



# **Gender and Energy for Sustainable Development: Fueling the Fight Against Poverty**

**Susan McDade**

Manager

Sustainable Energy Programme

United Nations Development Programme



# **1. Gender and Energy Overview**

## **2. Multifunctional Platform Project**

- Concept**
- How it works**
- Impacts**
- Challenges**

## **3. Toolkit Policy Recommendations**



# Background Materials

**Generating Opportunities: Case Studies on Women and Energy**

**Gender and Energy for Sustainable Development: A Toolkit and Resource Guide**



# 1. Overview: Why Energy matters

- **Energy affects all dimensions of sustainable development**

## Economic

**Energy is essential engine for economic growth:**

- Commercial energy use is growing (about 1.7% in industrialised and 3.8% in developing countries)

## Environmental

**Current energy systems are polluting and unsustainable**

- 80% of total energy consumption comes from fossil fuels used in conventional ways
- Local and global impacts on environment

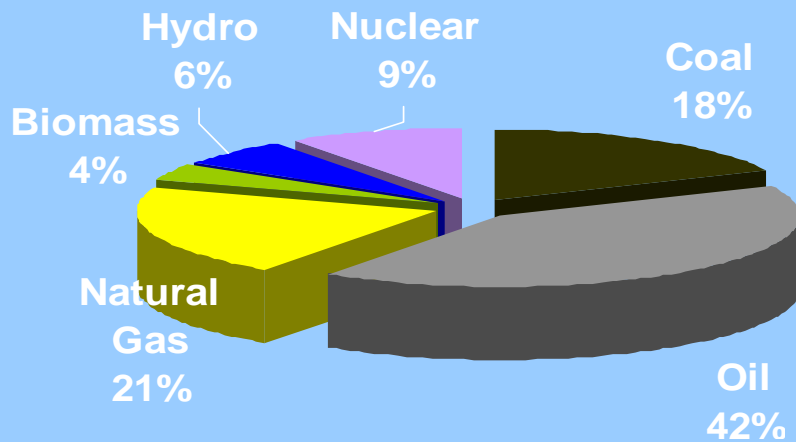
## Social

**High level of inequity in distribution of services**

- 2 billion without electricity
- 2 billion cook on traditional fuels
- Energy-linked poverty & drudgery women

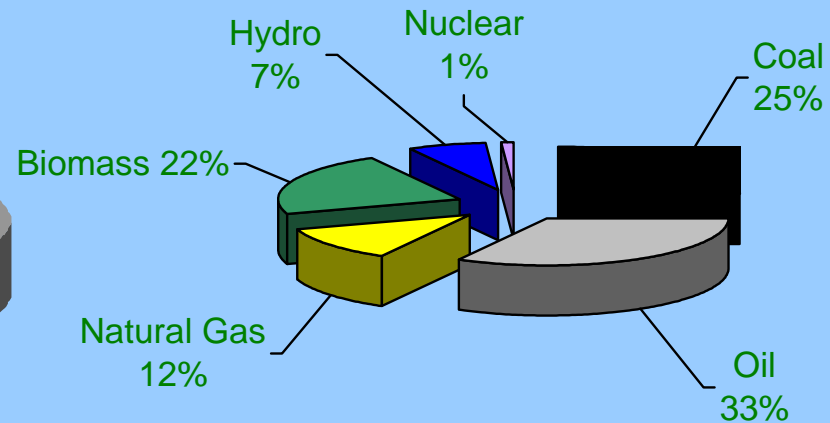
# Primary Energy Consumption

## Industrialized Countries



Population: 1.34 billion  
% of fossil fuels: 81%  
Energy =  $6,701 \times 10^6$  toe  
**5.0 toe/capita**

## Developing Countries



Population: 4.56 billion  
% of fossil fuels: 70%  
Energy =  $3,861 \times 10^6$  toe  
**0.85 toe/capita**



# Energy Services

From the point of view of the user the benefit produced by energy is what's important = **SERVICE**

Energy for illumination

Energy for cooking and heating

Energy for pumping and grinding

Energy for transport/communications

Energy for business development

# Two Distinct Energy Issues



- Electricity
  - Key for providing services such as lighting, access to communication tools (radio, phones, internet), mechanical power etc.
- Clean fuels
  - Household uses: heating and cooking services
  - Productive purposes: many uses and services
  - Social, environmental and economic benefits

