

This network is for people working on self-help settlements projects in Africa. More than just self-help building, this also means other kinds of community and individual self-help, including education, health, nutrition, skills training, employment projects, community organizing and so on.

## Dear Network Member

With this issue of the newsletter we are celebrating SINA's tenth anniversary. It is a longer-than-usual newsletter, with a special Tenth Anniversary section starting on page 5, containing a feature article by Barry Pinsky, one of the network's founders. Barry traces the origins of the network idea, the growth, highlights and achievements of SINA's first ten years and where it is headed. His article also provides a useful reference to SINA's various meetings and publications.

The anniversary issue also contains the usual columns that have been started over the years in response to members needs, such as HIC News, Evictions Update and the Women and Shelter Network. Some have a special focus on SINA's anniversary. For example, News From Members has additional space to look at the changes over ten years as perceived by some founding and early members. And the feature on Woodless Construction on page 13 is submitted by Development Workshop (DW), one of the organizations that helped found SINA at the 1981 Lusaka Workshop. John Norton's article shows how DW's patient work at grassroots level in the Sahel has built up a new local building industry over the decade.

Thanks to all of you who have contributed to this issue in one way or another, by answering the questionnaire we sent out, by sending in articles and news, but most of all for the work you do on self-help at the community level, which is beginning to make a difference in people's lives.

Diana Lee-Smith  
Editor

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## News from SINA Members

### Kenya

David Kithakye, one of the first people to join SINA in 1982, now works as a Task Manager, Municipal Development Programme (MDP) for sub-Saharan Africa, East and Southern Region. The MDP was started after a 1989 workshop for local government practitioners and experts whose theme was "Strengthening Local Government in sub-Saharan Africa". The main objective of the MDP is to build local government capacity. It gives advice to institutions and people working in municipal management or in the training of municipal employees. The programme has started a newsletter *Local Government Perspectives*, which is distributed free of charge. Address: Local Government Perspectives, PO Box UA 400, Union Avenue, Harare, Zimbabwe.

**Appropriate Technologies for Enterprise Creation (APPROTEC), PO Box 10973 Nairobi.** "We are a new Kenyan NGO concerned with designing, developing and promoting appropriate technologies in Kenya and other African countries. We focus on technologies with potential for income generation and believe that assisting small enterprises is the most effective way to promote self-sustaining development. APPROTEC was started after the closure of the Appropriate Technology Unit of Action-Aid Kenya.

"Appropriate technologies help local people to establish and run new small businesses and to expand existing urban and rural enterprises. They use and process locally available resources, produce goods and services which meet locally felt needs, create local employment and help to expand

local economies. Our main activities include:

- Training machinery manufacturers, new entrepreneurs, artisans and end users to manufacture and/or use new appropriate technologies.
- Advocacy and promotion of proven new technologies among entrepreneurs, government officials, NGOs and the public.
- Research, design and development of technologies with potential for small enterprise creation.
- Consultancy services for other NGOs and agencies.

We are involved in the following areas:

- Low-cost building materials production.
- Low-cost construction techniques.
- Animal traction and agricultural implements.
- Low-cost water supply and sanitation technologies.

# Woodless Construction in Niger and Mali: Meeting shelter needs and environmental concerns

*This article was sent to SINA by John Norton of Development Workshop (DW). It is an appropriate contribution to SINA's tenth anniversary because DW also participated in the Lusaka Workshop in 1981, and the article shows how a decade of painstaking work at community level leads to change. The Woodless Construction Program has won the UNCHS Habitat Scroll of Honour Award for 1992.*

The introduction by Development Workshop (DW) of Nubian vaults and domes to Niger came as a result of the recognition by several international organizations that over-consumption of wood for building was leading to depletion of timber reserves and thus enhancing desertification. Scarcity of wood, branches and even grasses has in turn made domestic building increasingly difficult and costly for the people, who in some instances can no longer find the materials they need. In other cases they have been obliged to use species of wood with very poor durability, which have to be replaced more frequently, thus speeding up the rate of overall timber consumption.

## Building and training

DW was invited in 1980 by a small Canadian NGO, ISAID, to demonstrate the vault and dome techniques in Chikal, Niger. Following this, DW's associate Peter Tunley continued to build with the same techniques, initially for ISAID and other organizations, in the area of Filingue, north east of Niamey, and then subsequently in the Air Tenere area in northern Niger on behalf of the IUCN/WWF programme for the conservation and management of natural resources.

