




**USAID**  
FROM THE AMERICAN PEOPLE



# **Life-of-Project Environmental Compliance for Environmentally Sound Design and Management**



# 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 Sub-Saharan Africa?***

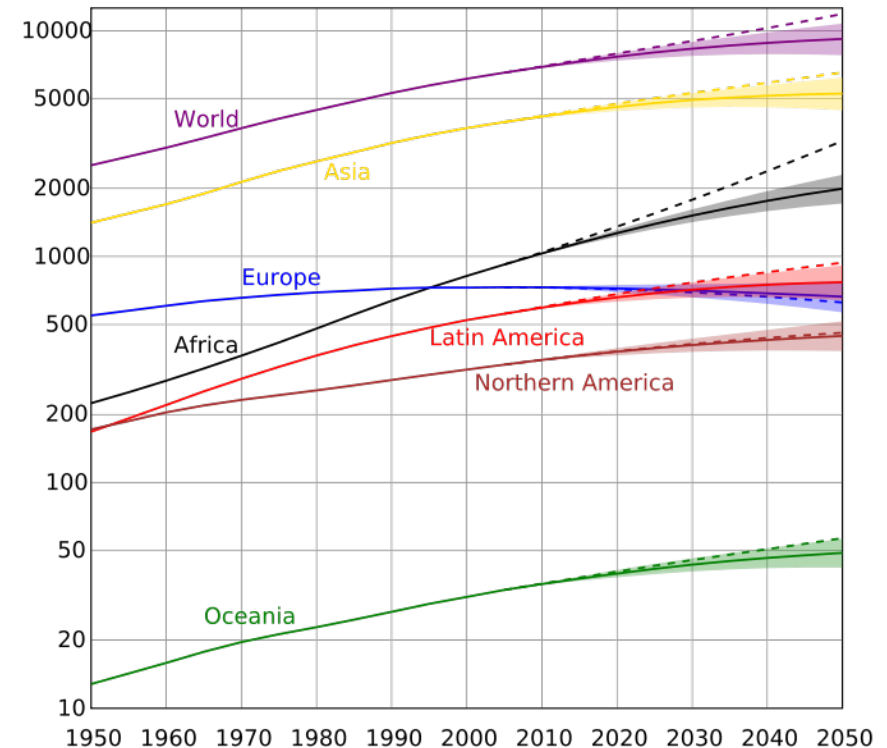
# Population growth

## 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%

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

\*\*LAC: Latin America and the Caribbean

**Most urban growth in the next 25 years in developing countries**

**LEADS TO**

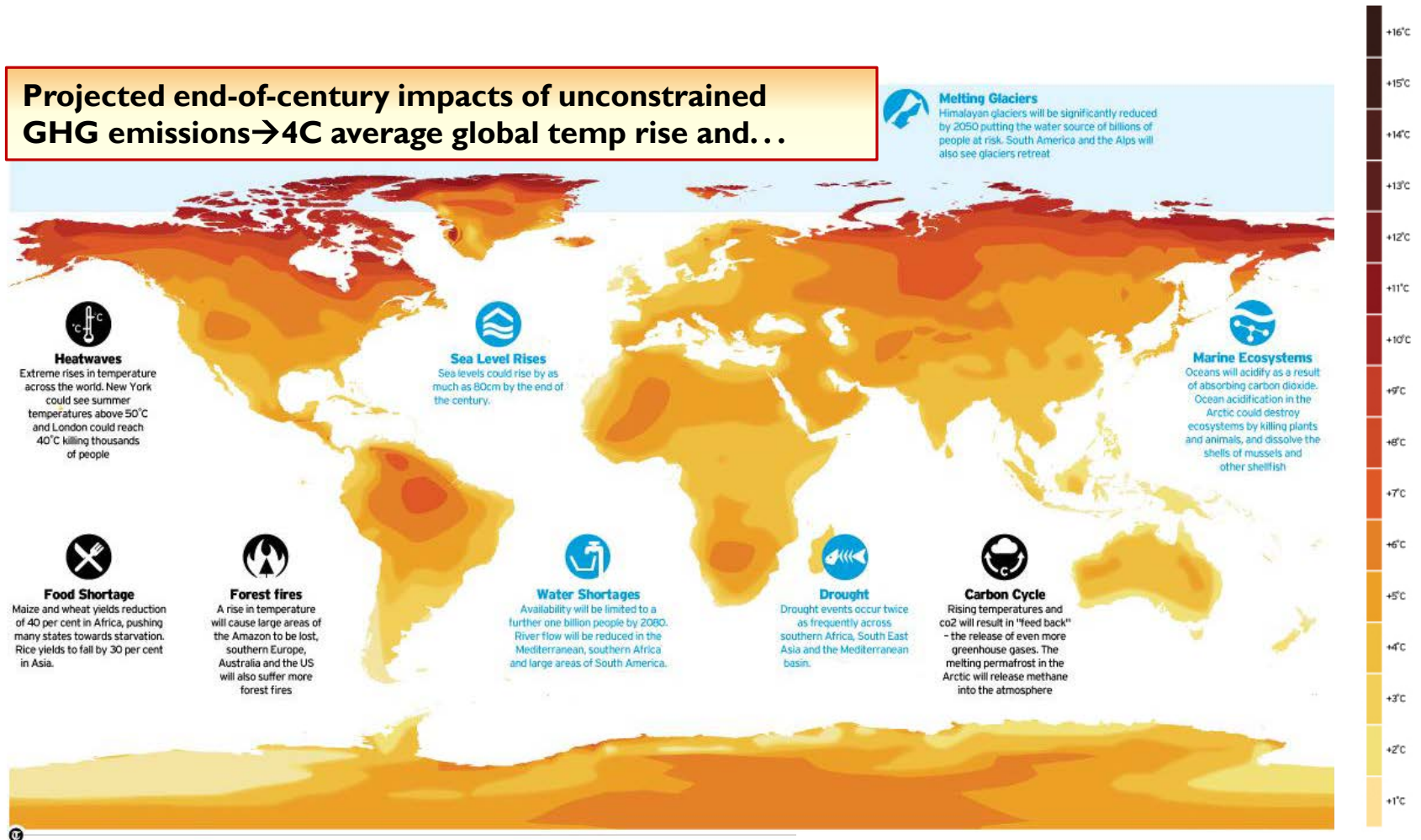
**Increased urban environmental health hazards (given poor municipal sanitation, waste management capacity).**