# Fuels for Cooking

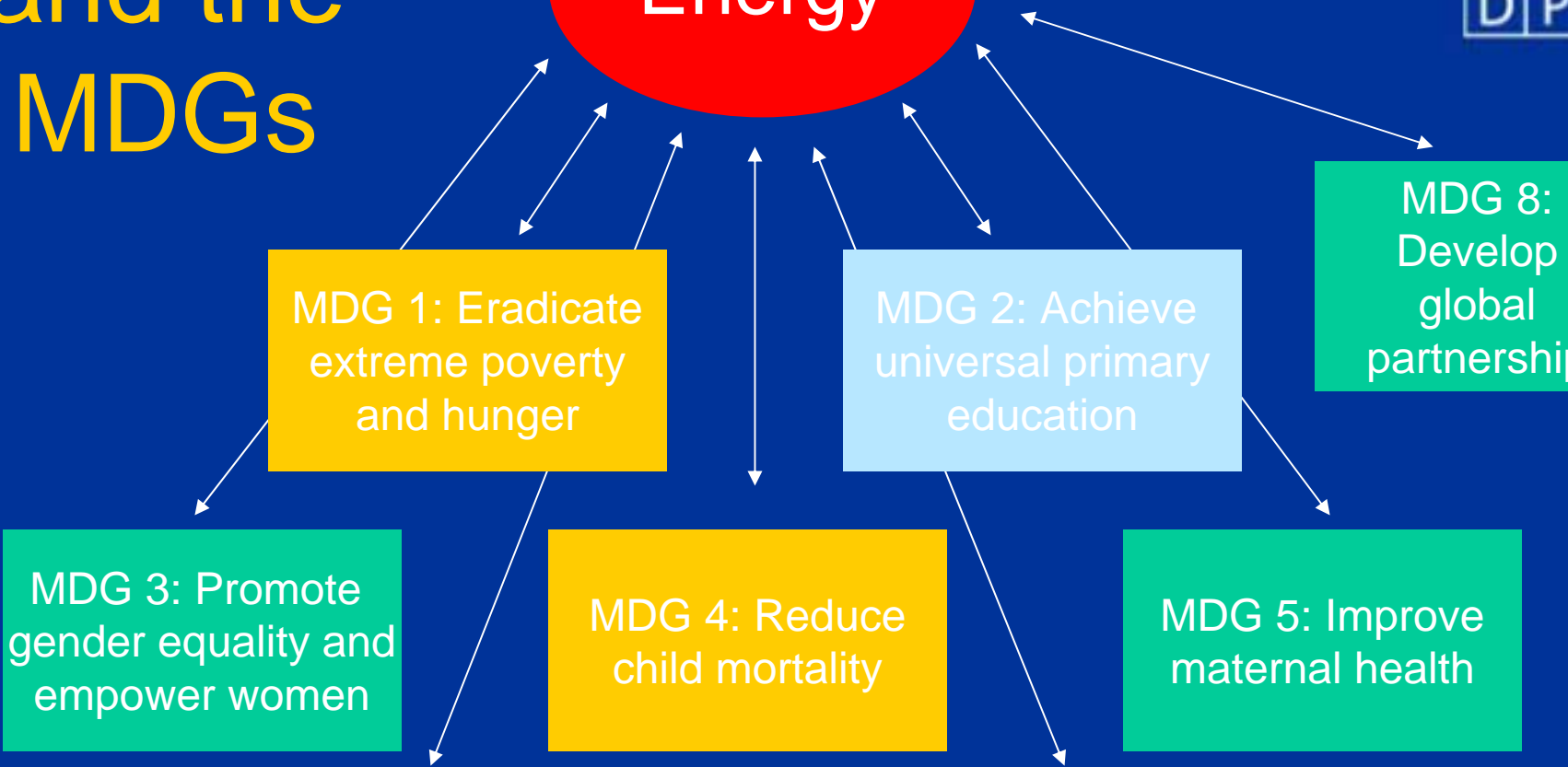
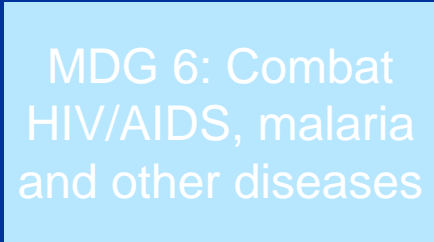
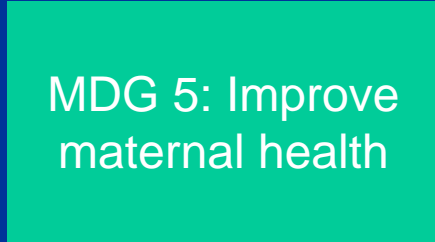
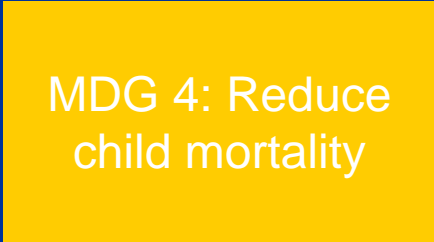
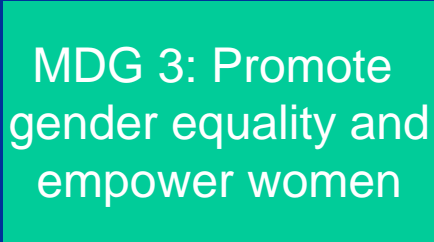
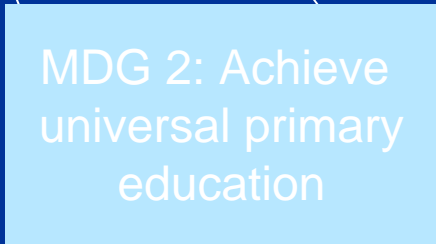
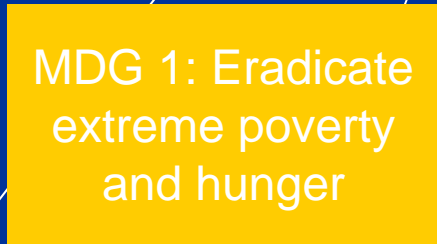