Progress started with the construction of their project offices, and continued over the

next five years with the construction of a large number of houses and public facilities. Using the basic techniques of vaults and domes built with unstabilized earth blocks, a very diverse range of building types evolved through a collaboration with local masons and through an imperative need to find building solutions which could really meet local needs and affordability. The construction provided excellent opportunities for training on buildings sites, and strengthened the development of builders skills. Training programmes for masons were started in 1988, bringing masons from as far afield as Tchad and Mali, as well as from other parts of Niger. The techniques began to spread throughout the region, and some masons now face a greater demand than they can meet.

With on-going technical assistance being provided by DW, training has now become a key activity, with a number of masons now working as trainers, and instances of the techniques already being passed on to a younger generation in masons' families in both the Agadez and Filingue regions.

## Using local resources and building skills

The woodless construction programme is based on building with unstabilized earth blocks. No presses, cement or lime are

used, and where possible the bonding patterns of block laying are now adapted to suit the local traditional block sizes to make production easier. The basic elements are vault and dome roofs built without shuttering, and masonry arches. But in practice there are numerous variations in these elements, permitting a wide variety of built forms, and importantly, allowing masons to develop their own distinctive styles.

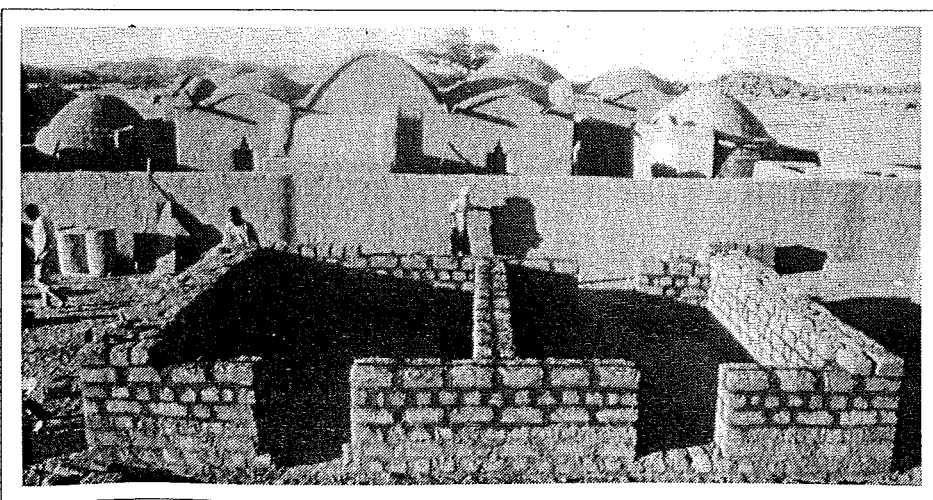
In the 12 years the techniques have been used in Niger, there has been considerable refinement in the methods of building, to increase both strength and safety, and to assure better protection from water. The building process has also become easier to learn and use.

## Spontaneous construction

By 1990 several hundred buildings were complete, of which 25% had been built for private clients, including villas and several government buildings. But more significantly, over 20% were already the spontaneous construction by local masons using these techniques to meet their own building needs and those of their families and neighbors - including mosques as well as houses, kitchens and stores.

The amount of spontaneous construction is constantly increasing. Where the techniques are now known, village builders are convinced of their usefulness in redressing what they see as a problem of obtaining good durable wood, and so too are the organizations concerned with the conservation and management of natural resources. In Mali and Niger, the ministries concerned with the environment are beginning to give their active support. Each building saves about 0.5 cubic meters of wood per square meter of construction, and of this, for a building of 30m<sup>2</sup>, on average 14 tree trunks are saved: all of which adds up to increased chances of trees being saved and regenerated.

From the user's point of view, the vault and dome roofs are proving durable, and eliminate the need to replace timber in the roofs.



*Domed and vaulted construction needs no wood to make the roof. Here the techniques introduced by DW are used to build a modern office that needs no artificial cooling, in Iférouane, Niger.*

Costs are either the same or lower than those for building with good timber roofs. The woodless construction techniques almost completely eliminate the need to bring in non-local materials for the basic structure of a building. It is in effect the ease of access to materials and the use of increasingly locally understood techniques which contribute to the techniques' growing popularity and sustainability. Indeed, in the Sahel, for many families there are few other options than to use those resources available locally, and in some case the woodless construction techniques have enabled families to build houses with almost no financial cost at all.

### Adapting to local needs

Any project should go through changes during its life - and in the case of the Woodless Construction Programme, time has been in its favour and a factor in its emerging success. Twelve years of constant technical assistance in the field along side local masons has allowed the techniques to be improved and changed to suit varying local conditions, and has encouraged the masons to take pride in their work and maintain a high standard in their buildings.

