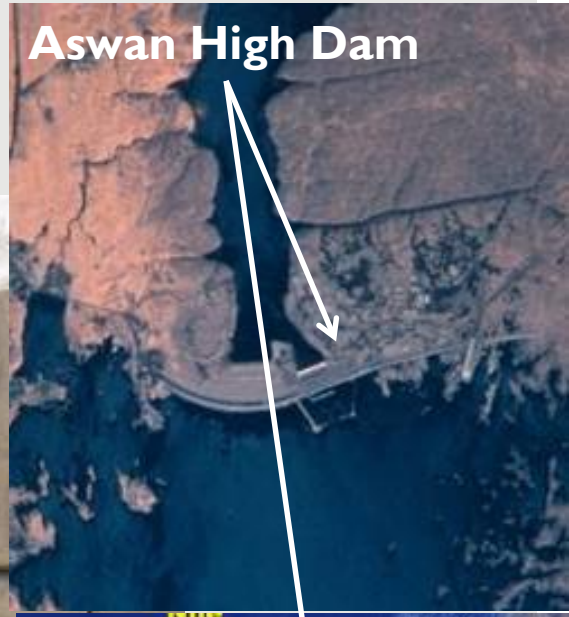
And in environment and development, things are <u>often</u> complicated …

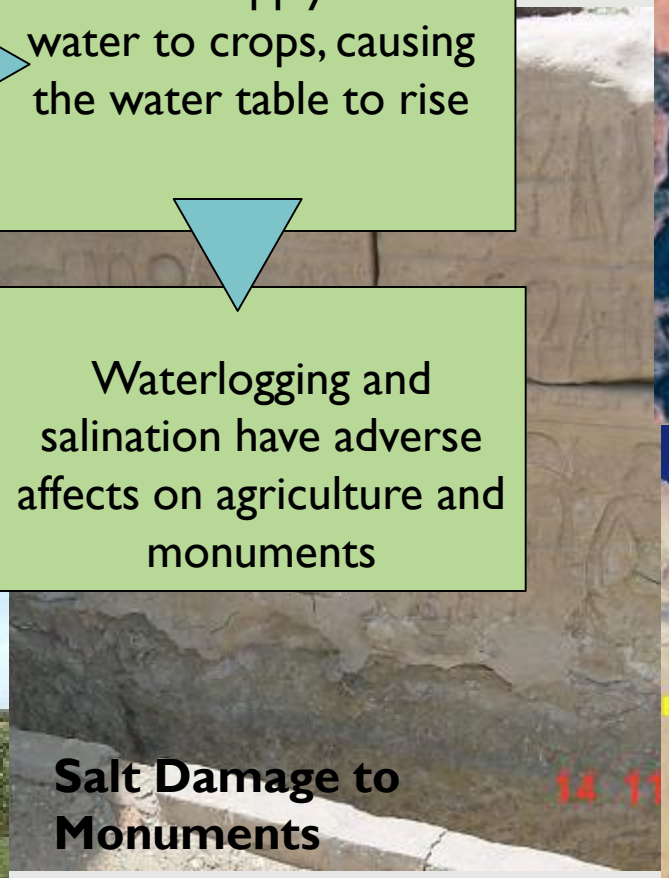
1960 – 1970: Aswan High Dam is built for year-round irrigation; annual Nile floods stop. Salt is no longer washed from soils

Farmers apply more water to crops, causing the water table to rise

Waterlogging and salination have adverse affects on agriculture and monuments

Significant damage to two industries essential to the Egyptian economy





SMALL-SCALE IS NOT SMALL IMPACT!

- Myth:
  "Environmental impacts of small-scale activities are negligible"
- Reality:
  Impacts of a single poorly designed/implemented small-scale activity may be small in absolute terms
  - But local impacts to people and communities can be very significant
  - If small-scale activities are numerous, together they can have significant cumulative impacts.

Potable water supply near hospital morgue

Total failure of latrines to contain pathogens

THE BOTTOM LINE:

yes, we do need a formal, systematic environmental compliance process!

USAID's environmental procedures are a <u>life-of-project</u> process for:

- Avoiding environmental failures
- Maximizing environmental benefits

In short, for achieving environmentally sound design & management (ESDM)

WAY FORWARD IN ACHIEVING ESDM

- Strengthen short & long term planning and integration at the national level;
- Implement national land use plans (where they exist);
- Strengthen EIA and Strategic Environmental Assessments processes;
- Build stakeholder capacity to implement ESDM throughout the project cycle;
- Strengthen monitoring and enforcement of laws, regulations and codes of practice that enhance ESDM;
- Promote activities that provide alternative livelihoods to ease dependence on land and land-based resources;

WAY FORWARD IN ACHIEVING ESDM:
COLLABORATION IN WEST AFRICA-SAHEL REGION

- **The Economic Community of West African States (ECOWAS) Treaty**

  - Originally signed in 1975 in Lagos, Nigeria

  - Revised Treaty signed 24th July, 1993.

  - Objectives of the treaty to harmonize and coordinate national policies to achieve accelerated and sustained economic development for Member States

- ***Agriculture and Environment***

  - ARTICLE 25 - Member States shall cooperate in the development of agriculture, forestry, livestock and fisheries in order to ensure food security, etc.

  - ARTICLES 29-31 – Regard the protection of the environment and natural resources and prohibition of Hazardous And Toxic Wastes

WAY FORWARD IN ACHIEVING ESDM:
TRANSNATIONAL INITIATIVES

- Strengthen transboundary management of shared resources;

  Examples:

  - Park National "W": Benin, Niger; Burkina Faso

  - Park National Niokolo – Badiar: Senegal; Guinea

  - Transboundary Ramsar site: Saloum-Niumi: Senegal -Gambia

- International resource conservation initiatives:

  - Biosphere Reserve (UNESCO)

  - World heritage site (UNESCO)

  - National Biodiversity Strategies and Action Plans (NBSAPs) under CBD