*Respiratory disease from cooking on traditional fuels kills over 1.6 million people annually, women in particular*





# Energy and the MDGs





# Gender and Energy

Energy is needed for development

All people need energy services

Women and men are impacted differently by lack of services

Women are responsible for the collection, transport and generation of traditional energy

# Rural Energy: Traditional Fuels



# Women and Energy



- Lack of access to energy affects women and girls disproportionately
  - Health: carrying tens of kilos of fuelwood over long distances; indoor air pollution
  - Literacy: girls are kept from school
  - Fertility: illiteracy increases family size
  - Safety: household fires, personal attack
  - Future economic participation of women  
(see *Generating Opportunities*, UNDP 2001)

# CONSIDERATIONS



**Availability of modern fuels and mechanical power are very important for women**

**Fuels: cooking, heating, boiling, agricultural processing**

**Mechanical power: water pumping, food grinding, agricultural processing**

**Labour saving devices**



## **Key Questions:**

- 1. Who uses energy (women/men)**
- 2. What energy do they use (source)**
- 3. What does it produce (service)**
- 4. How much does it cost**
- 5. How is it delivered**
- 6. What can people (men/women) pay**



## 2. Case Study

- **Mali Multi Function Platform**

# Multifunctional Platform Project



- Started in early 1990's in Mali
- To-date, about 400 platforms operational in Mali (~800 clients per month per platform)
- In 1999, a regional project commenced to cover Burkina Faso, Senegal, Guinea and Cote d'Ivoire





# The Context

A rural woman's working day in Africa is extremely arduous and this hectic schedule leaves her neither time nor energy for herself or her children. There is certainly no time left to develop any kind of profitable business activity.



**Lightening the arduous work of village women is therefore a priority in order to effectively reduce poverty.**

**Time saved can be devoted to education, health and child care, as well as to generating extra income to engage in these productive activities.**

