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Mainstreaming Environmental Impact Principles into Monitoring and Evaluation

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- Why do we do M&E
- How to add in env principles

Mitigation and Monitoring

a critical part of environmentally sound design and management

- ✓ **Mitigation is the implementation of measures designed to reduce the undesirable effects of a proposed action on the environment**
- ✓ **Monitoring tells you if your mitigation measures are sufficient and effective**

Different mitigation measures act in different ways to reduce adverse impacts:

Mitigation Action	How it works	Examples
Prevent & Control	Prevent an impact by: <ul style="list-style-type: none">–Changing technique–Changing the site–Specifying operating practices	PREVENT contamination of wells, by SITING wells a minimum distance from latrines. Proper OPERATION & MAINTENANCE of new water point.

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Remediate	Repair or restore the environment after damage is done.	Re-grade and replant a borrow pit after construction is finished

Mitigation, Monitoring and Indicators



- **Environmental monitoring is a necessary component of mitigation and should be a part of project results reporting**
 - *Otherwise how do you know it's working?*



- **Indicators are chosen to**
 - **Measure the most serious impacts**
 - **Show whether mitigation measures are effective**

Life Cycle Analysis (LCA)



“Crucial to Critically Look Forward”

An interdisciplinary, objective process to evaluate the **environmental risks** associated with a product, process, or **activity** by identifying **energy** and **resources** used, **wastes** released, **damage** caused to the environment over the **life** of the activity

“Sustainability”

“Cradle-to-Grave”

Refléter les enjeux environnementaux dans les indicateurs

Health Care Facilities

- ❖ **Risk:**
Endanger the health of patients and the community with **improper waste management**

- ❖ **Indicators:**

- ☐ # hazardous medical supplies separated from regular waste
- ☐ Medical waste disposed safely? (Y/N)
- ☐ # health care workers trained in safe medical waste disposal

An unused incinerator. surrounded by medical waste



Separation of Hazardous from Regular Waste



Evaluation...

Activity: A clinic is training staff to properly dispose of medical waste.

1. Desk Study:

- Percentage of health staff trained?
- Is hazardous waste separated?
- Where is haz waste disposed or incinerated?
- Are inspections of waste disposal locations carried out?



2. Field Observation:

Waste is segregated at point A, but not incinerated at B.



Road Rehabilitation

❖ **Mitigation:** follow land contours, avoid $>10\%$ grades, side drainage to prevent flooding washout, no new roads for agricultural expansion without EA, engineering oversight

❖ **Indicators:**

- ☐ # maintenance committees operational each year
- ☐ % of road with year-round access at end of program
- ☐ # km of road under improved practices (erosion control)
- ☐ **NOT** (only) # km of road rehabilitated



Agroforesterie et plantation d'arbres

Quel est l'objectif ? Diversifier les revenus ? Réhabiliter les terres érodées ? Combattre la désertification ? S'approvisionner en bois de feu ?

❖ Indicateurs types :

- Nb d'arbres plantés
- Nb de pépinières établies

❖ Indicateurs amélioré:

- ☐ Nb d'ha de terres érodées en réhabilitation
- ☐ Nb de parcelles boisées créées
- ☐ % d'augmentation des revenus diversifiés de l'activité
 - Arbres fruitiers, de gomme arabique, de bois de feu

Mise en œuvre du projet type de gomme arabique en Afrique de l'Ouest.



***Acacia senegal,
semés près des
demi-lunes***

***❖ Les projets de l'USAID plantent ~ 10.000 arbres
de gomme arabique***

***Le projet se
finit -l'Acacia
disparaît***



Quels sont les enjeux de durabilité de l'environnement découlant de la distribution directe, FFE ?