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

# Global climate change

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



Temperature rise over pre-industrial climate baseline

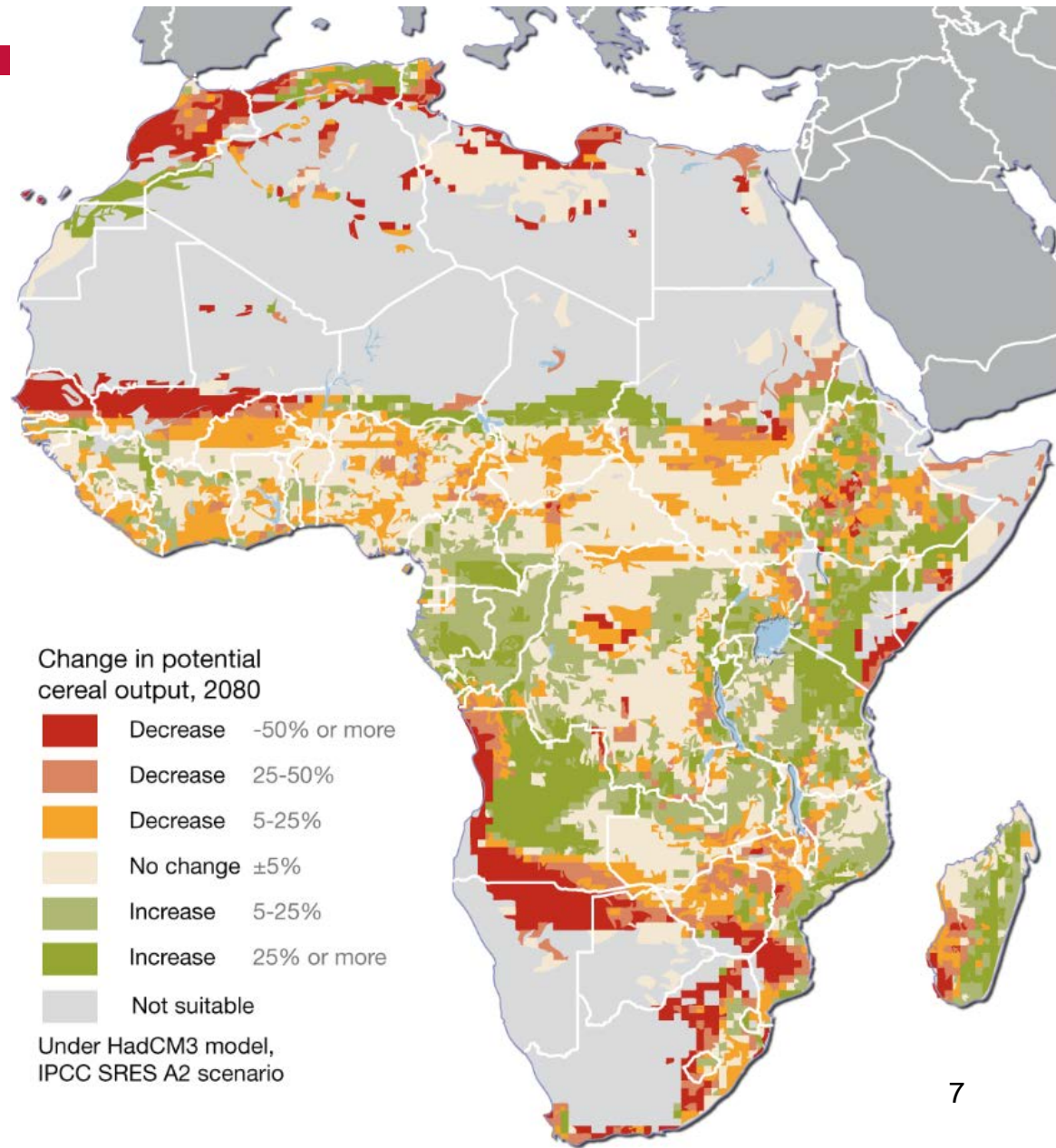




# Global change: Africa

**High dependence on  
rain-fed agriculture  
+ Poverty  
+ Dependence on  
already-marginal lands  
+ strong shifts in  
precipitation volumes  
& timing**