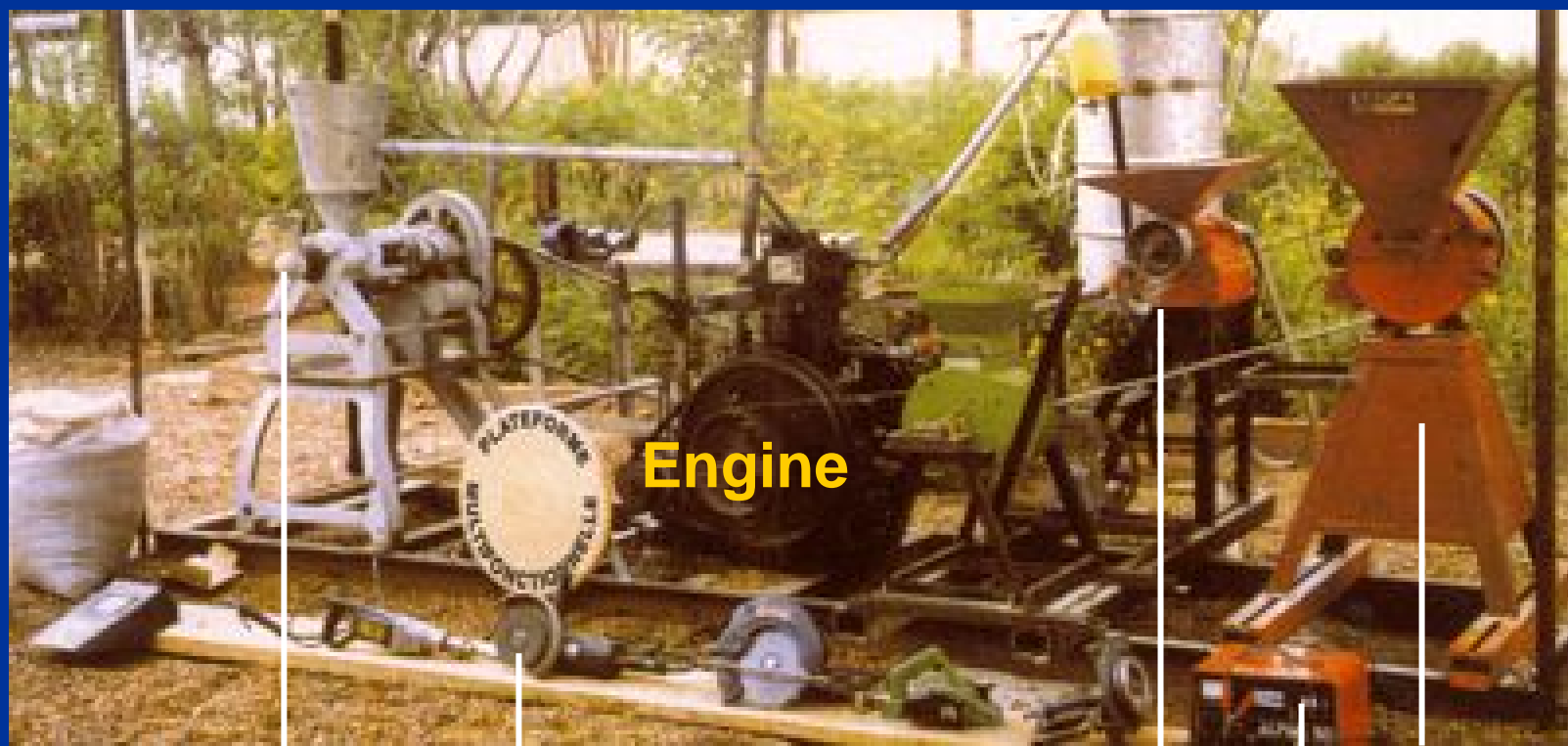
# The concept



The Multifunctional Platform:

- ✓ Provides reliable, affordable energy services
- ✓ Fee for Service
- ✓ Reduces women's/girls' workload
- ✓ Frees up women's/girls' time
- ✓ Creates opportunities for income generating activities.

The Multifunctional Platform supports a **simple diesel engine** that can power different tools : cereal grinding mills, de-huskers, oil presses, joinery and carpentry tools ...



Oil press

Saws...

Engine

De-husker

Battery charging

Grinding mill

The Multifunctional Platform also provides **water distribution** and **lighting**.



The advantages of the engine are its **simplicity**, **sturdiness** and **multiple uses** - a perfect example of appropriate technology.

# The Platform process at the community level



- Demand-driven: Women's group to request
- Participatory Pre-feasibility and Feasibility assessments
- Decision on specific configurations of a multifunctional platform that fits community's needs
- Establishing ownership and management mechanism by women
- Capacity building for women and operators of the multifunctional platform
- Business implementation using a multifunctional platform-based rural energy enterprise
- Local capacity building for private artisans
- Monitoring and Evaluation

