



USAID
FROM THE AMERICAN PEOPLE

Fundamental Skills of Environmental Impact Assessment (EIA)



GEMS Environmental Compliance-
ESDM Training Series

Kabul • July / August 2016



SESSION OBJECTIVES:

- Define Environmental Impact Assessment (EIA)
- Explain the EIA process
- Develop fundamental EIA skills; learn basic approach
- Illustrate EIA framework as the internationally accepted standard process for achieving ESDM
- Establish EIA as the basis of USAID Environmental Procedures



EIA

ENVIRONMENTAL IMPACT ASSESSMENT IS

- A formal process for identifying:
 - likely effects of activities or projects on the environment, and on human health and welfare
 - means and measures to mitigate & monitor these impacts



WHAT IS AN ACTIVITY?

THE EIA PROCESS EXAMINES THE IMPACTS OF **ACTIVITIES**.

An activity is:

- A desired accomplishment or output.
- A project or program may consist of many activities.

Accomplishing an activity requires a set of **actions** or **interventions**

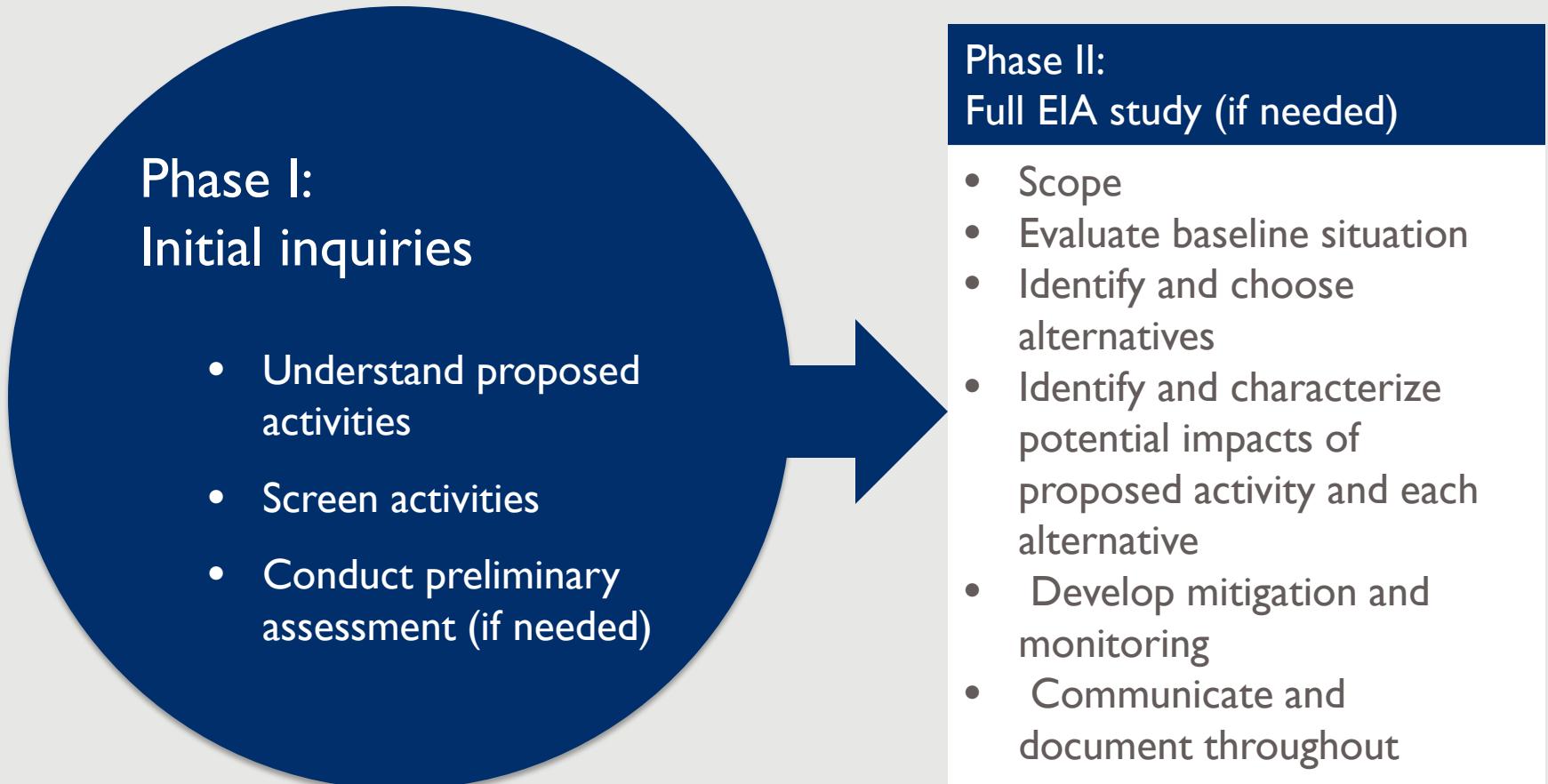
ACTIVITY:
increase rice production

ACTIONS:

- Provide inputs (seed, fertilizer, pesticides)
- Design and construct irrigation infrastructure
- Increased access to finance, lending
- Road rehabilitation
- Capacity building and technical assistance

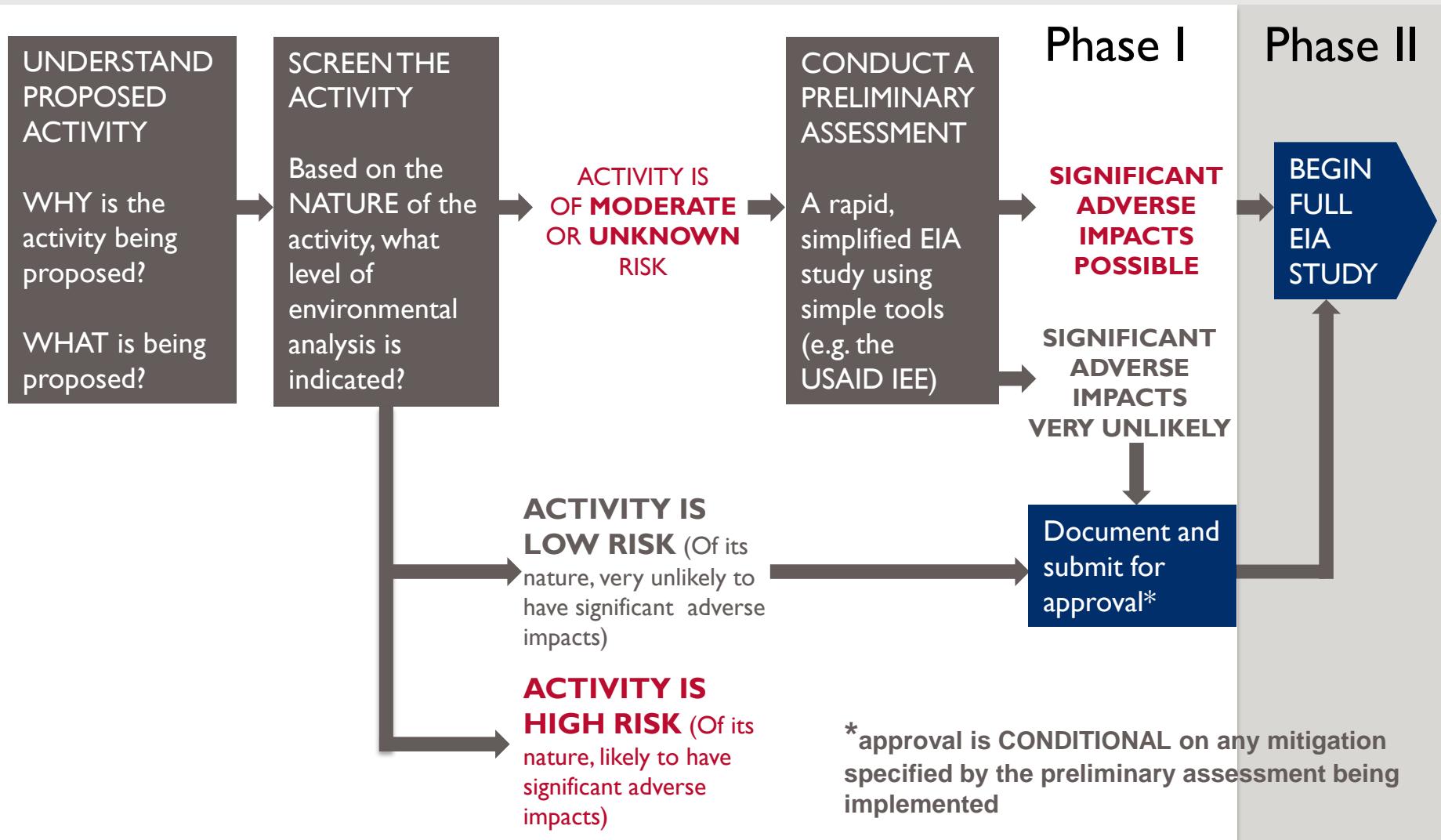
WHAT ARE SOME
OF YOUR ACTIVITIES?