Time has also enabled small structures to be built in new regions which can then be observed during one or more rainy seasons to monitor their response and to identify

improvements that need to be made, and to give time for the population to develop confidence in the techniques. The result has been that, whilst there are parts of the Sahel where these techniques are not suited, the performance of buildings over several years show that woodless construction is possible and durable in much of the region, and that it is a viable contribution to meeting building needs and conserving resources in a sustainable manner.

Further information, a range of publications and a video cassette on woodless construction are available from: **Development Workshop, B.P. 13, 82110 Lauzerte, France.**

## Women and Shelter Network

### Initiative Center Meeting in Kenya

A small half-day meeting was held at Mazingira Institute on July 1, 1992, to identify directions for work in the HIC Women and Shelter Network in Kenya. It was attended by Mercy Chiuri of NCKK, the Initiative Center for Kenya, Nancy Gachoka of St. John's Community Center, Lydia Anjiah, Diana Lee-Smith and Wandia Seaforth of Mazingira Institute, the Reference Center for English-speaking Africa.

The meeting started off with the participants watching two videos depicting women's housing situations and strategies in several Asian countries; from the Asia Coalition for Housing Rights (ACHR) and Society for the Promotion of Area Resource Center (SPARC) in India. Then Mercy and Nancy talked about their work and how the WAS network could be useful to them, by sharing experiences with others.

The NCKK and the St. John's Community Center are involved in urban improvement programs and both Mercy and Nancy work in low-income neighborhoods characterized by high unemployment, prostitution and teenage motherhood. (Nancy's program is described in SINA 27). One of her current projects in the slums of Nairobi involves 40 households, of which 33 are female-headed.

It was decided that two types of meetings should be held as soon as possible:

- Meetings of officers in the organizations that participated in the meeting (NCKK and

St. John's Community Center), to discuss women and shelter issues, so that these are better understood and integrated in the organizations' work.

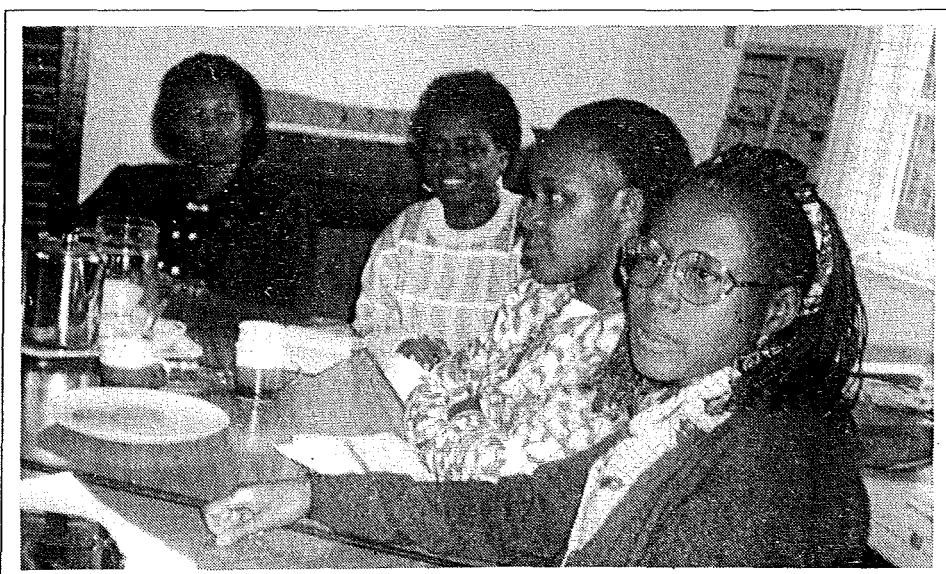
- Community meetings in the neighborhoods to discuss the shelter problems facing the residents, the majority of whom are women, and to create awareness on women and shelter issues. Nancy has already had a very successful community seminar on AIDS.

It was agreed that the two videos from Asia were good tools for gender sensitization. Nancy and Mercy proposed to screen them

during their meetings, although language translation is a problem in the communities they work with. Mercy felt that it would be a good idea to hold a gender sensitization meeting for higher level personnel in many NGOs.

The WAS secretariat will provide resource people as well as the videos for all these meetings which are expected to start around October, 1992.

For more information contact: **Mercy Chiuri, UCIP, NCKK, PO Box 45009, Nairobi, Kenya.**



*Mercy Chiuri, Lydia Anjiah, Nancy Gachoka and Wandia Seaforth at the Kenya Initiative Center Meeting.*