# Participatory Feasibility Studies



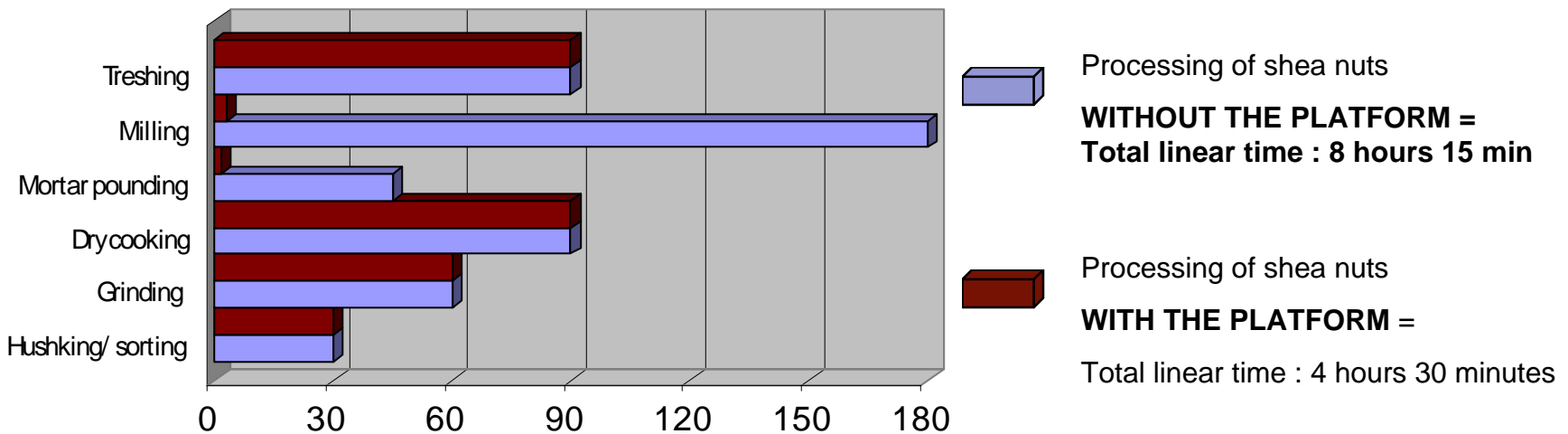
*The **Participatory Feasibility Study** helps each village define the components of its Platform on the basis of its priorities and its technical and financial capacities. It also helps the project identify specific baseline indicators (economic, technical and social) for each community. Results are then measured with a reference to those baseline **indicators**.*



# Results and Impacts



## Time saved



*The time saved in shea nuts crushing process is about 3 hours and 45 minutes.*



# Increase of income of MFP users through the increased production of agricultural products.

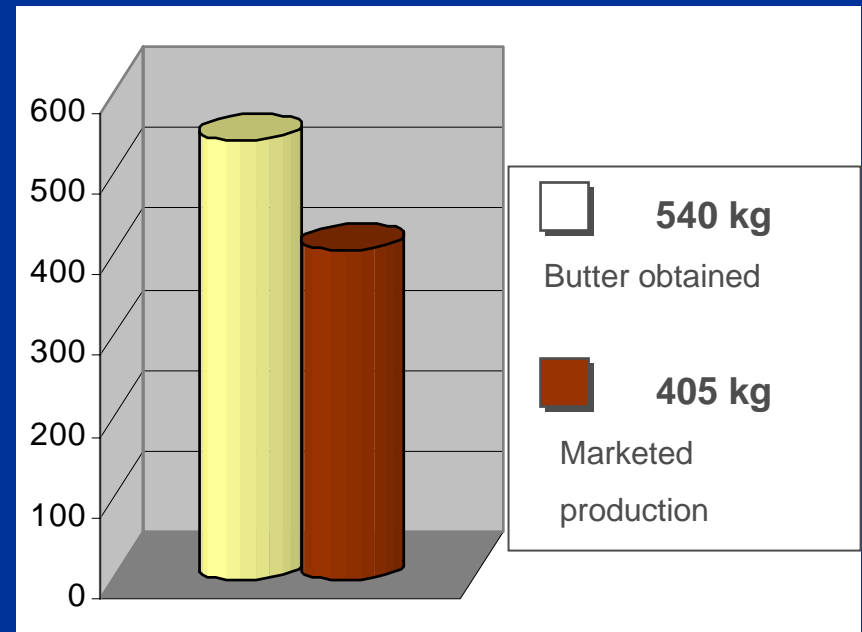
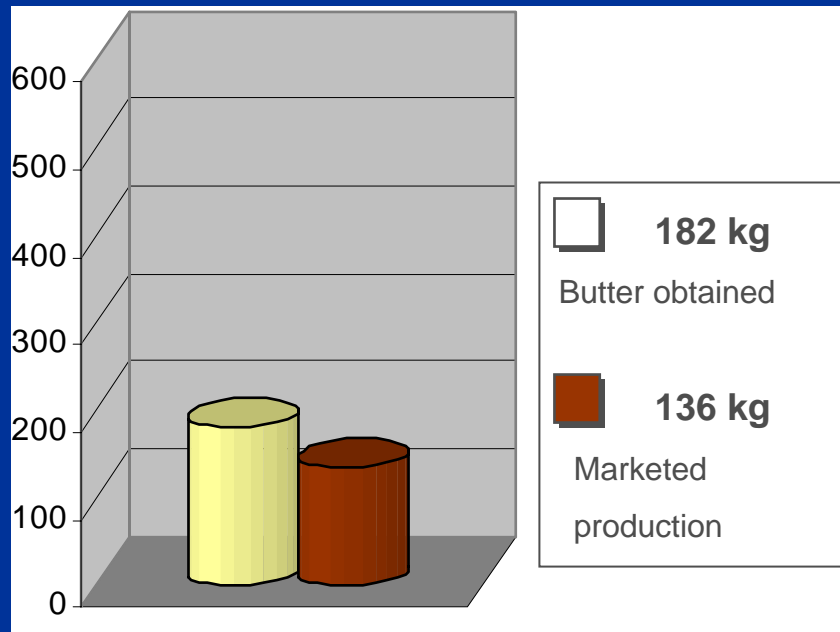