THE EIA PROCESS



Most USAID activities do NOT proceed to a full EIA study

PHASE I OF THE EIA PROCESS



PHASE I: SCREEN THE ACTIVITY

SCREEN EACH ACTIVITY

Based on the NATURE of the activity, what level of environmental analysis is indicated?

Answering these questions does NOT:

- require analysis
- require detailed knowledge of the proposed sites, techniques or methods

SCREENING asks a very basic set of questions about the activity.

EXAMPLE SCREENING QUESTIONS:

- Does the activity involve:
- Penetration road building?
- Large-scale irrigation?
- Introduction of non-native crop or agroforestry species?
- Resettlement?

PHASE I: PRELIMINARY ASSESSMENT

CONDUCT A PRELIMINARY ASSESSMENT

A rapid, simplified EIA study using simple tools (such as USAID's Initial Environmental Examination [IEE])

SCREENING DETERMINES WHETHER THE PRELIMINARY ASSESSMENT IS NECESSARY

Purpose is to provide documentation and analysis that:

- Allow the preparer to determine whether or not significant adverse impacts are likely
- Allows the reviewer to agree or disagree with these determinations
- Sets out mitigation and monitoring for adverse impacts

PHASE I: PRELIMINARY ASSESSMENT

TYPICAL PRELIMINARY ASSESSMENT OUTLINE:

1. Background (Development objective, list of activities)
2. Description of the baseline situation
3. Evaluation of potential environmental impacts
4. MITIGATION & MONITORING
5. RECOMMENDED FINDINGS



FOR EACH ACTIVITY IT COVERS, A PRELIMINARY ASSESSMENT HAS 3 POSSIBLE FINDINGS:

THE ACTIVITY IS...

- very unlikely to have significant adverse impacts.
- unlikely to have significant adverse impacts with specified mitigation and monitoring,
- likely to have significant adverse impacts (full EIA study is required)

WHEN TO PROCEED

We only proceed to
Phase II of the EIA
process

IF

Phase I indicates that
a **FULL EIA STUDY**
is required

PHASE II: FULL EIA STUDY

The full EIA study has very similar objectives and structure to a preliminary assessment.

HOWEVER, THE FULL EIA STUDY DIFFERS IN IMPORTANT WAYS:

- A formal SCOPING PROCESS precedes the study to IDENTIFY ISSUES TO BE ADDRESSED
- ANALYSIS of environmental impacts is much MORE DETAILED
- ALTERNATIVES* must be formally defined. THE IMPACTS OF EACH ALTERNATIVE MUST BE IDENTIFIED & EVALUATED, AND THE RESULTS COMPARED
- PUBLIC PARTICIPATION is required
- A PROFESSIONAL EIA TEAM is usually required

**includes the project as proposed, the no-action alternative, and at least one other real alternative*

FUNDAMENTAL EIA SKILLS

There are “core” skills that are central to environmental impact assessment:

- Baseline characterization
- The identification of potential adverse impacts (or impacts of concern)
- Developing a mitigation strategy

HOW DO I
APPROACH THE
EIA PROCESS?





FUNDAMENTAL EIA SKILLS

BASELINE CHARACTERIZATION	IDENTIFYING IMPACTS OF CONCERN	MITIGATION STRATEGY*
<p>Used to prepare preliminary assessment—but also critical to making mitigation responsive to local environmental conditions</p>		<p>Key skill for avoiding adverse impacts and achieving ESDM</p>

* Monitoring is the essential complement to mitigation; it is required to verify whether the mitigation measures are sufficient, effective—and actually implemented. Monitoring is addressed in a subsequent session.

CHARACTERIZING THE BASELINE SITUATION...

