



**Getting light**  
from solar flashlights



**Cooking without fuel**  
with a solar cooker



**Providing fresh water**  
from fog and rain with  
meshwork



**Reducing fuel** by cooking  
with fuel efficient cookers



**Improving sanitation**  
with dry toilets



**Producing electricity**  
in off-grid regions  
with small hydropower stations

*»Sometimes it needs only a few things and some knowledge to improve living conditions for many people in developing countries.*

*We want to create a platform where you can find knowledge about simple and efficient technologies – as open source.«*

*Rolf Schwermer*

## Project Description Information and Communication Platform „tecbase.org“

Development of a public accessible web based information and communication platform for simple and effective technologies:

- Sanitation
- Shelter
- Water
- Energy
- Food
- Mobility
- Communication

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## Name: tecbase.org

Since April 2010 a preliminary website exists at [www.tecbase.org](http://www.tecbase.org).

The screenshot shows the homepage of tecbase.org. At the top, the logo 'tecbase.org' is followed by the tagline 'simple + efficient technologies' and 'open source'. On the left, a vertical navigation menu includes links for 'tecbase.org - Start', 'Why - the Idea', 'What - Materials', 'What for - Topics', 'Communicate!', 'Links', and 'Contact'. The main content area features six project tiles, each with an image and a title: 'Getting light from solar flashlights', 'Cooking without fuel with a solar cooker', 'Providing fresh water from fog and rain with meshwork', 'Improving sanitation with dry toilets', 'Reducing fuel by cooking with fuel efficient cookers', and 'Producing electricity in off-grid regions with small hydropower stations'. A quote by Rolf Schwermer is displayed on the right side. At the bottom, there is a call to action: 'Do you want to know more about these simple and efficient technologies?' followed by a language selection prompt 'To read more choose a language:' and buttons for 'Deutsch', 'Espanol', and 'Francais'.

Figure 1: Homepage of the preliminary website tecbase.org

## Aims of „tecbase.org“

**Spreading adapted technical solutions:** „tecbase.org“ will provide information about simple and effective technologies, which are especially adapted to the living conditions of poor communities in developing and in newly industrializing countries; technologies, which are prototyped for these conditions or which are already tried and tested.

**Providing public access to technical informationen:** Different forms of technical information about simple and effective technologies, for example operation manuals, process descriptions et cetera, will be provided as open source, public accessible. The technical information will be published under a suitable legal copyright concept like Creative Commons.

## Contents of „tecbase.org“

Technical information provided on „tecbase.org“ will relate to **various technical products and processes**, for example:

- Biogas digester
  - Food drying methods
  - Fuel efficient cookers
  - Small hydropower stations
  - Small wind generators
  - Solar cookers
  - Solar lamps
  - Dry toilettes
  - Water extraction methods
  - Water disinfection methods
  - Water filter
  - Water pumps
- etc.

Technical information will be prepared on demand and provided **in different forms**:

- Process Descriptions
- Construction Manuals
- Assembly Manuals
- Operation Manuals
- Technical Background Information
- Data Sheets / Fact Sheets
- Technical Information for public use (eg. info panes)

Technical information will be translated on demand **in several languages**. For that reason, technical information shall be designed easy to translate, so that they can be translated with as little effort.

## Audience of „tecbase.org“

Users of the information and communication platform will be the following target groups:

- Staff members of nongovernmental organizations (NGO) in industrialized countries and in developing countries (like the fictitious use case person Alex Bongani, see page 7)
- Staff members of self organized groups / support groups in industrialized countries and in developing countries
- Staff members of cooperatives / small enterprises in industrialized countries and in developing countries, which produce and distribute simple and effective technique products
- Staff members of communities and governmental organizations in industrialized countries and in developing countries
- People who are generally interested in „low tec“ / adapted technologies

## Specification of „tecbase.org“

### Information items of „tecbase.org“

- **Technical information units – for example process descriptions and different kinds of manuals – will be presented**
  - as printable document (PDF)
  - as well as web based topics (HTML).

Reasons: The technical information units will be provided via world wide web. Additionally the information units have to get printed on paper so that they can be used in regions without internet connection.

- **The technical information units normally consist of precise and concise text and graphics.** Graphics preferably will be black and white photographs and line graphics which both can easily be printed.

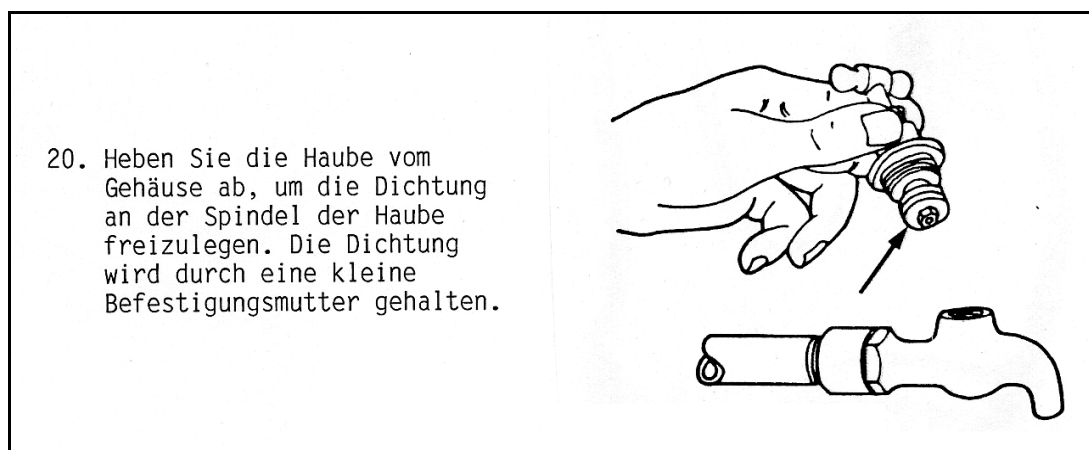


Figure 2: Example for a text-picture-combination; source: training material for water tap repair

Reasons: The design of the information units have to be as simple as possible, so that they can be used also in regions with low band internet access. The units should always and easily be printed and copied.