**Make Africa the most  
vulnerable continent  
to global climate change.**



# Question:

## Relationship between Environment and Development

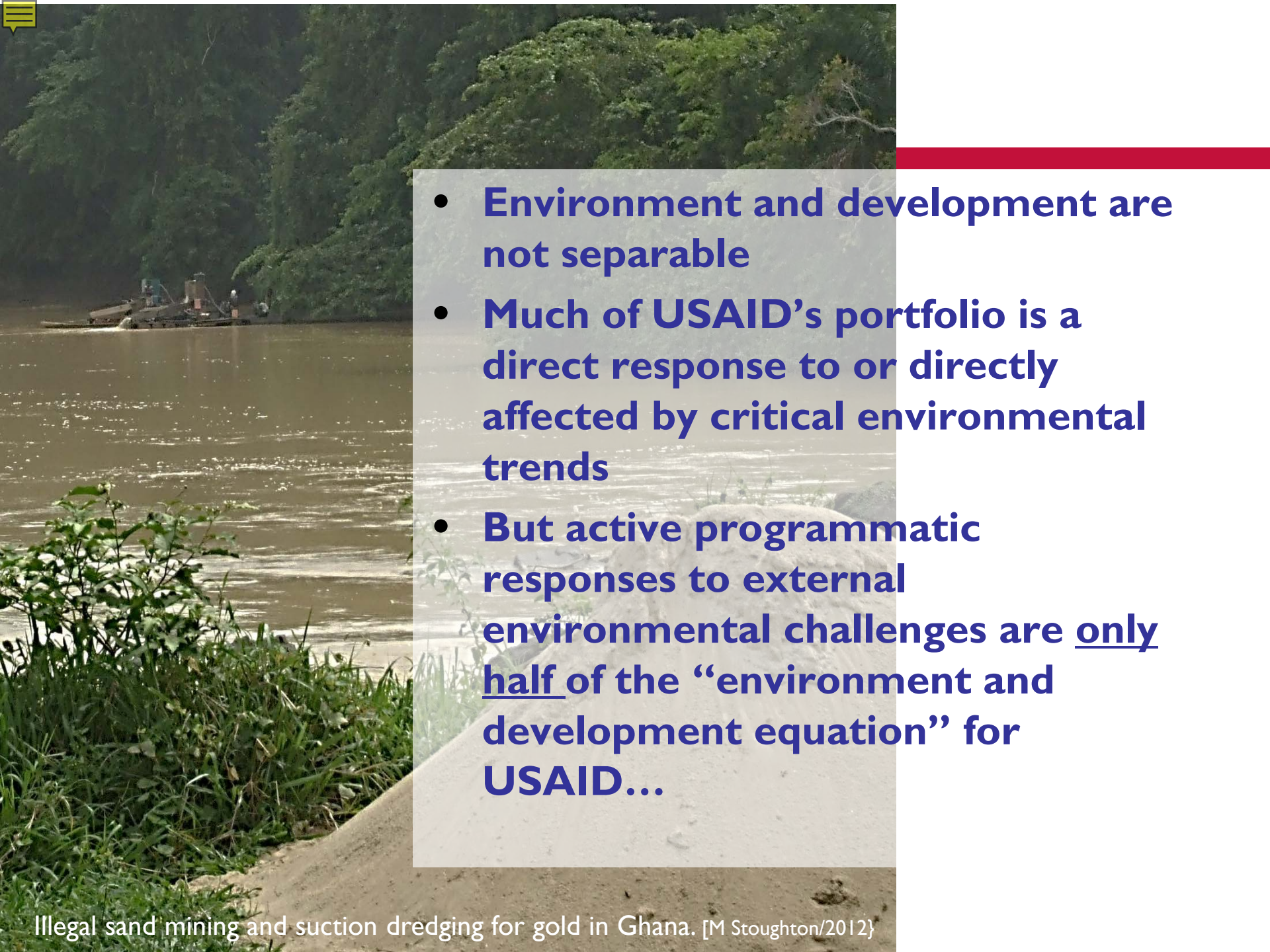


*What examples can you give of development programs or projects that have been affected by the environment?*