Eau potable et bois de feu pour cuire les aliments

Qu'en est-il de la déforestation et de la production de charbon



**Combien de bois de feu¹
emploie un programme type
de FFP ?**

**~1 kg de bois de feu/personne/jour
x 70.000 bénéficiaires x 365 j**

~30.000 MT of bois de feu/an

**Améliorer les fours de
cuisson**



Sources d'énergie pour la préparation d'aliments

- ❖ La disponibilité locale de bois de feu est importante lors du choix du type d'aide alimentaire
 - ❖ Certains légumes cuisent plus longtemps que d'autres
- ❖ Amélioration des pratiques de cuisson (petits bouts de bois, isolation des fours à foin, pré-trempage) et des fourneaux (Greenfire)
- ❖ **Indicateurs :**
 - ❑ Quantité de combustible ou de temps épargné en améliorant les pratiques
 - ❑ Pas le Nb de fourneaux distribués (fourneaux refusés par les experts car non conformes)

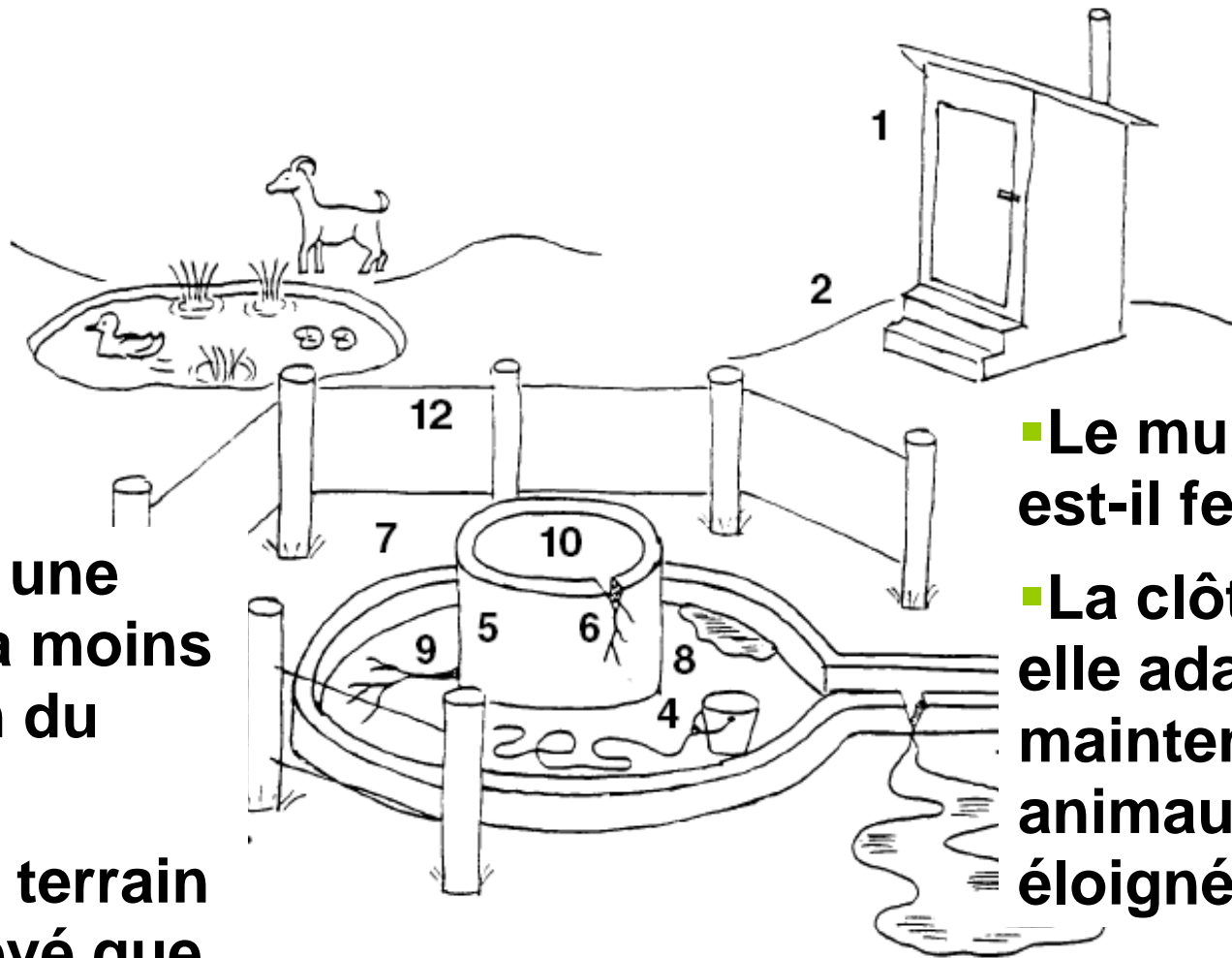
Approvisionnement en eau potable

Quel est le problème de cette intervention ?