- The **environmental components** of interest are those:
 - likely to be affected by your activity
 - upon which your activity depends for its success

Water?	<i>Quantity, quality, reliability, accessibility</i>
Soils?	<i>Erosion, crop productivity, fallow periods, salinity, nutrient concentrations</i>
Fauna?	<i>Populations, habitat</i>
Env Health?	<i>Disease vectors, pathogens</i>
Flora?	<i>Composition and density of natural vegetation, productivity, key species</i>
Special ecosystems?	<i>Key species</i>

WHERE DO I OBTAIN INFORMATION ON THE BASELINE SITUATION?

I. YOUR ORGANIZATION:

- TALK to staff who know the project, and know the sites.
- OBTAIN project documents and information

2. DIRECT OBSERVATION:

- Go to the site(s)! Look up publicly available satellite imagery before you go.

3. UTILIZE OTHER LOCAL TALENT & KNOWLEDGE:

- communities, government, counterparts

AREN'T WE FORGETTING SOMETHING?

What about reports by donor organizations and international agencies? What about government statistics? GIS databases?

All these sources can be useful (and sometimes necessary)

But good local information is the most important input

IDENTIFYING IMPACTS OF CONCERN

WHAT IS AN IMPACT?

The impact of an activity is the change from the

BASELINE SITUATION
caused by the activity.



To measure an impact, you must know what the baseline situation is.

The **BASELINE SITUATION** is the existing environmental situation or condition in the absence of the activity.

Important:

Baseline situation is not just a “snapshot in time”

TYPES OF IMPACTS & THEIR ATTRIBUTES

The EIA process is concerned with **all types of impacts** and may describe them in a number of ways



- Intensity
- Direction
- Spatial extent
- Duration
- Frequency
- Reversibility
- Probability

- Direct & indirect impacts
- Short-term & long-term impacts
- Adverse & beneficial impacts
- Cumulative impacts

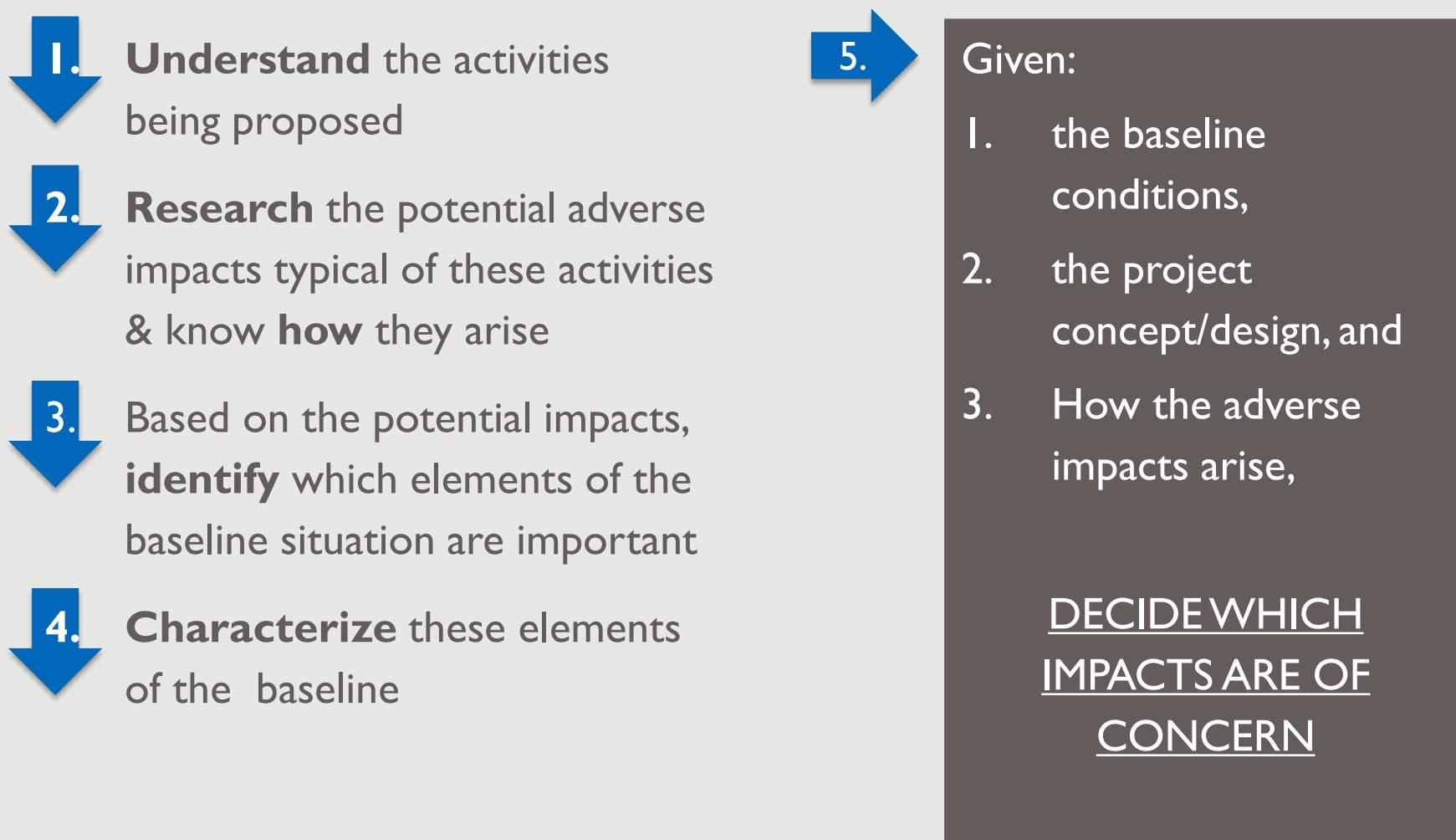
But all impacts are NOT treated equally.