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

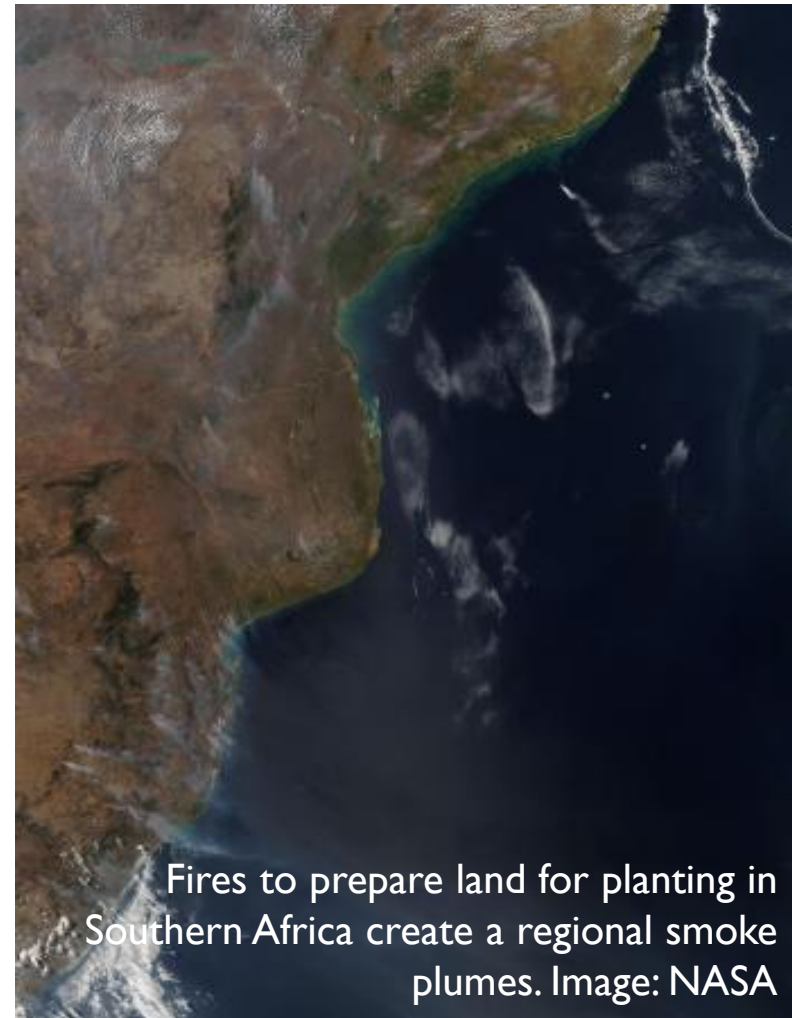




- 
- The background of the slide is a photograph showing a wide, muddy river. In the middle ground, a large, dark-colored suction dredge is operating on the riverbed, creating a large plume of white, silty water. The riverbanks are covered in dense green tropical forest. In the foreground, there is a concrete or earthen embankment with some green vegetation. The overall scene depicts the environmental impact of illegal sand mining.
- **Environment and development are not separable**
  - **Much of USAID's portfolio is a direct response to or directly affected by critical environmental trends**
  - **But 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 Southern Africa create a regional smoke plumes. Image: NASA

# Origin & mandate of USAID's environmental procedures

## An “environmental failure”

1974

*In 1974, USAID provided highly concentrated Malathion to poorly trained field workers on an agricultural project in Pakistan*

*Working without protective equipment in the heat, the workers sprayed each other.*

*5 died.*

1

First a court mandate

Then a mandate in law:

2

1975

Sued by US NGOs for non-compliance with NEPA, USAID settled out of court, agreeing to develop environmental safeguard procedures.

§117 of the FAA requires that USAID:

**utilize an Environmental Impact Assessment (EIA) process to:**

**“fully take into account the impacts of [its] programs and projects upon the environment and natural resources”**

**of host countries prior to implementation.**



# Where are the procedures found?

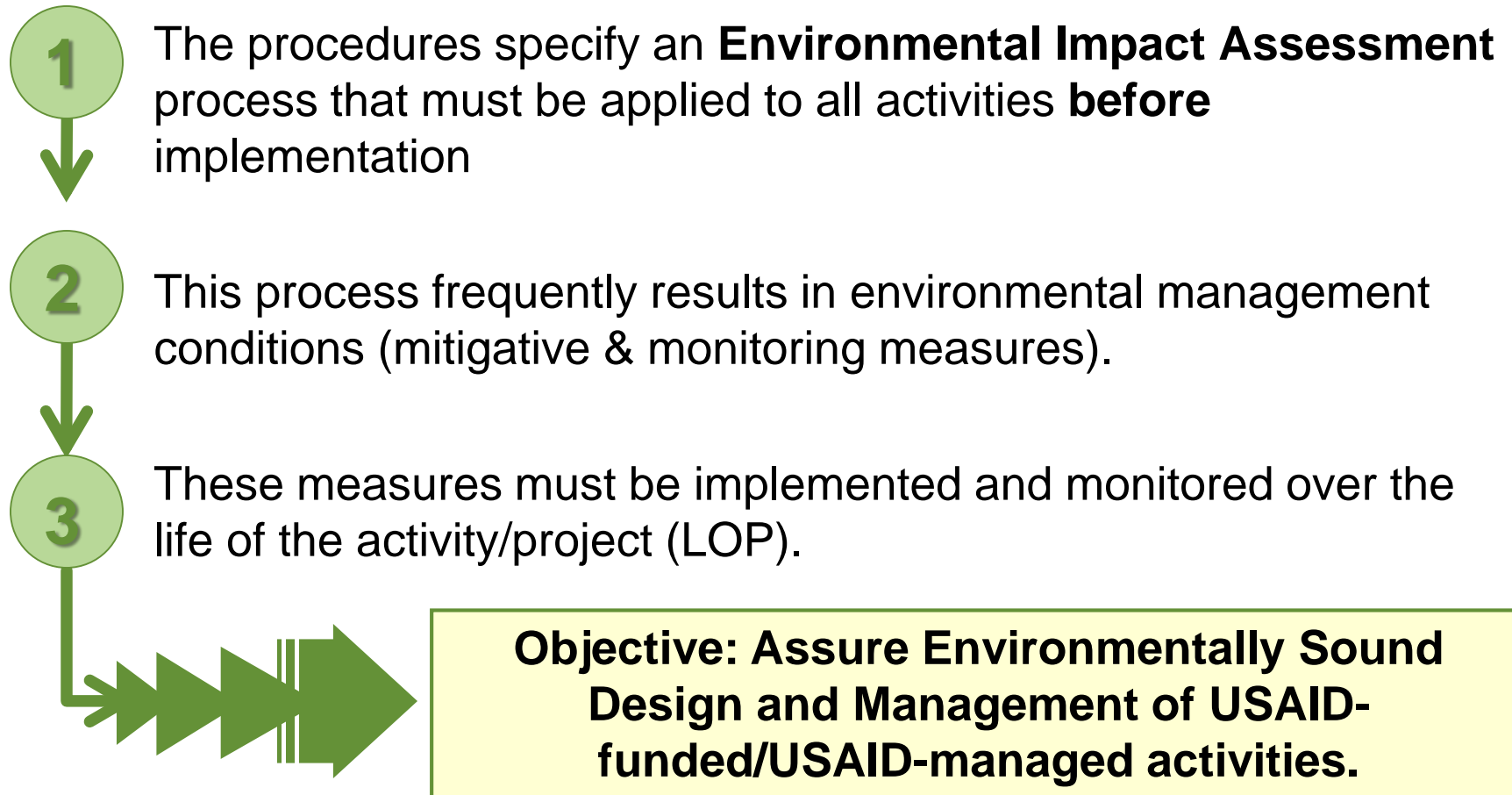
**USAID's Environmental Procedures** are the response to these mandates. They consist of:

- **Federal regulations:**  
22 CFR 216 ( “Reg. 216”) and
- **Mandatory Agency Policies** as set out in USAID's Automated Directives System (ADS), (especially--but not only--201.3.11, 202.3.6, 204 & 303)

**Compliance with the procedures is mandatory. With limited exceptions for disaster assistance, they apply to every program, project, activity, and amendment supported with USAID funds.**



# What do the procedures require? (the big picture)



# What do the procedures require? (a little more detail)

1. Environmental considerations must be taken into account in activity planning.
2. No activities implemented without **approved Reg. 216 environmental documentation.**
3. Any resulting environmental mitigation and monitoring conditions are:
  1. Written into award instruments.
  2. Carried out by the implementing partner, and this implementation is monitored

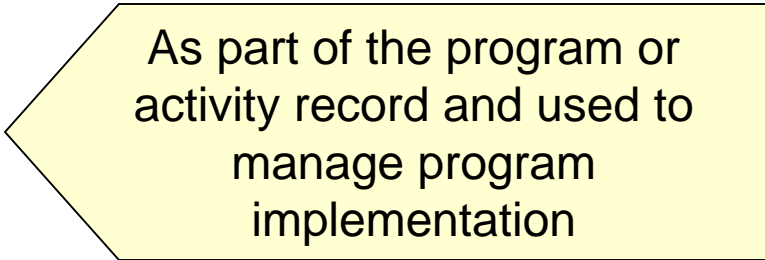
**The output of the EIA process specified by 22 CFR 216\***

**USAID monitors via field inspections and review of routine project reports submitted by IPs. To make this possible, project reporting by IPs must provide an auditable record of environmental compliance.**



# What do the procedures require? (cont'd)

4. Environmental compliance is assessed annually as part of formal Mission (operating unit) reporting.
5. Environmental compliance documentation is maintained by the Mission & each sector team



As part of the program or activity record and used to manage program implementation

**In contrast to gender and general sustainability assessment, pre-implementation environmental review is required by law and regulation, not just Agency policy.**

