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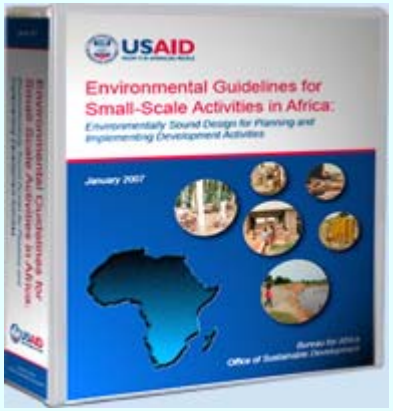
Practicing Core EIA Skills
&
Getting Acquainted with the *Small-Scale Guidelines*:
A Virtual Field Visit

USAID Staff Environmental Training
Pretoria ▪ 11–15 May 2009

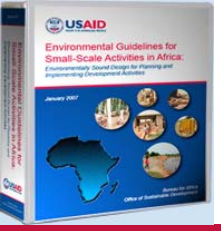
Key reference for this exercise: The *Small-Scale Guidelines*



Available at
www.encapafrica.org

Sector coverage:

- *Agriculture & Irrigation*
- *CBNRM*
- *Construction*
- *Ecotourism*
- *Energy Sources for Development*
- *Fisheries and Aquaculture*
- *Forest Management, Plantations & Agroforestry*
- *Healthcare Waste*
- *Housing*
- *Humanitarian Response & Disaster Assistance*
- *Livestock*
- *Micro & Small Enterprises (multiple sectors)*
- *Pest Management: IPM*
- *Pest Management: Safer Pesticide Use*
- *Rural Roads*
- *Small Health Facilities (in review draft)*
- *Schools (in review draft)*
- *Water Supply and Sanitation*



Organization

Chapter outline

Brief description of the sector

Potential environmental impacts of development programs in the sector and their causes

Guidelines for sector program design

Environmental mitigation and monitoring

Annotated resources and references

Key source of information for identifying potential env impacts. (In design phase, prior to a field visit, etc.)

In table format— designed for easy use

Link to extended resources via on-line bibliographies

!

Not a design manual. Focused specifically on ESDM.

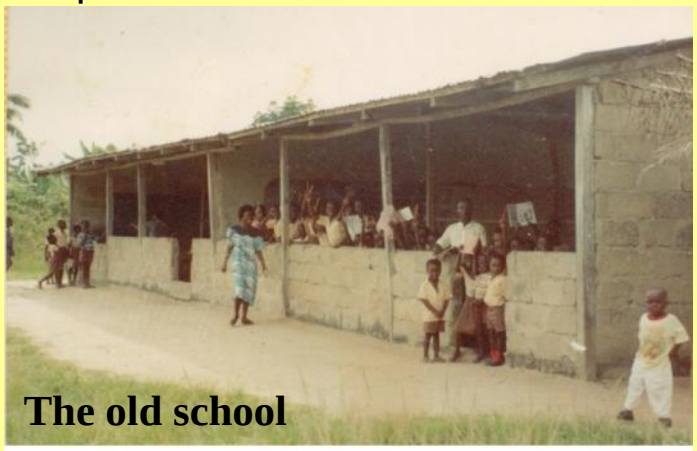
Experience in the technical aspects of project design is assumed.

Virtual Field Visit: Scenario & objectives

Scenario

A new primary school has been constructed in under-developed ABC town, replacing an inadequate previous structure

However, little attention was paid to environmental soundness & corrective measures may be required.



The old school

Objectives:

Identify environmental issues of concern

Propose corrective measures

☞ *Using the impact evaluation process presented in the last session*

☞ *With reference to the impacts and mitigation guidance in the* Small Scale Guidelines.