FOCUS!

ESSENTIAL to focus on the most significant impacts

You definitely do not have time and resources to analyze and discuss in detail less important ones.

IMPACT EVALUATION PROCESS: THEORY



IMPACT EVALUATION PROCESS: EXAMPLE

I. Proposed intervention: irrigation scheme (wing dam diversion type ▪ water-intensive crops ▪ high fertilizer use, unlined canals & open-channel irrigation)

2. Key potential impacts:

- Excessive diversion of water
- Salinization of soils
- Contamination of groundwater & downstream surface water

3. Key elements of baseline:

- River flow volume, variability
- Soil & water characteristics & groundwater depth
- Downstream uses



IMPACT EVALUATION PROCESS: EXAMPLE

4.

Baseline characterization

- *River flow volume, variability*
 - Will divert 3% of normal flow
 - low-year flows are 50% of normal
 - Downstream abstraction is <10% of total flow volume.
- *Soil characteristics & groundwater depth*
 - Soils are well-drained but relatively high in salts; groundwater 2m depth
- *Downstream uses*
 - Key water source for community domestic use & livestock, immediately downstream.

5.

THEREFORE:

IMPACTS OF CONCERN:

Salinization
Downstream
contamination

LITTLE CONCERN:

Excess
Diversion

**WHY THESE
CONCLUSIONS?**

MITIGATION DESIGN

A critical part of the EIA process—and of ESDM

MITIGATION IS...

The implementation of measures designed to eliminate, reduce or offset the undesirable effects of a proposed action on the environment.

HOW DOES MITIGATION REDUCE ADVERSE IMPACTS?

TYPE OF MITIGATION MEASURE	HOW IT WORKS	EXAMPLES
PREVENTION AND CONTROL MEASURES	Fully or partially prevent an impact/reduce a risk by: <ul style="list-style-type: none">▪ <i>Changing means or technique</i>▪ <i>Changing or adding design elements</i>▪ <i>Changing the site</i>▪ <i>Specifying operating practices</i>	PREVENT contamination of wells, by SITING wells a safe distance from pollution sources Add wastewater treatment system to the DESIGN of a coffee-washing station and train in proper OPERATIONS
COMPENSATORY MEASURES	Offset adverse impacts in one area with improvements elsewhere	Plant trees in a new location to COMPENSATE for clearing a construction site
REMEDIATION MEASURES	Repair or restore the environment after damage is done	Re-grade and replant a borrow pit after construction is finished

... and sometimes you may need to redesign the project to modify or eliminate problem components

MUST EVERY IMPACT BE MITIGATED?

Mitigation specified in Phase I or Phase II of EIA process must be implemented

Environmental management criteria often require judgment in designing specific mitigations. Apply the following principle:

PRIORITIZE!

