



USAID
FROM THE AMERICAN PEOPLE

Session 3: Environmental Impact Assessment: A Framework for Environmentally Sound Design and Management



Session Objectives:

- Define Environmental Impact Assessment (EIA);
- Understand EIA key concepts & the EIA process
- Show that the EIA process provides a systematic, internationally accepted framework to achieve Environmentally Sound Design and Management (ESDM);
- Explain that USAID's environmental procedures are a specific implementation of the general EIA process.

Why this session?

Isn't this workshop about USAID's Environmental Procedures, not EIA?



- USAID's environmental procedures are a specific implementation of the general Environmental Impact Assessment process
- Understanding this process makes USAID's procedures much easier to understand.
- Core EIA skills are required for effective compliance during USAID project design and implementation.



Environmental Impact Assessment

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

Environmental Impact Assessment: a universal requirement



- From its beginnings in the 1970 US National Environmental Policy Act. . .
- Most countries & almost all donors (**including USAID**) now have EIA requirements
- 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



Key EIA concepts

- Defining “impact”
- Characterizing baseline conditions
- Defining “activity”

Key EIA concept: 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.

The **baseline situation** is a key concept in EIA.

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? *Quantity, quality, reliability, accessibility*

Soils? *Erosion, crop productivity, fallow periods, salinity, nutrient concentrations*

Fauna? *Populations, habitat*

Env Health? *Disease vectors, pathogens*

Flora? *Composition and density of natural vegetation, productivity, key species*

Special ecosystems? *Key species*

Baseline situation: not just a “snapshot in time”



This chart of groundwater levels shows both **variability** and a **trend over time**.

BOTH are part of the groundwater baseline situation.

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.

What is an activity?

The EIA process examines the impacts of **activities**.

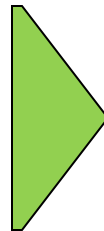
✓ An activity is:

A desired accomplishment or output

E.g.: a road, seedling production, or river diversion to irrigate land

A project or program may consist of many activities

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



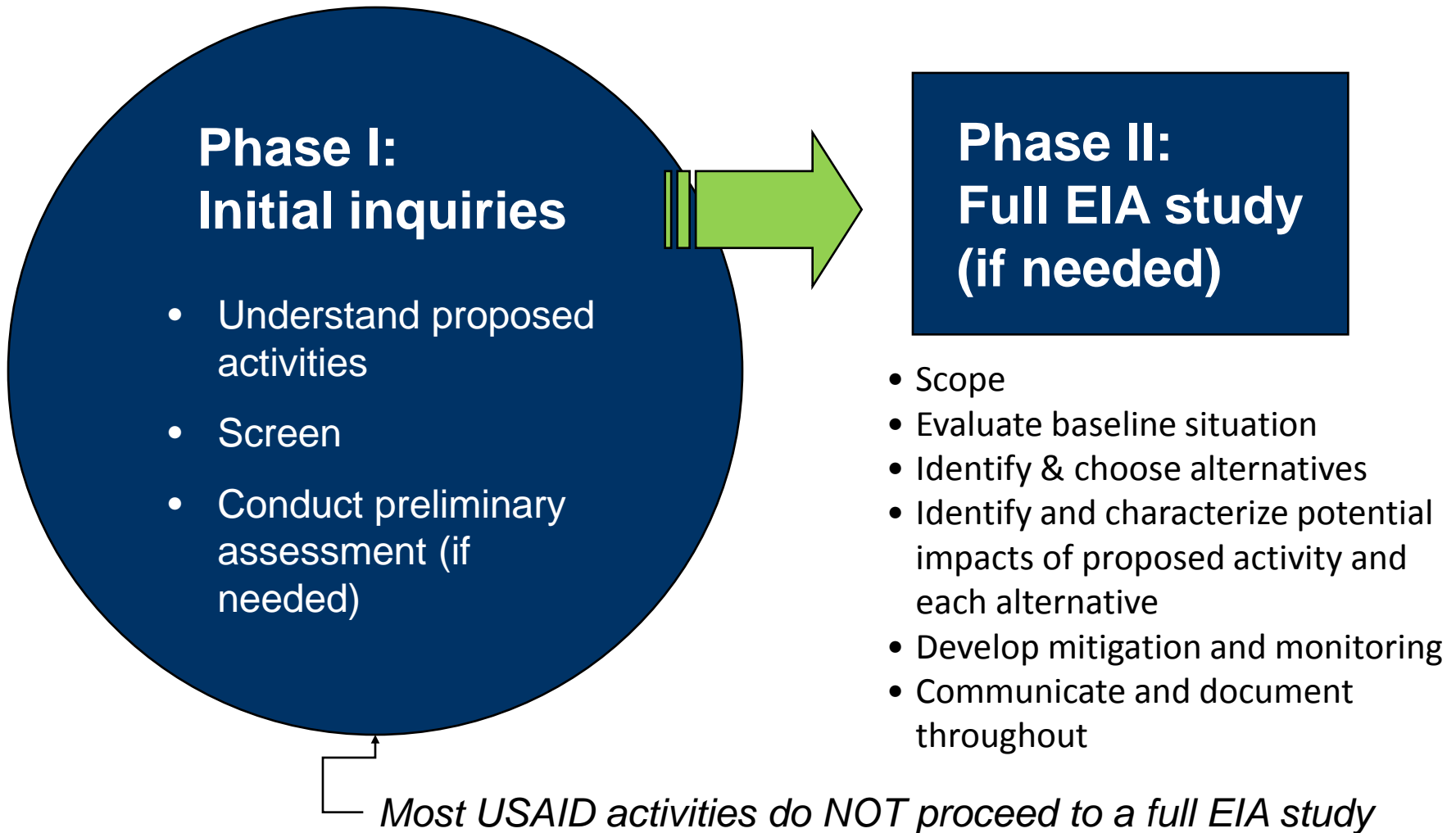
ACTIVITY:

market access
road
rehabilitation

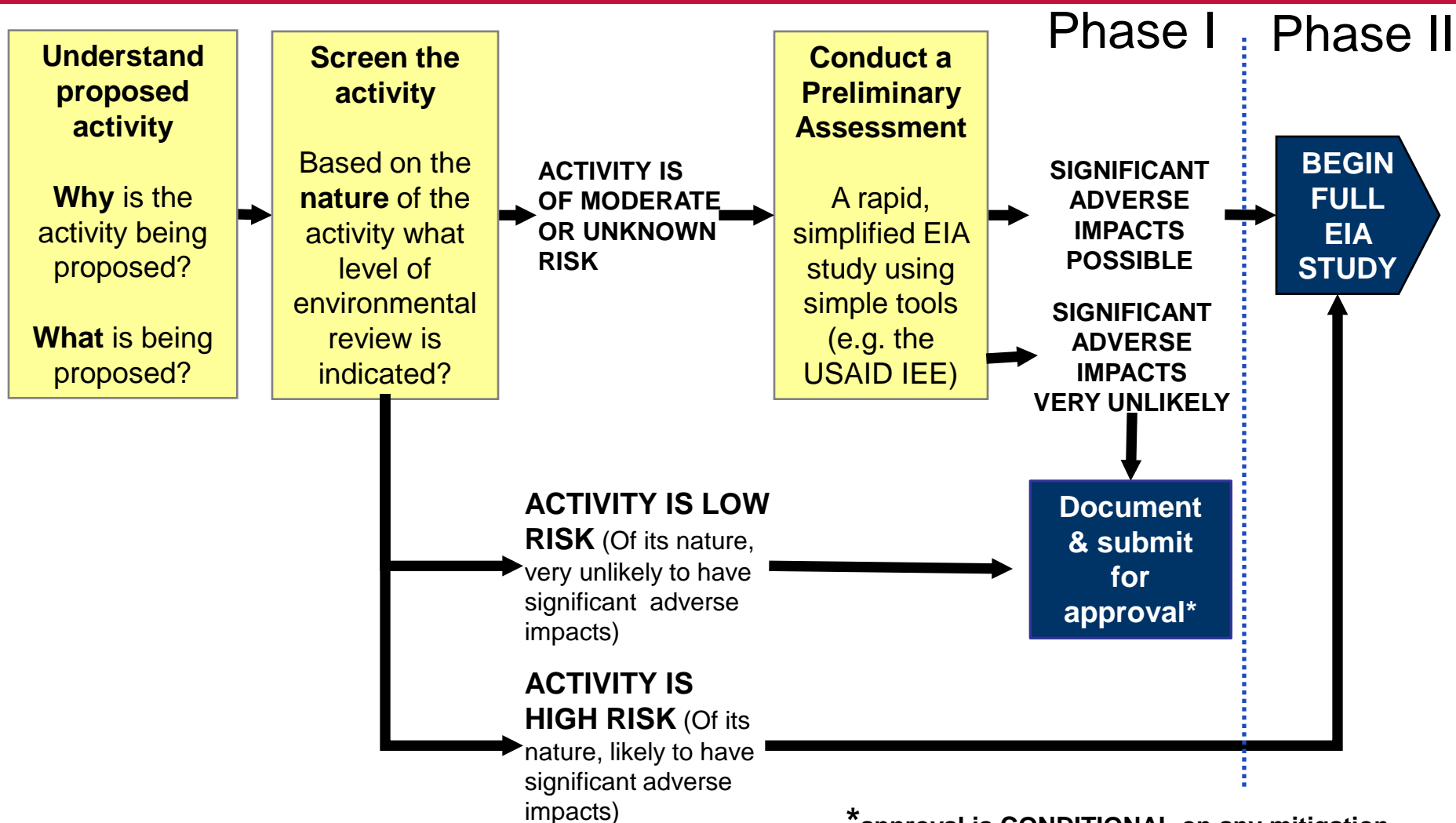
ACTIONS:

Survey, grading, culvert construction, compaction, etc. . .

The EIA process



Phase I of the EIA process



* approval is **CONDITIONAL** on any mitigation specified by the preliminary assessment being implemented



Screen the activity

Screen each activity

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

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?

These questions do **NOT**:

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




The Preliminary Assessment (USAID's Initial Environmental Examination)

Conduct a Preliminary Assessment

A rapid, simplified EIA study using simple tools (USAID Initial Environmental Examination (IEE))

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 these determinations
- Sets out mitigation and monitoring for adverse impacts



Screening determines whether the preliminary assessment is necessary

The Preliminary Assessment (IEE)

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**



Full EIA study (USAID's Environmental Assessment)

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*

3 rules for Environmentally Sound Design & Management (ESDM)



Properly done, the EIA process makes them a reality.

1 Be prevention-oriented

- Prevention occurs across the project lifecycle. . .
.. but starts with DESIGN
- DESIGN starts with the **choice of method**
- **Environmental impacts are 1 factor considered**

Project objective:

Improve agricultural productivity

Possible *methods*

How do we choose?



EIA assures a “prevention orientation”

1

Be prevention-oriented

- Prevention begins with choice of **method.**
“Consider alternatives” is a key principle of EIA.
- EIA forces formal consideration of environmental issues during project design.

Early consideration is key to prevention—because that is when design changes can be made

Apply general best development practices. .

Using a technically sound design...

*That is suited for the local
social & policy context*

*Building beneficiary capacity &
stakeholder commitment*

Adjusting what we do as results come in

**. . .to environmental
aspects of the activity
AND design for climate change**

Best Practice #1: Technically sound design

The design must be appropriate for local environmental conditions

....

... Rainfall, temperature, soils, flood, drought and earthquake potential. . .

For example. . .

?

Appropriate choice of crops or trees?



?

Appropriate choices of construction materials and methods?