- **The technical information units will be provided in several languages – on demand.**

Reasons: People should be able to read and use the tecbase.org technical information units in their own language. For that reason the units should be easy to translate.

- **There will be provided a manual and style sheets for creating information units in „tecbase.org-style“.**

#### **Communicative Elements of „tecbase.org“**

- Users of „tecbase.org“ will get offered various possibilities for communication:
  - **Registration as user** of „tecbase.org“
  - **Management of the own user profile:** User can edit different views and rights for their own user profile data (for example like [www.xing.com](http://www.xing.com))
  - **Possibility to post in a forum** related to the information units / topics
  - **Possibility to generate and to publish own information units** (user generated content)

Alex Bongani, NGO staff member

## Use Case for „tecbase.org“: Alex Bongani, NGO staff member

A so called use case demonstrates most vividly and concretely possible using situations of the information and communication platform to illustrate and clarify the conception and design of „tecbase.org“.

### A fictitious persona: Alex Bongani



Alex Bongani (32, civil engineer, Dutch) is a project manager of a European NGO (Non Governmental Organization). Alex' NGO is a nonprofit organization which collects donations, especially in Germany and in the Netherlands, to implement school building projects in Southern Africa (in Namibia, Zambia, Botswana, Mozambique and in rural areas of the Republic of South Africa).

### What Alex Bongani needs

From his participation in several projects Alex Bongani knows very well that a sustainable development process is not done with the construction of school buildings.

- Electricity for lighting in schools is lacking. This allows to use the school building only as long as it is bright.
- Sanitation is very bad and endangers the health of children, many are often ill and can not come to school.
- The lack of water prevents school attendance of children, because they have to fetch water for their families.
- Cooking with firewood requires a lot of time – the children often have to gather firewood for their families and therefore can not come to school.

For that reason Alex Bongani is searching for

- information, which could be helpful for his projects;
- useful supplements to complete the school construction projects;
- communication and exchange with other professionals about project experiences;
- contacts to potential partners.

### How Alex Bongani could use tecbse.org

Alex Bongani uses „tecbase.org“ to gather information, to communicate and to find contacts to other experts.

Alex Bongani finds on „tecbase.org“ platform

- Information for building school toilets and biogas digesters for producing methane gas. Methane gas can be used for gas cookers in the school kitchen and for gas lamps in class rooms.

- Contacts for example to an NGO in India which has developed and tested several types of school toilets
- Erfahrungsberichte von Mitarbeitern anderer NGOs über den Bau und den Betrieb von Schultoiletten und Kleinbiogasanlagen.

## Models for „tecbase.org“

Nach den derzeitigen Recherchen gibt es keine Informations- und Kommunikationsplattform, die dem Konzept für „tecbase.org“ entspricht. Wertvolle Anregungen für die Initiative zum Aufbau von „tecbase.org“ haben jedoch zwei Ideen-Vorbilder geliefert, die einzelne Aspekte dieses Projektes „tecbase.org“ beinhalten.

### LivingKit

Der Gestaltungsentwurf für ein „Knowledge Distribution System“ namens „LivingKit“ des Architekturbüros Escher GuneWardena Architecture, USA, wurde im Rahmen der Ausstellung „Entry 2006“ in Essen, Zeche Zollverein, gezeigt.

- Nach Auskunft von Escher GuneWardena Architecture ist „LivingKit“ ein **Gestaltungsentwurf, der nicht realisiert wird**.
- Außerdem war der Gestaltungsentwurf „LivingKit“ als eine **reine Informationsplattform** gedacht, also ohne eine Kommunikationskomponente, wie sie für „tecbase.org“ vorgesehen ist.

### GATE

Unter dem Namen „GATE“ hat die GTZ (Gesellschaft für Technische Zusammenarbeit) eine umfangreiche Sammlung an Dokumentationen aus der Entwicklungszusammenarbeit (Projektberichte, Technische Berichte u.a.m.) zusammengestellt und im Internet als PDF-Dokumente zur Verfügung gestellt.

- Die „GATE“-Plattform unter der Internet-Adresse [www.gate-international.org](http://www.gate-international.org) ist eine **reine Dokumentsammlung** ohne Kommunikationskomponente.
- Die meisten **Dokumente** enthalten viele wertvolle fachliche Informationen, sind jedoch als Berichte erstellt und **ohne Aufbereitung wenig nutzbar**.
- Die **Arbeit** der Arbeitsstelle „GATE“ wurde im Jahr 2007 **eingestellt**. Es werden keine aktuellen Dokumente mehr eingestellt.

## Contact Person for „tecbase.org“

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