## SHEA BUTTER PRODUCTION

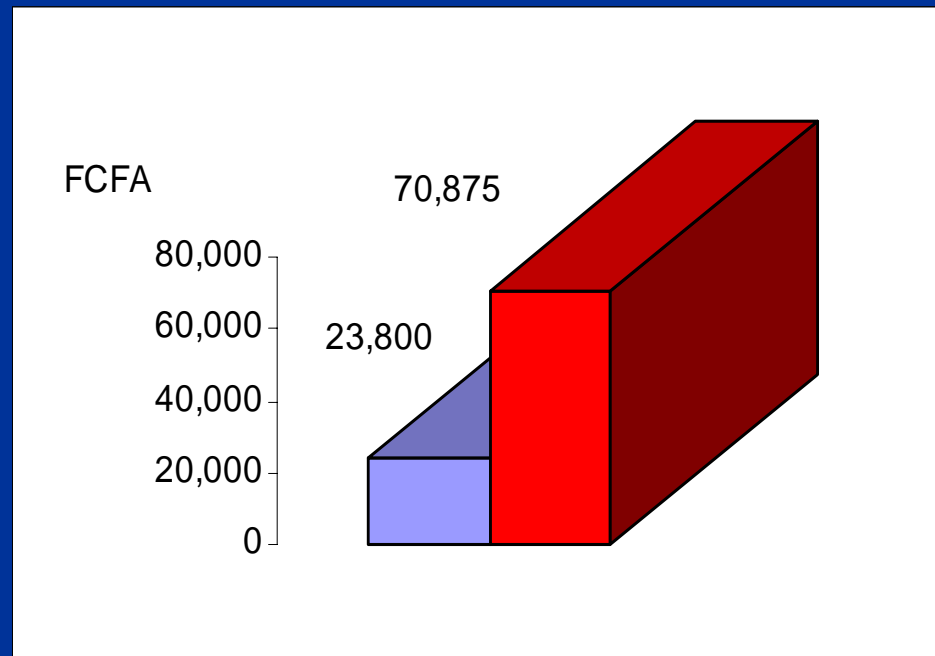
BEFORE installation of platform

-

AFTER installation of platform



# Annual income per woman from shea butter sales



**Before the Platform**

**23 800 Fcfa**



**After the Platform**

**70 875 Fcfa**

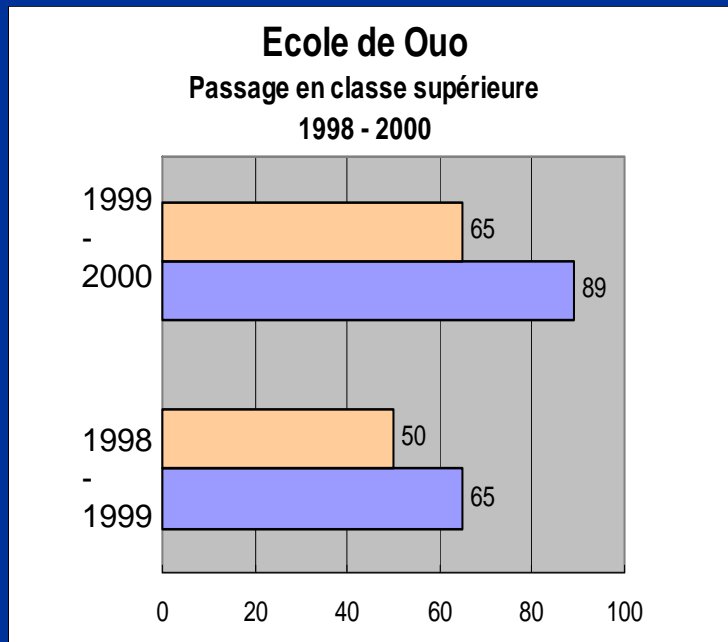
# Impact of the platform on girls' education

Girls handle domestic chores (cereals grinding) generally from age eight and even earlier for water carrying.