# Overview: Roles & Responsibilities

## USAID

**Assures** Reg. 216 documentation in place.

**Establishes/approves** environmental mitigation & monitoring conditions.

**Oversees** compliance with these conditions, a core part of AOR/COR responsibilities.

## Implementing Partners

**Implement** environmental management conditions established in Reg. 216 documentation.

**Report** on implementation to USAID.

*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?**

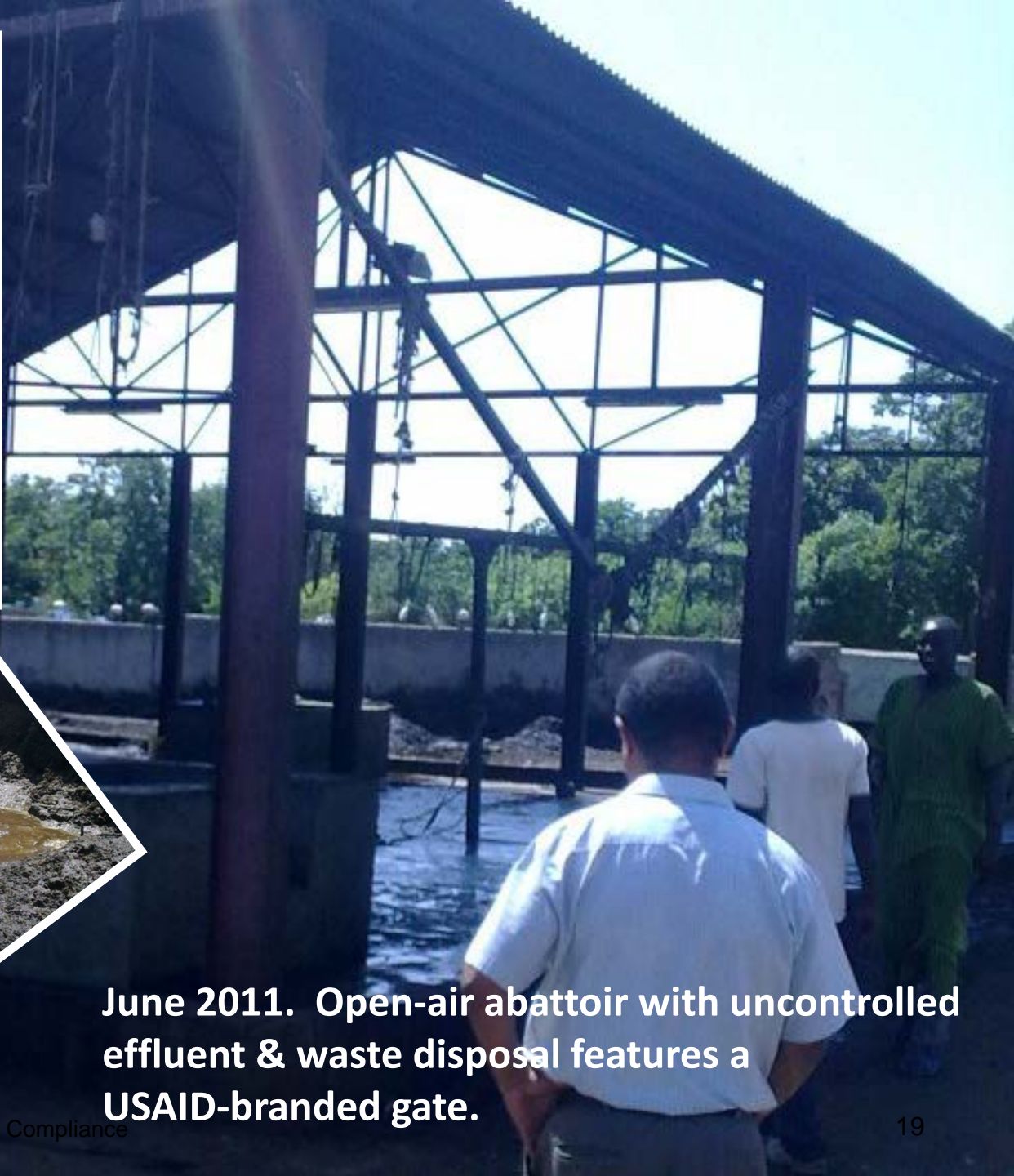