Best Practice #2: Design for the policy & social context

Environmental applications:

Compliance

with national and local environmental laws and policies

Language, literacy

Environmental management measures must be matched to capabilities

Natural resource management and land tenure

Activities utilizing land and other natural resources must be compatible with local NRM and land tenure

land and resource rights are often gender-specific

Best Practice #3: Build commitment & capacity. . .

! Environmental application:

Proper maintenance and operation are critical to controlling environmental impacts.

Local beneficiaries need to be trained and committed to:

- environmentally sound operation.
- maintaining the equipment/structure

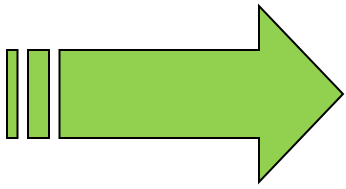


Who will maintain it?
Who will operate it?



... and involve the local community

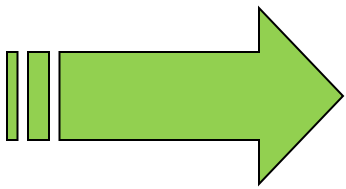
**Ethics require it
(environmental justice)**



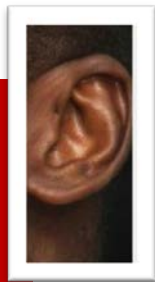
Local residents must live with the environmental impacts of activities!

LOCAL KNOWLEDGE is critical

- How often does the river flood?
- How often are crops rotated?
- Is there a land tenure problem?
- What do people value and need?



LISTEN to the community
TALK to both men and women





Best Practice #4: Practice Adaptive Management

**“Adjust what we do as
results come in”**

Environmental dimension:
If our activity has
unintended adverse
environmental
consequences, **we need to
DO SOMETHING ABOUT
IT!**

Requires:

- **Funding for environmental monitoring in project budget**
- **flexibility to adapt the project in response to unanticipated adverse impacts**
- **Adjusting implementation based on the experiences of others**

**Communities are often
essential to monitoring
results from the field**

Best Practice #5: Design for Climate Change

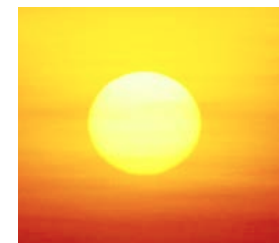
Already mentioned: future baseline conditions will change—design projects to be **ROBUST** to meet these changes

**But in
addition**

While individual projects are rarely significant contributors to global climate change. . .

. . . climate change is driven by the sum of many small actions.

So even small-scale projects should seek to reduce greenhouse gas emissions/ increase sequestration/ reduce climate vulnerability in the local area in a manner consistent with their development objectives.



Best Practice #5: Design for Climate Change

Example actions in small-scale projects:

Reduce greenhouse gas emissions



Use alternative energy (PV, windmill water pumping, etc)

Improve thermal performance in building design

Reduce climate vulnerability in the local area



Prioritize water efficiency to reduce a project's contribution to the area's future water stress

Increase sequestration



Tree-planting

Land management sustainable grazing, cropping



Soil carbon measurement by hand in Senegal

How does EIA make “Rule 2” a reality?

2

Apply best development practices to environmental aspects of the activity

Technical soundness

EIA requires characterizing environmental conditions

Stakeholder commitment

Stakeholder consultation is central to EIA

Adaptive management

EIA requires a systematic approach to field monitoring

Rule 3 for achieving ESDM. . .

3

Be systematic

Take a **systematic look at:**

- the possible adverse environmental impacts of an activity
- ways to reduce these impacts.

The best way to be systematic:
**Environmental Impact
Assessment (EIA)!**



EIA: Best practice – and the law!

EIA: the internationally accepted process to achieve Environmentally Sound Design & Management

- **Systematic process to be prevention oriented & assure that environmental aspects of development best practices are applied**

AND

EIA is:

- **REQUIRED BY LAW** in most countries.
- **REQUIRED** by almost all donors.