Enquête sur les risques de contamination des puits

- Y a-t-il une latrine à moins de 30 m du puits ?
- Sur un terrain plus élevé que le puits ?



- Le mur d'amont est-il fendu ?
- La clôture est-elle adaptée pour maintenir les animaux éloignés ?

Qualité de l'eau pour puits à usage humain et animal

❖ Indicateur type

Nombre de puits de forage réhabilités

❖ Indicateur amélioré:

- ❑ % de ménages avec accès tout au long de l'année à des sources d'eau améliorées
- ❑ % de points d'eau établis propres après 3 mois
- ❑ % de sources d'eau sans coliforme fécal pour 100ml

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Hygiène

- ❖ **Indicateur type :**
Nb latrines construites
- ❖ **Indicateurs améliorés :**
 - ❑ Nb bénéficiaires satisfaits du fonctionnement de la latrine
 - ❑ Nb de latrines propres et employées après 1 an
 - ❑ Nb de latrines employées à la fin du programme



**Elimination non responsable
des déchets sanitaires**

Community Latrine





Standard Operation and Maintenance

Construction



Shock

Maintenance 1°



Post- Shock

Maintenance 2°



Relief Cleanup

Disaster Risk Reduction (DRR)

Construct

tenance 1^o

Maintenance 2^o

2008 Severe Flooding

Millions in Flood Affected Areas

3

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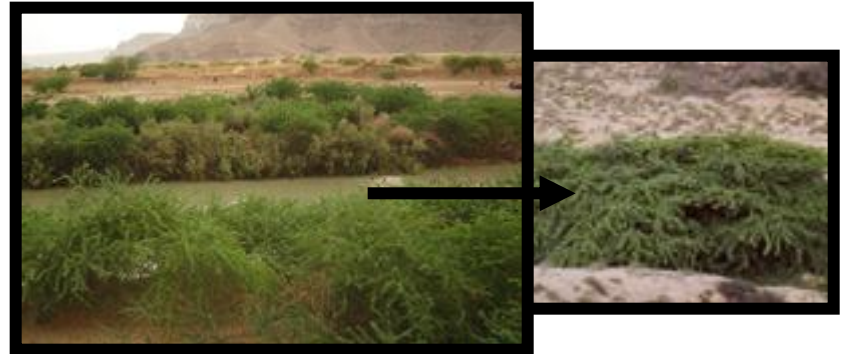
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Global Food Price Inflation

Global Climate Change: Adaptation

- Flood Risk Factor: Waterways compromised by several hundred tons of refuse in urban; Invasive species



- Disaster Risk Reduction (DRR): **Restoring channel volume** through the removal of refuse; Invasive shrubs
- Regional Planning level for **conflict over resources**
- Thus, **O&M affect the level of disaster impact**