About the case

Environmental Context:
West African Humid Tropics

Based on real facilities in a real town, but a number of details changed for study purposes

Basic orientation:
West African Humid Tropics

- **Climate:**
  Annual min/max temp: 18C-38C. Avg humidity: 50-80%. 2 rainy seasons; rainfall 85-220 cm/year; intense storms possible.
- **Geography:**
  Usually gently rolling.
  Very low earthquake risk
- **Diseases:**
  Malaria and a wide variety of tropical diseases are serious threats to public health.
- **Culture**
  60% Christian/30% Muslim/10% traditional; traditional beliefs widely practiced. High linguistic and tribal diversity. Some groups matrilineal.

Part 1

DESK PREPARATION: WHAT DO WE NEED TO EXAMINE IN THE FIELD?

How can design and management of day schools be environmentally UNsound?

Adverse impacts OF the school ON the environment

Surface and groundwater contamination; spread of pathogens and disease vectors.

(from inadequate/poorly managed latrines, waste, drainage.)

Erosion

(from inadequate/poorly managed drainage)

Local deforestation

(from inadequate/poorly managed latrines, waste, drainage.)

Failure to design & site responsive to local environmental conditions

Too noisy→ poor learning

Poor thermal perfomance (too hot)→ poor learning

Too dusty → student illness, poor learning

High pathogen, disease vector concentrations→student illness

Structural failure (from foreseeable storm, pests, quake)→ tragedy

Failure to provide safe & adequate water supply

Poor learning, student illness

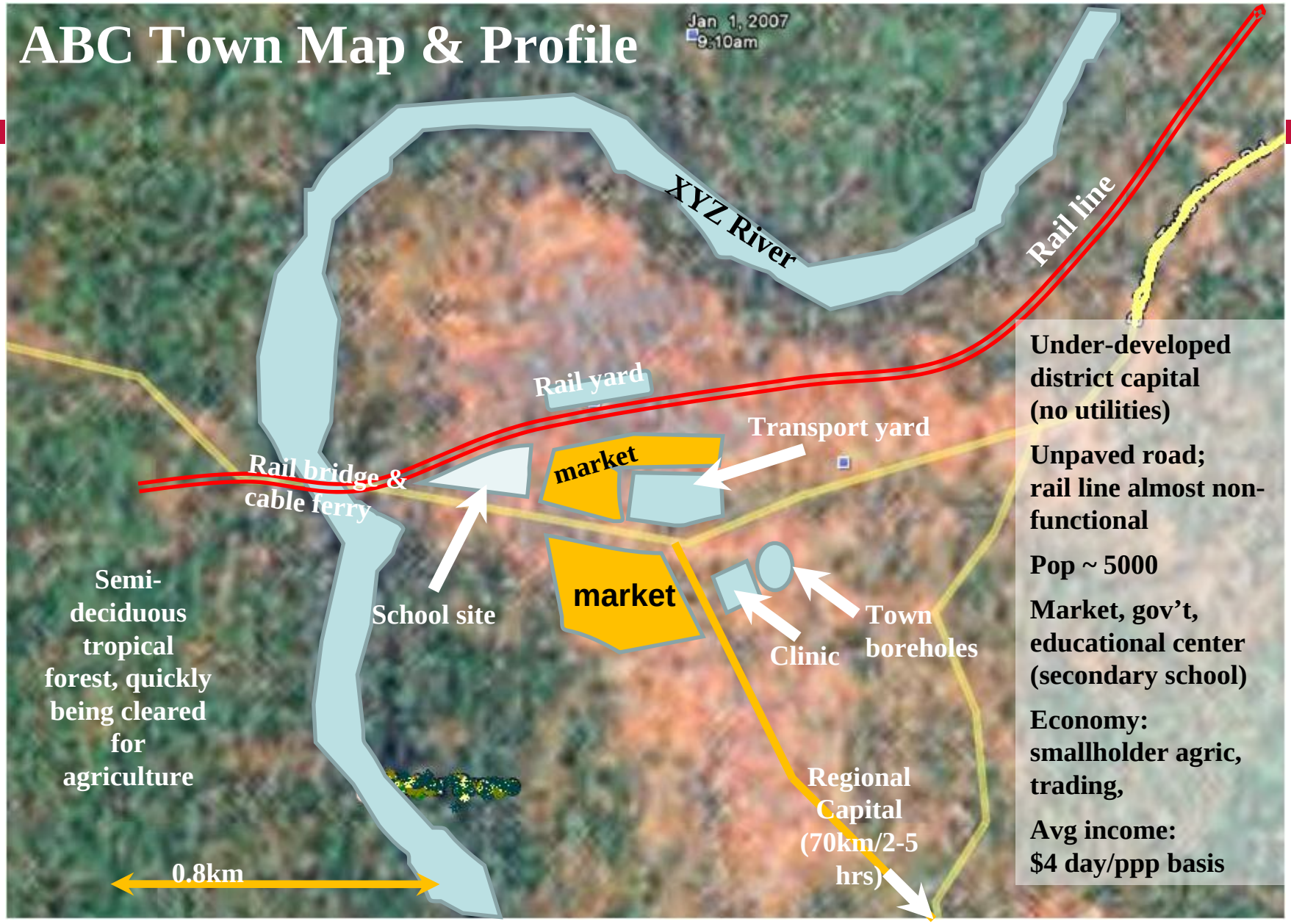
So what are the key aspects of the baseline situation to examine?