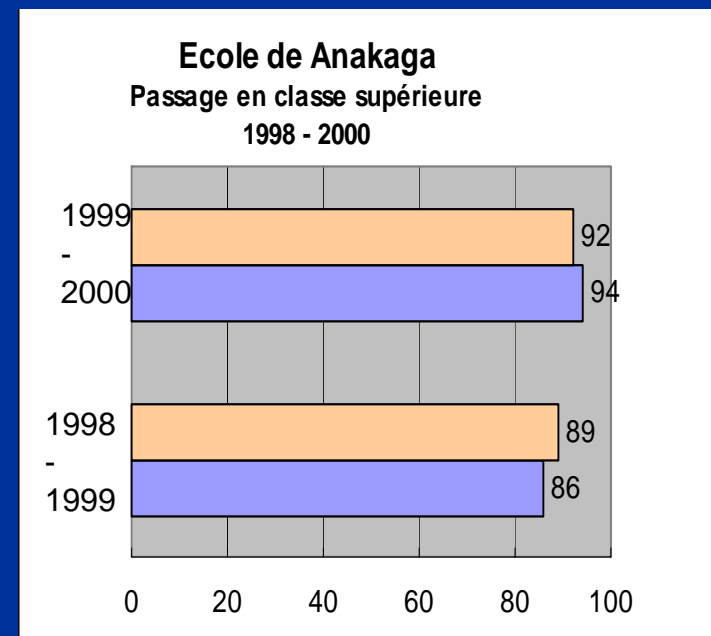


*In the two villages located in the same cultural and geographical area (Dogons, Mali), girls' school performances in the village of Anakaga with a platform are a lot better than that of the village of Ouou (without a platform).*

### Students scoring "pass" mark required for higher class (%)



**Without the Platform**

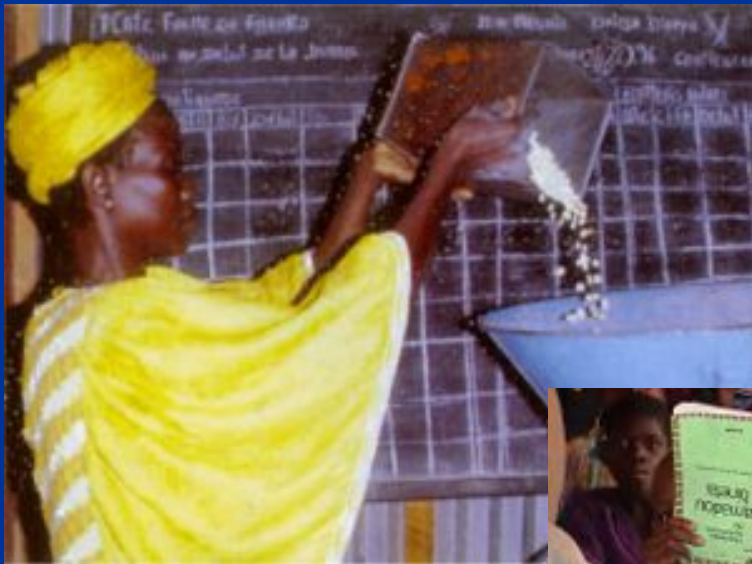


**With the Platform**





*Expanded  
economic  
opportunities*



*Better  
education*



*Empowerment*



# 3. Policies, Gender and Energy



Pro-women energy policies =  
policies that support energy  
services most used and  
needed by women

# Policies that address the energy needs of women



1. Policies to support electricity for illumination
  - Impacts educational attainment, literacy
  - Public safety and participation
  - Income generating opportunities

# Policies that address the energy needs of women



2. Policies to support availability of mechanical power and electricity for energy-using productive devices.
  - Decentralized rural power systems
  - Mechanical power for pumping and grinding
  - Non-farm productive employment



# Policies that address the energy needs of women



3. Policies to support the availability of cleaner fuels and enhanced markets to address the thermal energy needs of women related to:

cooking

heating

food processing

# Policies that address the energy needs of women



4. Policies to support technology development and dissemination in sectors and applications where women are most active.
  - Users needs and experience matters
  - More R&D needed
  - Pumps, kilns, presses, stoves....

# Policies that address the energy needs of women



5. Policies to support energy service financing and credit facilities to promote energy-using business opportunities.
  - Micro-credit
  - Collateral and legal issues
  - Targeted lending institutions

# Policies that address the energy needs of women



6. Policies to provide improved information on markets and consumer demand for energy products to assist women in becoming energy entrepreneurs.
  - Marketing and business training
  - Consumer and trade organizations
  - Information services

# Policies that address the energy needs of women



7. Policies to support gender equity in all economic sectors and the participation of women and women's groups in national and local policy formation processes
  - Gender consideration in policy setting
  - All sectors important
  - Organized groups matter

# Policies that address the energy needs of women



8. Policies to remove barriers to the full participation of women in economic, social and political life

- Legal status and personal documentation
- Ownership and inheritance rights
- Land tenure and property



