



**Sustainable development in
northern Burkina Faso**

**"Improving the efficiency
and profitability of
women's ceramic
production"**

A Development Workshop programme



Development Workshop has been working in Burkina Faso, through a locally-staffed permanent office, since 1995. Over 2500 women potters are enrolled in our fuel-efficient ceramics programme. DW does not have enough resources to assist them all. We need your help.

Why work with women potters?

DW projects in Burkina Faso provide women potters with 'closed' kilns, built using only locally available adobe bricks by DW-trained builders. These highly fuel-efficient kilns replace the extremely inefficient firing methods traditionally used by women in the centre and north of Burkina Faso: the traditional method involves firing pottery in shallow, open pits piled with wood and dung. Most of the heat generated is simply lost in the open air and the lack of any temperature control results in a high proportion of very poor quality products, often unsellable.

The closed kilns introduced by DW greatly improve the efficiency of this popular and important women's income generation activity:

- **Saving energy:** the volume of fuel used (dead wood, branches, dung) per kilo of sellable product is reduced by 80 %.
- **Reducing breakages:** compared with 40% loss with traditional firing, breakages are virtually eliminated.
- **More and better products:** the kilns enable a wider range of high added value products such as terra cotta floor tiles and fuel efficient cooking stoves; these command better prices and open up new markets.
- **Charcoal, a valuable by-product** – about 75 kg of charcoal are recuperated after each firing providing additional income, typically enough to cover the initial cost of the fuel for firing.



Fuel efficient kilns mean increased income for women, better labour efficiency, and a big saving in the consumption of scarce organic matter. One of the most popular products is a ceramic fuel efficient cooking stove, available in four sizes and this in turn saves wood. DW helps women potters market their products, and encourages them to work in State registered Economic Interest Groups which helps them manage their activity and revenues.

What are the benefits of closed kilns?

- Vastly increased efficiency, a genuine income and work in organised groups leads to **female emancipation and independence in an increasingly stressed social and economic environment**.
- Reduced energy consumption contributes to climate change adaptation by conserving available bio resources;
- The products meet local demand - the woman in Mané village, near Kaya, for example report that their improved cooking stoves are their best selling product.
- Female potters earn income from this non-agricultural activity which they can integrate perfectly into their daily routines.

Who builds/who trains/who produces/who buys what?

- **The kilns** are built by local builders trained by DW in « woodless construction » techniques, using hand moulded, sun dried mud bricks to build a vaulted firing chamber¹. No tree cutting; no non-local cement, steel or machines.
- **The training of women potters (in how to use the kiln and how to launch new products)** is provided by other experienced women potters, specially trained by DW.
- **Production and selling** is done by the women themselves, working in groups either informally or increasingly organised in Economic Interest Groups.
- **Combustible materials** (dead wood, cereal stalks, cow dung) are collected by the women potters.
- **Demand for kiln-produced products** commanding higher prices and for the wider range of products available is both local and regional (floor tiles for example are typically ordered for larger quality buildings further afield).
- **Demand for closed kilns is high** : 2500 women want to benefit from kilns so far; they make a formal request for a kiln to DW, they initiate and "own" their project – DW will only respond to such requests.
- **Partnership**: DW works with its long term local partner, Development Workshop Burkina Faso, to execute practical activities, and with the local Commune authorities who provide support (in the form of a site for example). Women potters sit on the Commune's steering committee.

DW needs help to meet the demand for more kilns to be built and more training to be provided to women's groups in Burkina Faso.

¹As part of a separate EU-funded programme, DW trains builders from villages and towns in the north of Burkina Faso to build without wood, using vaults and domes built with handmade mud bricks. This work was awarded a World Habitat Award in 1998. See www.dwf.org.

Costs for one kiln

Building one kiln	£550
Training 10 women, (who then train other group members)	£570
Providing an improved ceramics kit	£550
Total	£1 670

Cost for a programme for 7 kilns, including operational costs

Women's contribution	£1 330	3%
Programme operational costs	£16 850	44%
Direct installation costs	£19 840	52%
Total required	£38 020	

Why Burkina Faso?