! **as the new school is already built, it has become part of the baseline. We need to include relevant elements of school design, siting, operations, etc.**

PART 2:

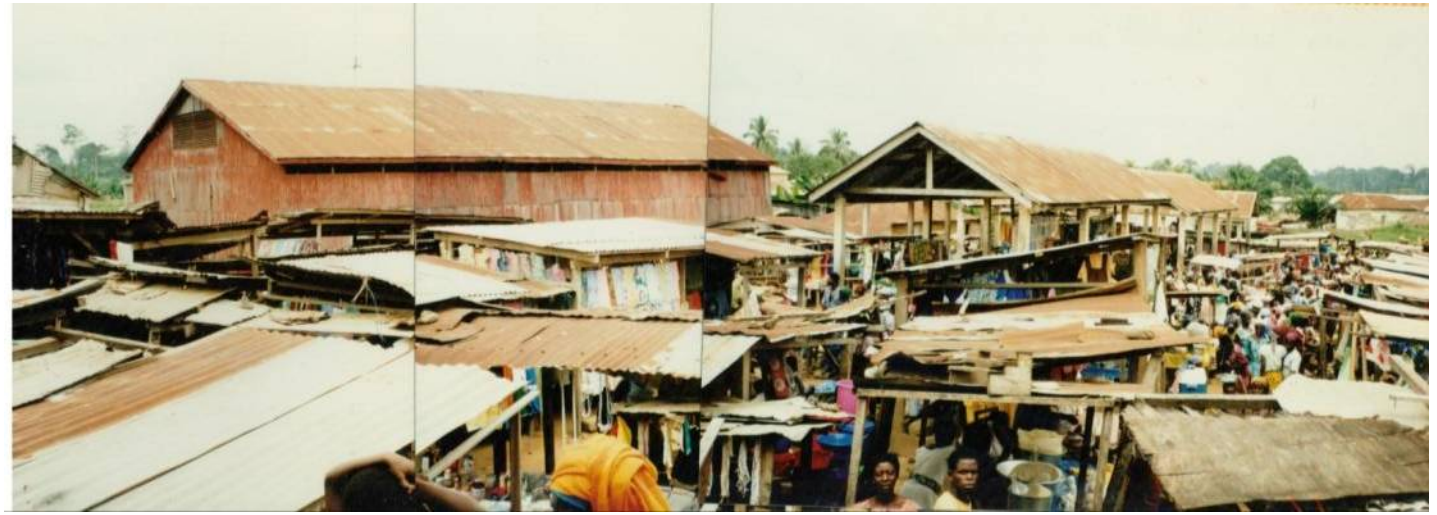
FIELD VISIT

ABC Town Map & Profile

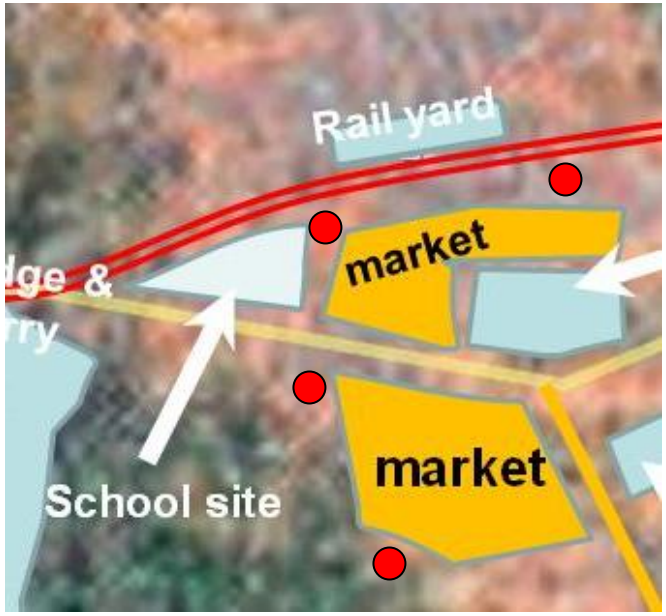


ABC is a significant market center

Retail and wholesale.
•Purchase point for agricultural goods being taken to the regional capital
•Distribution center for smaller rural traders



Sanitation is a problem

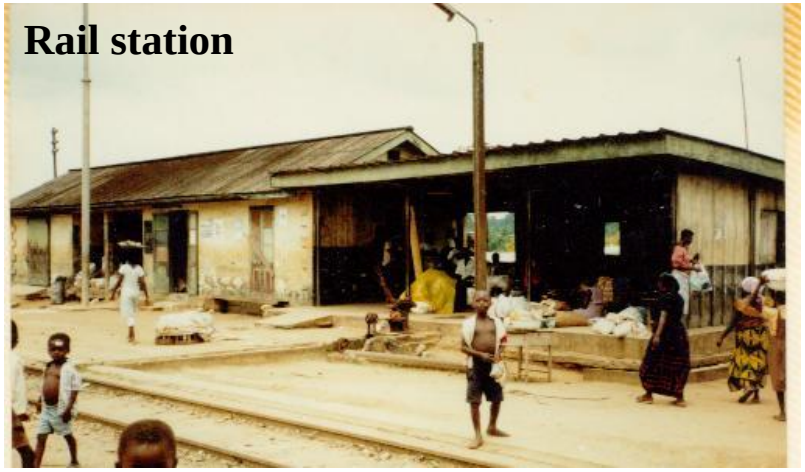


The market generates large amounts of waste, which is poorly managed. Observed waste piles (pictured) are noted on the map (red dots).

Public latrines are simple pit & too few. Some households have private latrines. A few of the wealthiest have bucket-flush toilets and septic tanks/soakaways.

4 Town boreholes are located centrally and are the only source of safe water. Most households use shallow wells.

ABC lies on a key transit route



Ferry crossing;
rail bridge at far left

Road is poor, but is a key conduit for agricultural goods.

Rail service is likewise poor, but supports transport of heavy/bulky goods (e.g. cement)