**Getting things right isn't so easy,  
even when the issues are clear...**



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



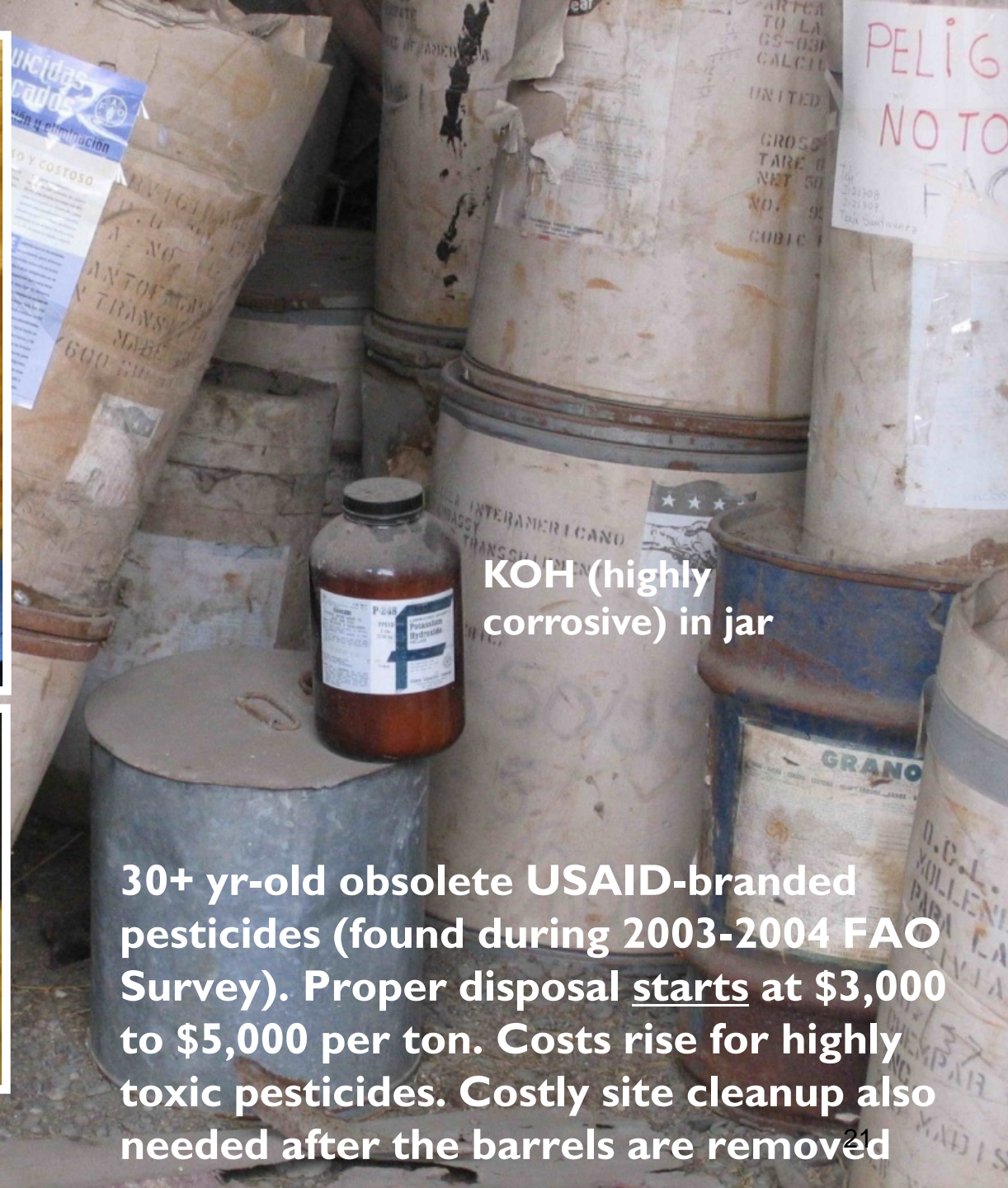


**June 2011. Open-air abattoir with uncontrolled effluent & waste disposal features a USAID-branded gate.**









KOH (highly  
corrosive) in jar

30+ yr-old obsolete USAID-branded  
pesticides (found during 2003-2004 FAO  
Survey). Proper disposal starts 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

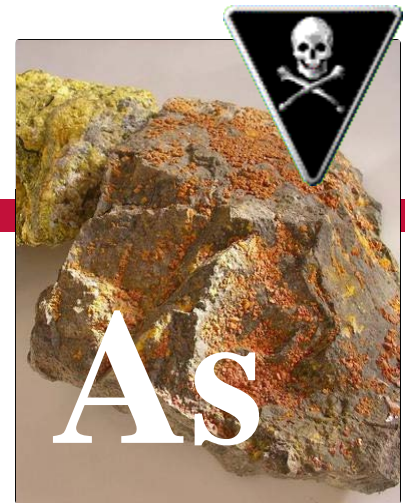
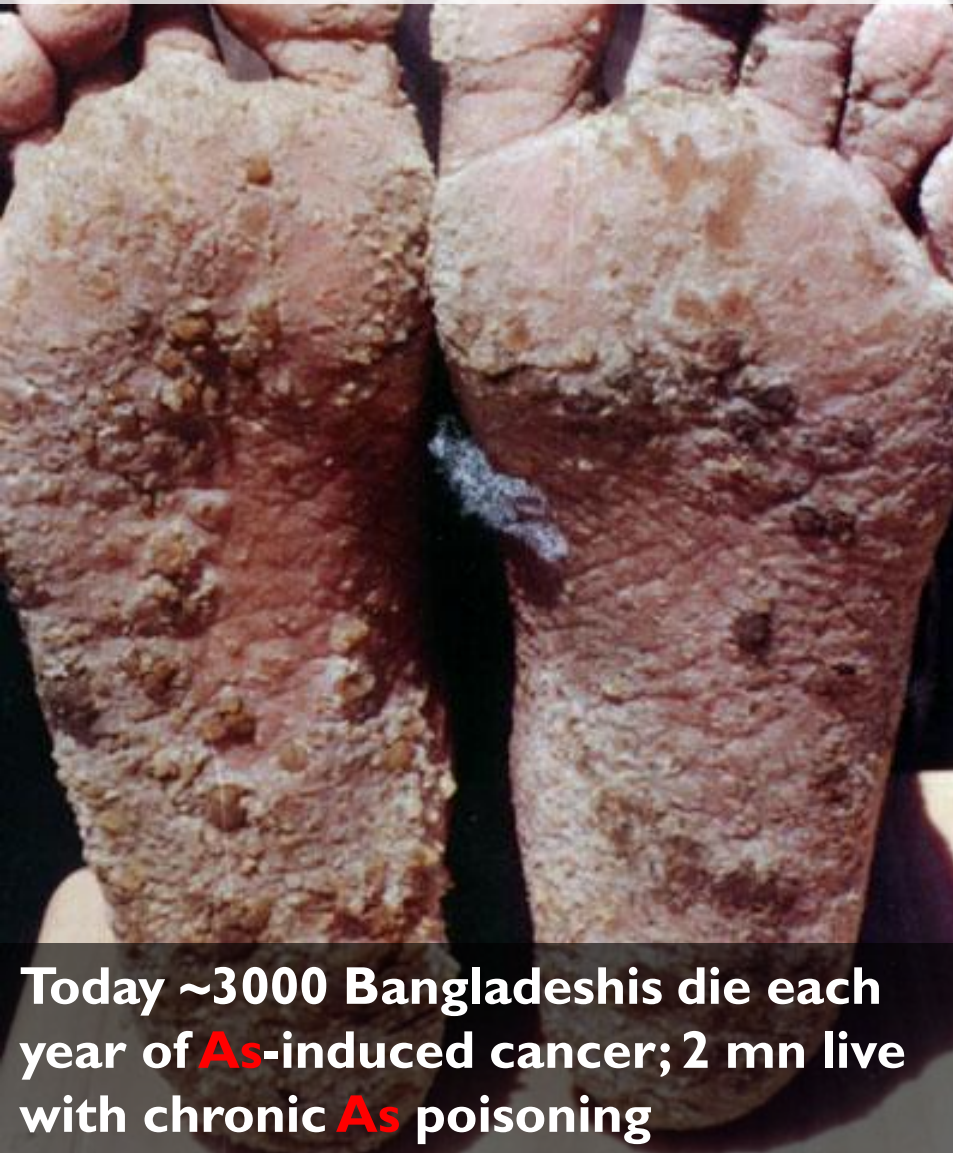