POTENTIALLY SERIOUS IMPACTS/ISSUES

These must **ALWAYS** be mitigated to the point that the impact is non-significant

EASILY MITIGATED IMPACTS

Then, there may be other impacts for which mitigation is easy and low-cost

PREVENTION IS BEST

Where possible, PREVENT impacts by changes to site or technique.

CONTROL of impacts with Operation & Maintenance (O&M) practices is more difficult to monitor, sustain.



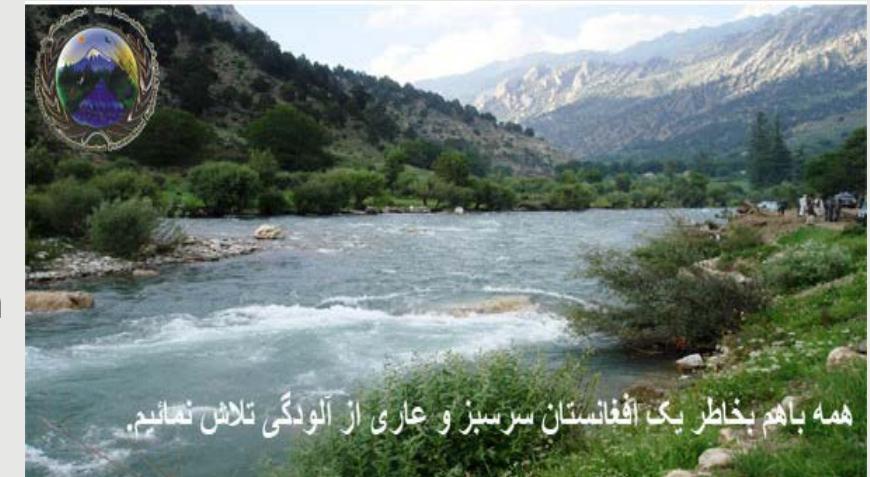
THREE RULES FOR ENVIRONMENTALLY SOUND DESIGN & MANAGEMENT (ESDM)

1. Be prevention-oriented
2. Apply best development practices to environmental aspects of the activity
3. Be systematic

Properly implemented, the EIA process makes them a reality.

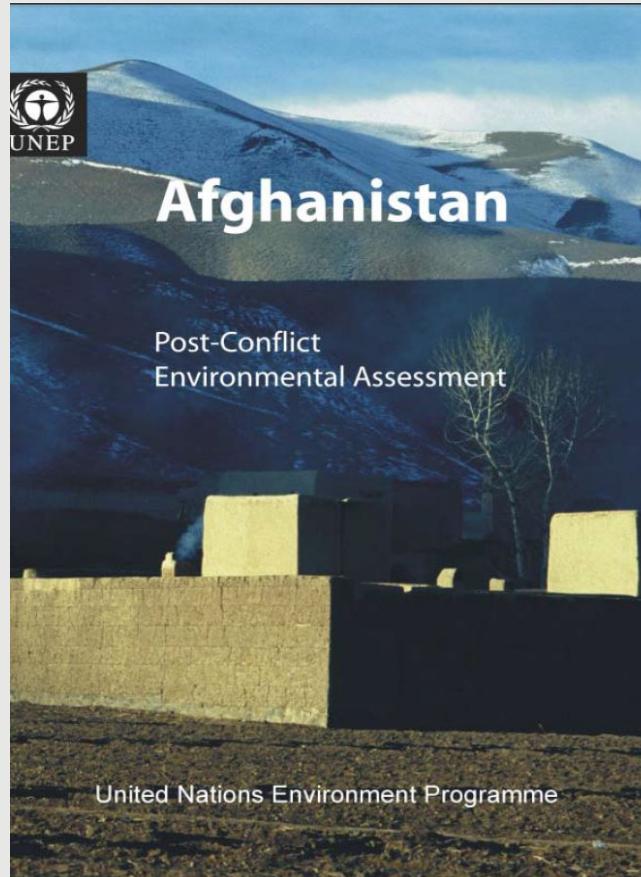
ENVIRONMENTAL IMPACT ASSESSMENT: A UNIVERSAL REQUIREMENT

- From its beginnings in the 1970 US National Environmental Policy Act...
- EIA now extends beyond government works to
 - *Infrastructure and economic development projects funded by the private sector & donors*
 - *Analysis of policies, not just projects*
- In many developing countries, EIA is the core of national environmental regulation
- Most countries & almost all donors (including USAID) now have EIA requirements



همه باهم بخاطر یک افغانستان سرسیز و عاری از آلودگی تلاش نماییم.