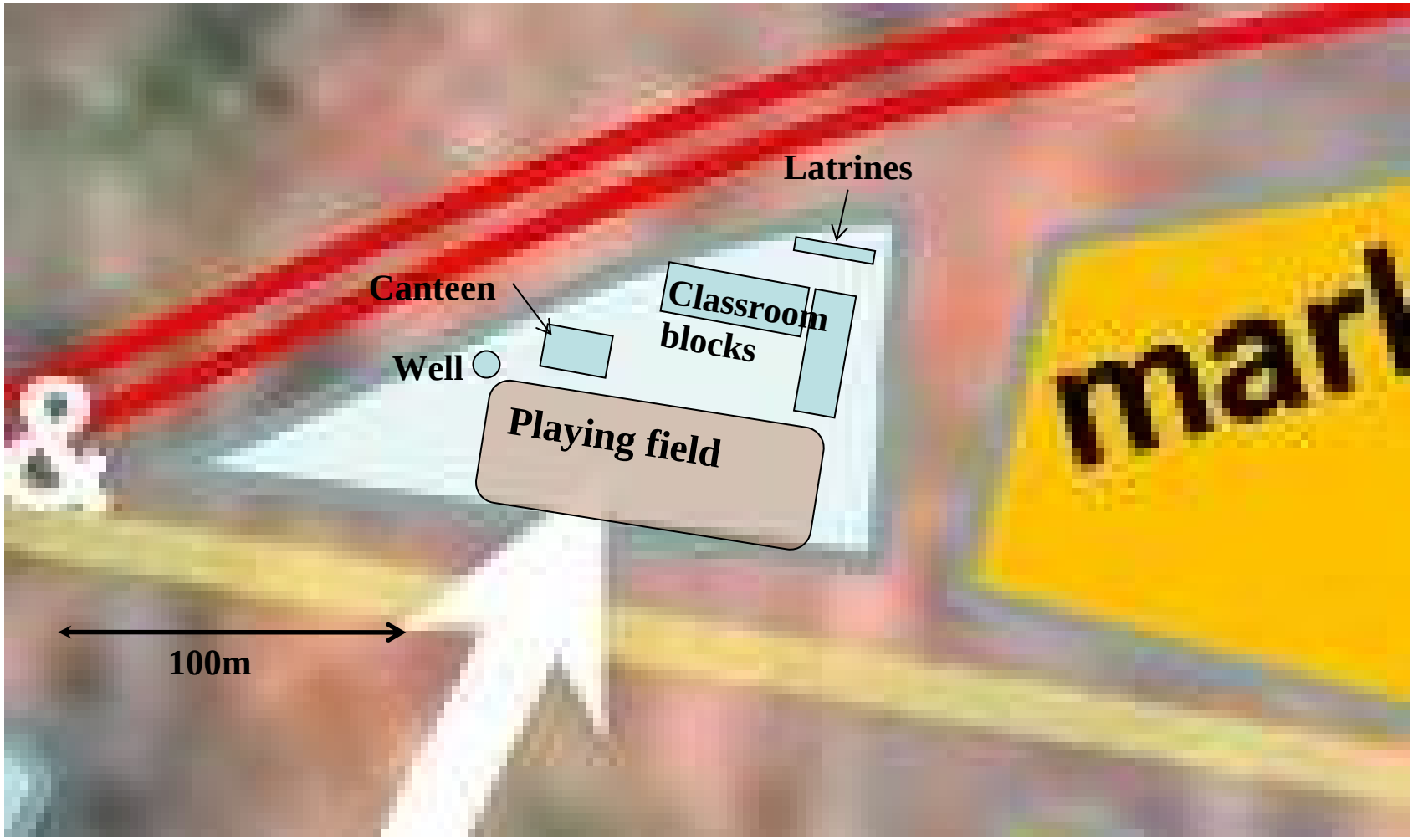
Significant deforestation

Area receives significant in-migration for agricultural land. Combined with commercial logging, forest is receding quickly. Local weather is changing; severe ground winds more frequent.

The new school

View from road, rail line lies behind

School site plan



School facilities

Canteen staff in the canteen.
(Note 3-stone fire at left.)

Unimproved latrine block.

School facilities

Detail of roof construction.

School well.
(shallow hand-dug; note cover and lock)

Part 3

BACK AT THE OFFICE

Back at the office. . .

- **Based on your field observations, characterize the most relevant elements of the baseline situation**
- **On this basis, decide which of the potential adverse impacts and other potential "ESDM failures" are real and present serious concerns.** •
- **Suggestion corrective measures (mitigation) to address these issues.**

- **Key reference:**
  Schools chapter of the *Small Scale Guidelines*