Burkina Faso is one of the world's poorest countries², rated 181 out of 187 countries on the HDI³, with few natural resources. Over 40% of the population lives on less than £100 a year⁴ and in the north of the country poverty affects up to 69% of the population, reflecting the bad state of the environment. This project concerns women living in the North and Centre regions of the country, with 477,000 people of whom at least 51% are women.

The economy in these regions is 80% based on agriculture, and highly exposed to climatic variations. Diversification of the economic base is essential in a context where women have few options. Pottery has been one of these, but sadly using traditional methods of production, this generates little or no revenue. Most activities outside the family compound involve agriculture and livestock, collecting firewood and gathering edible plants. In the absence of other non-agricultural income, many women are forced to turn to temporary activities such as high risk panning for gold that harms health and well-being.

Ceramics – a non-agricultural activity

Earthenware ceramic production using traditional methods is one of the few non agricultural activities which can be perfectly integrated into the daily routine of women in the family concession. Women produce pots for storing food and water, small bowls and traditional tubular gutters. There are female potters working in nearly every village in the north of Burkina Faso.

Firing in shallow open pits results in a considerable loss of heat and waste of energy during the firing process. A gust of wind is all it takes to raise the temperature and spoil the pots. An analysis of traditional ceramic production shows that it generates little profit, a fact that women rarely appreciate. Moreover, the women complain that collecting cow dung for fuel creates conflict with farmers, who use dung to fertilize the very barren soil.



A kiln : the key

A very significant improvement in the range and quality of ceramic products is obtained thanks to the 'closed' kilns. DW not only builds the kiln, but also provides potters' wheels and moulds for producing floor tiles, gutters, and fuel efficient cooking stoves. This wider range of products then sells both locally and regionally, including in the capital.

The kiln typically measures 4 x 3 metres, and the firing chamber is large enough to take 500 - 1,000 kilos of products, depending on the nature of the products. A *canari* (round jar) which used to sell for the equivalent of £1 now fetches £1.50 thanks to its higher quality. The money the kilns bring in helps send children to school and feed the

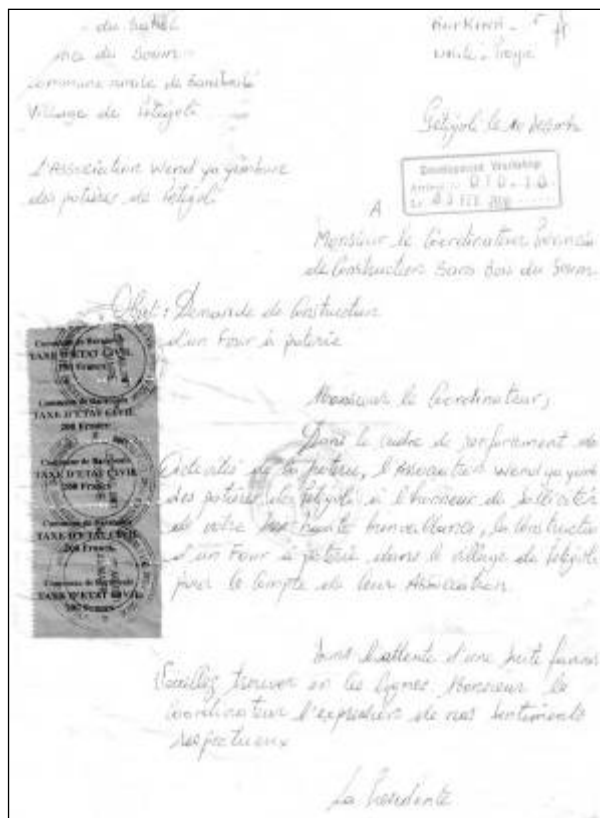
² Burkina Faso – European Community. Country strategy and national indicative programme document for the period 2008-2013.

³ Human Development Index; World Report on Human Development 2005.

⁴ Burkina Faso: La Pauvreté en 2003, report published by the National statistical and demographic institute (INSD), Ministry of Economy and Development, Burkina Faso.

family. Each firing generates on average £100 and each kiln is usually shared between three or four women's groups, with each group numbering about 25 members. Thus for each kiln, an estimated 100 women benefit directly, and 1,000 family members are secondary beneficiaries.