## For more information:

Susan McDade, Manager, Sustainable Energy Programme  
BDP, UNDP, New York

Email: [susan.mcdade@undp.org](mailto:susan.mcdade@undp.org)

Sheila Oparaocha

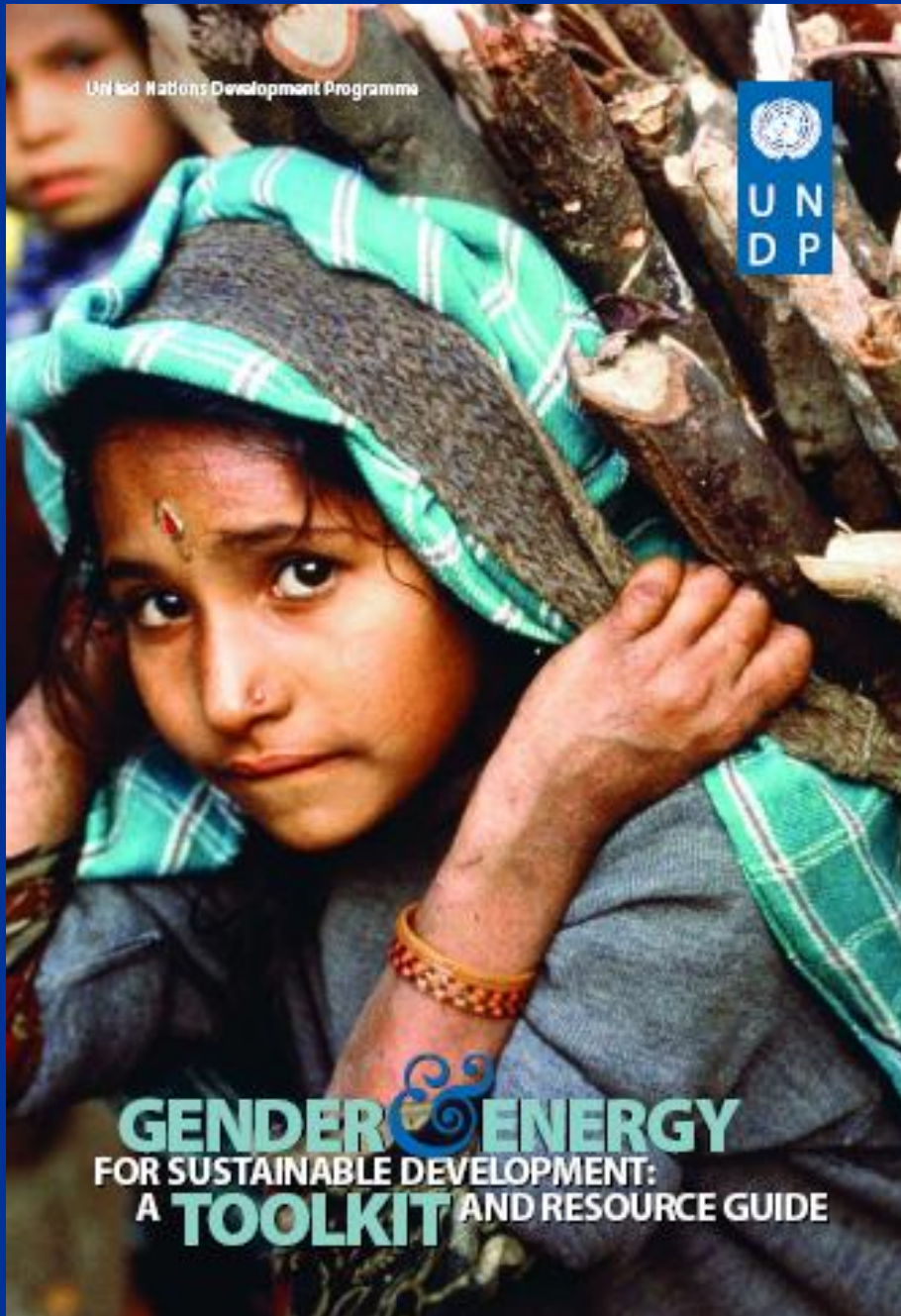
Coordinator, ENERGIA

Email: [s.oparaocha@etcnl.nl](mailto:s.oparaocha@etcnl.nl)

Laurent Coche, Coordinator, Regional Multifunctional Platform  
project

UNDP Mali

E-mail: [laurent.coche@ptfm.net](mailto:laurent.coche@ptfm.net)



Documents  
available

at

[www.undp.org/energy](http://www.undp.org/energy)



# This matters