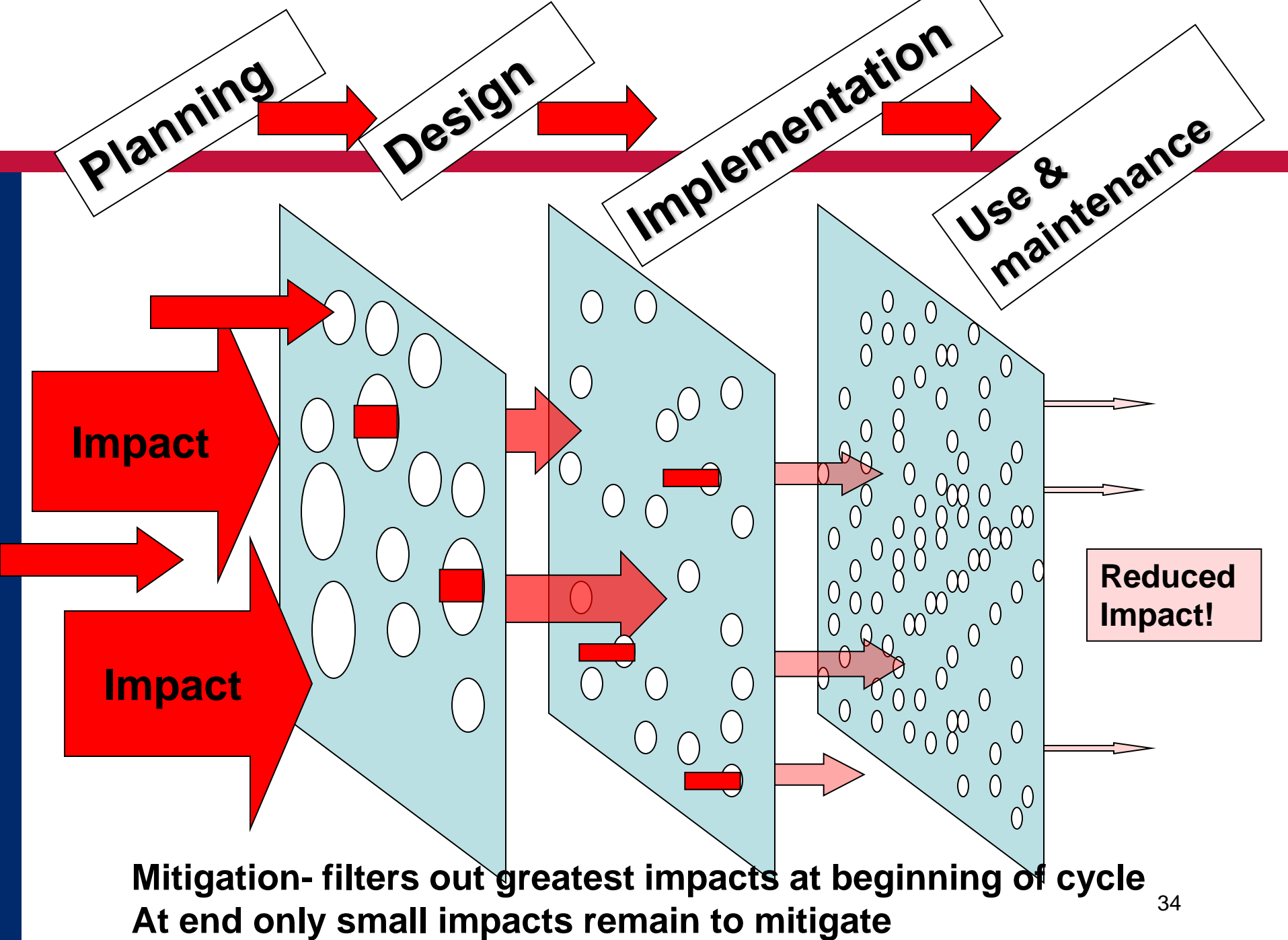


Comment faut-il le faire?

1. **Technical Quality:** Provide funding in budget plans for necessary involvement of technical experts (e.g., road engineer, AG/NRM specialist, Wat/San expert)
2. **Integration:** Add environmental sensitivities and indicators into project management (e.g., LQAS/LAYERs)
3. **Sustainability:**
 1. **Management:** M&E systems must measure management, not just the construction or distribution phase
 2. **Buy-In:** Ensure interventions meet community needs, not just funding mandates
 3. **Cost Recovery:** Encourage community access to finances

Do I mitigate EVERY impact?

NO, YOU MUST PRIORITIZE!





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Obstacles to Effective Environmental Management?

- **Inadequate Financial Resources**
- **Lack Technical Expertise**
- **Lack of Supervisor Support**
- **Higher Priority Demands on Staff Time**
- **Unpredictable Events (Disaster, Con Del Visit)**

Summing up

Mainstreaming Environmental issues into Program M&E is critical for Sustainability:



Prioritize



Life Cycle Analysis



Mainstream



Pourquoi inclure des enjeux environnementaux dans les systèmes de programme M&E ?

- Pour garantir une meilleure **efficacité** des investissements de la communauté et de l'USAID
 - *Des programmes bien conçus qui prennent en compte les risques environnementaux seront plus durables.*
- Pour **réduire l'impact** sur les maigres ressources de la communauté.
 - *Les communautés s'appuient beaucoup sur l'environnement pour leur santé et leur vie.*

Are there any Environmental Sustainability issues with Direct Distribution, FFE??



Clean Water and Fuelwood to Cook Food