Photo: UNESCO-IHE

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

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

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

# And in environment and development, things are often 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

Significant damage to two industries essential to the Egyptian economy

Waterlogging and salination have adverse affects on agriculture and monuments

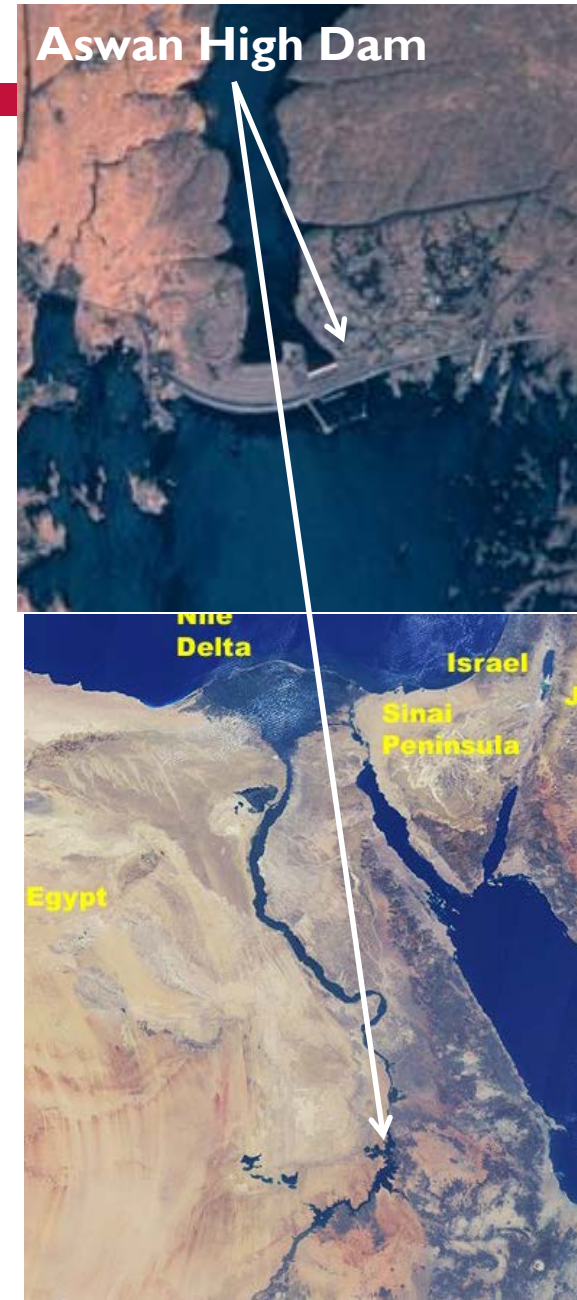


Salt Damage to Crops

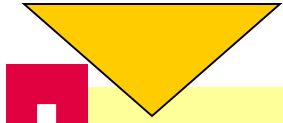


Salt Damage to Monuments

Aswan High Dam



## Bottom line: in development, there are numerous pathways for environmental failure



Failure to implement the most basic good housekeeping practices (first examples)

Failure to understand system complexity (as we just saw)

And many others, e.g.:

- Designing for average conditions, not expected variability
- Failure to plan for the effects of increased scale



# Designing for average conditions, not expected variability

Global change will affect  
both average conditions &  
expected variability



This schoolhouse is being **rebuilt** in makeshift fashion with plank walls & split-bamboo roof.

Why? Strong winds ripped the aluminum sheet roofing off the donor-funded “permanent” structure and toppled the landcrete walls.

In this area, one or two storms every 5 years typically have winds of this strength.

Other “average conditions” to be careful of:  
Rainfall, tides, water tables. . **What else?**

# Failure to plan for the effects of increased scale



*(Or, failure to plan for success!)*

**The environmental effects of a small-scale animal husbandry project may be minor**

**BUT if the project is successful, and many more individuals begin to hold larger numbers of animals, serious problems may arise. . .**

**Health hazards from animal waste. . .**

**Fodder shortages (may lead to overgrazing and erosion and/or land conflicts)**



# Finally, 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 life-of-project process for

- Avoiding environmental failures
- Maximizing environmental benefits

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

# Environmental Compliance Process Overview

**Env considerations integrated in early project design**

**Pre-implementation EIA process (22 CFR 216)**

**Results in Reg 216 documentation**

*Request for Categorical Exclusion, Initial Environmental Examination (IEE), Environmental Assessment (EA)  
must be approved by Mission Director, Bureau Env. Officer*

**IP Compliance with IEE/EA conditions  
required by contracts, agreements**

**IP implements these  
conditions & remains within  
the scope of approved Reg 216  
documentation**

**AOR/COR monitors compliance &  
modifies or ends activities NOT in  
compliance**