ENVIRONMENTAL IMPACT ASSESSMENT: A UNIVERSAL REQUIREMENT



ENVIRONMENTAL IMPACT ASSESSMENT: THE WORLD BANK

The screenshot shows a web page from the World Bank's Operational Manual. At the top, there is a navigation bar with links to Home, Site Map, Index, FAQs, and Contact Us. Below the navigation bar is a banner featuring a woman working in a field. The main title "Operational Manual" is displayed prominently. A search bar is located at the top right. Below the banner, the URL "Home > Projects > Policies > Ext Opmanual > Table of Contents > OPs > OP 4.01 - Environmental Assessment" is shown, along with "Email" and "Print" links. On the left side, there is a sidebar with a "Search in Manual" input field and a menu containing "Table of Contents", "OPS" (with sub-options for BP, OpMemos, and By Series), "Definitions", "Archived Statements", "Print Manual", "Selected Translations", "Disclosure", and "Contact Us". The main content area is titled "OP 4.01 - Environmental Assessment". It includes a note: "These policies were prepared for use by World Bank staff and are not necessarily a complete treatment of the subject." To the right of this note are the document identifier "OP 4.01" and the date "January, 1999". Below this note, a detailed description of the policy statement is provided, mentioning its update in February 2011, previous revisions, and its replacement of other statements like OMS 2.36 and OD 4.00. It also mentions the Environmental Assessment Sourcebook and the World Bank Group Environment, Health and Safety Guidelines (EHSGs). A note at the bottom states: "Note: OP and BP 4.01 together replace OMS 2.36, *Environmental Aspects of Bank Work*; OD 4.00, Annex A, *Environmental Assessment*; OD 4.00, Annex B, *Environmental Policy for Dam and Reservoir Projects*; OD 4.01, *Environmental Assessment*, and the following Operational Memoranda: *Environmental Assessments: Instructions to Staff on the Handling of the Borrower's Consultations with Affected Groups and Relevant Local NGOs*, 4/10/90; *Environmental Assessments: Instructions to Staff on the Release of Environmental Assessments to Executive Directors*, 11/21/90; and *Release of Environmental Assessments to Executive Directors*, 2/20/91. Additional information related to these statements is provided in the *Environmental Assessment Sourcebook* (Washington, D.C.: World Bank, 1991) and subsequent updates available from the Environment Sector Board, and in the *World Bank Group Environment, Health and Safety Guidelines (EHSGs)*.¹ Other Bank statements that relate to the environment include OP/BP 4.02, *Environmental Action Plans*; OP/BP 4.04, *Natural Habitats*; OP 4.07, *Water Resources Management*; OP 4.09, *Pest Management*; OP/BP 4.10, *Indigenous Peoples*; OP/BP 4.11, *Physical Cultural Resources*; OP/BP 4.12, *Involuntary Resettlement*; OP/BP 4.36, *Forests*; and OP/BP 10.04, *Economic Evaluation of Investment Operations*. These OP and BP cover all projects for which a PID is first issued after March 1, 1998. Questions may be addressed to the Safeguard Policies Helpdesk in OPCS (Safeguards@worldbank.org)."

Revised April 2012

1. The Bank² requires environmental assessment (EA) of projects proposed for Bank financing to help ensure that they are environmentally sound and sustainable, and thus to improve decision making.

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AFGHANISTAN

- In order to sustainably develop, Afghanistan must address its environmental issues and integrate the environment into reconstruction in order to reestablish the basis for sustainable livelihoods and economically develop.
- Environmental matters in Afghanistan include: sustainable use, conservation and protection of natural resources, biodiversity, protection of specific areas, institutional arrangements, environmental information, education, training and research, and legislation and regulation.
- EIAs are implemented under enabling legislation and associated regulations to execute administrative procedures.
- Management of environmental impacts resulting from development projects is the responsibility of proponents with oversight from the environmental agency.



SUMMARY

- EIA is an established process that promotes sustainable environmental management and successful development outcomes.
- Core skills are needed to implement the EIA process and to help achieve ESDM; these are:
 - Baseline characterization
 - Identifying impacts of concern
 - Mitigation design
- EIA enables ESDM-focused development, and is the basis for USAID Environmental Procedures



Thank you