A request for a kiln



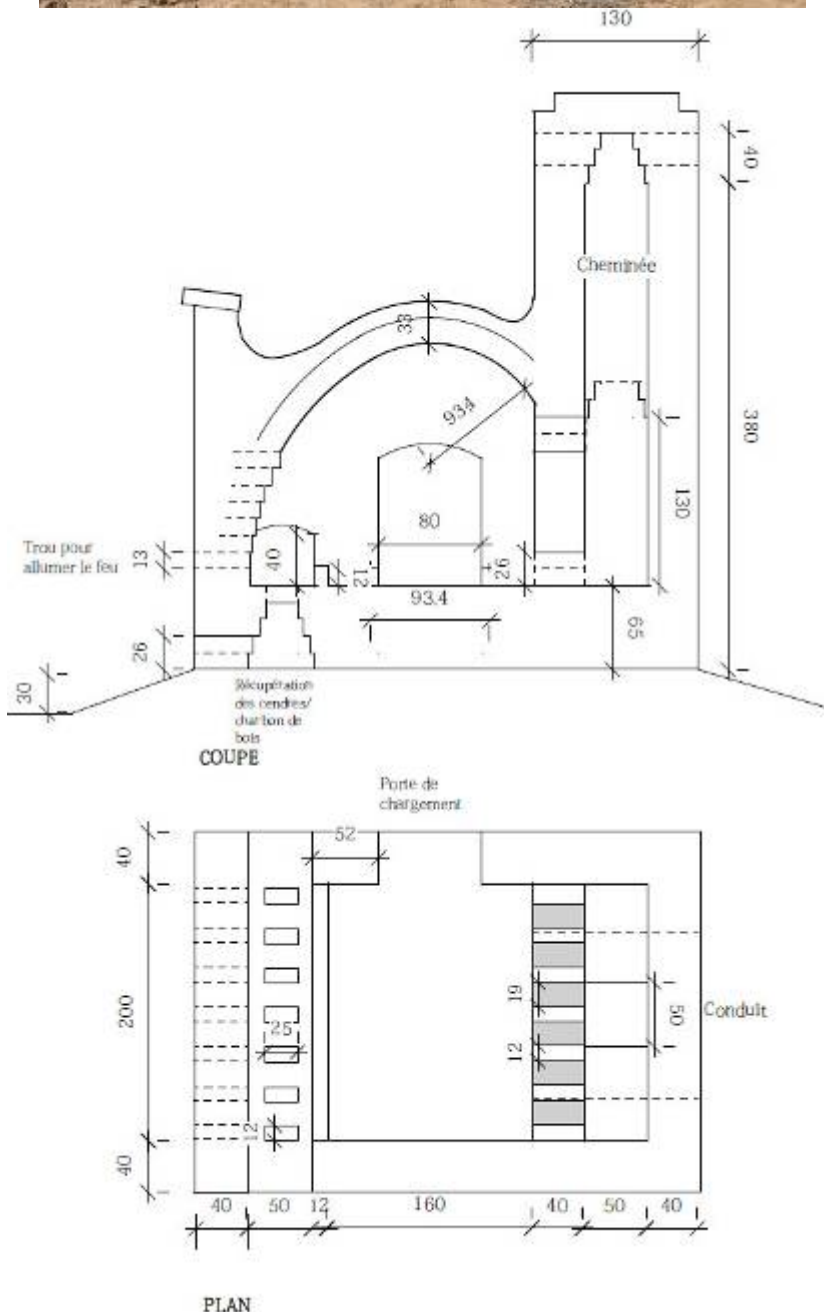
Women take pride in personalizing and decorating their kiln



What is needed in terms of equipment, training, sub-contracting, recruitment?

The project requires:

- For each kiln: 5,000 mud bricks in two sizes : larger mud bricks for the walls and plinth (38*24*12 cm) and smaller bricks (20*15*6 cm) for the roof; earth and water for the mortar ; two or four “woodless construction” builders and unskilled labourers. The women help make the bricks and provide 2 earthenware gutters (kiln-fired!) for each kiln.
- Builders tools (trowels, plumb line and nails, ruler, shovel, picks, planks for scaffolding, water barrels) and carts to be drawn by donkeys.
- Training female potters in the development of new ceramic skills: improving existing products and introducing new products, including floor tiles and open gutters ; improved cooking stoves that save wood, and various other products such as egg hatcheries, and chicken feeding containers. The trainees are given moulds for tiles and gutters, and a potter's wheel. They are taught how to load and fire the kiln.
- Training in setting up Economic Interest Groups to help organise firings, manage joint funds and share sales and marketing strategies.
- Training female trainers who are selected from within members of existing groups, ensuring the local sustainability of the skills they have acquired.



Examples of equipment, products and firing the kiln



Tiles provide a new and high added-value product, attracting larger orders from further afield which balance local demand for domestic ware. Each trainee receives the simple, robust kit shown here.



Making a floor tile ready for firing using the kit

Loading the kiln (ceramic gutters at front)



And the finished products ready for sale (one firing, no losses...)



Development Workshop

Aim

To assist the prevention or relief of poverty in socially and economically disadvantaged communities anywhere in the world.

DW's underlying principles

DW recognises that rapid change is a major factor affecting the living conditions of poor and underprivileged communities. DW strives to strengthen local capacity to meet needs and to confront increasing difficulties in achieving decent and durable living conditions. Our actions are defined by and with the target population. We take as our starting point local skills and indigenous practices, to which are added strategic approaches and actions which are both innovative and suited to the contemporary context. These actions are based on adapting and developing individual and collective skills and rely on local organisational, institutional, social and financial structures to achieve and maintain a built environment which is suited to today's needs and potential. DW pays particular attention to the role of women central to these actions, and supports the development of opportunities amongst the young. DW believes in decentralising responsibility for the implementation of its projects, which encourages capitalisation and leads to a local, durable operational capacity.

DW projects have achieved international recognition. To date, DW is the only organisation to have received two World Habitat Awards, including one for our work in West Africa.⁵

DW's general activities

DW strives to reduce the vulnerability of populations facing the impact of both natural and man-made disasters. These include the consequences of the degradation of the environment in which we live, notably desertification (e.g. in the Sahel region over the last 30 years), and the risks relating to cyclones, flooding and earthquakes (e.g. in Vietnam, Indonesia, Myanmar-Burma, Iran and Haiti). Locally recruited and trained teams address the causes and the consequences of poverty, aiming to improve the sources of income of the poorest. DW strengthens collaboration between local authorities and civil society to meet the development needs and aspirations of communities, by trusting in the skills of the inhabitants and using the local and durable resources which are available *in situ*. This approach enables vulnerable communities to become involved as genuine stakeholders in their own development.

In Burkina Faso, DW focuses on the management of the environment and on combating poverty and desertification. Specifically key aspects include -

- promoting "woodless construction" (sun-dried earth bricks made without presses, without cement and used without supporting formwork);
- supporting female potters;
- strengthening the links between local authorities and civil society;
- helping the recovery of flood victims.

Our main programme currently in Burkina Faso concerns 7 provinces and targets the populations of secondary towns and villages in the north and centre north of the country. This follows on from similar work in Mali, in Niger and in Mauritania over the past 30 years.

DW assures an ongoing monitoring process.

DW accounts are subject to an annual external audit.

Contact person: John Norton at john.norton@dwf.org

Development Workshop UK
5 Graces Mews, Camberwell, London SE5 8LF, UK
tel : 0778 841 8684 (D. Allen); +0033 56395 8234 (C. Norton)

e-mail : dwuk@dwf.org • web : <http://www.dwf.org/>

UK Charity registration n° 1149152



2008: Prevent typhoon damage to housing, Vietnam
1998 : Woodless Construction / Construction Sans Bois au Burkina Faso, Mali, Niger



2009 : UNISDR Sasakawa Award for Disaster Reduction Certificate of Distinction

2010 UN & BSHF 'Housing & Urban Development South South Transfer' Special Mention

⁵ The World Habitat awards are distributed annually at the United Nations World Habitat Day. DW received this award in 1998 for "Woodless Construction in Niger, Burkina Faso and Mali" and in 2008 for the "Prevention of cyclone damage to housing in Vietnam". Other awards include a United Nations "South-South transfer award Special Mention" (2010); the UN Sasakawa Award for risk reduction (UNISDR 2009); and inclusion in Dubai/UN "Good Practice" for Woodless Construction, amongst others.