

Access to safe water and sanitation are amongst most urgent tasks as was declared by UN Millennium Development Goals. International co-operation is fundamental to develop and adopt highly efficient innovative technologies to regional needs for people's benefit.

First in Africa Communal Waterhouse

Both German and RSA governments jointly financed a project which was developed by German, RSA and international companies and institutions. Ikwezi Local Municipality in Eastern Cape Province in South Africa is the beneficiary municipality for the national pilot facility which is first on African continent.

Demonstration unit in Ikwezi LM

In Jansenville township first pilot and demonstration facility was erected in 2008 and is now fully operational for use of locals. It comprises water recycling and solar energy technologies for laundry, sanitation, room conditioning, and water and room heating, based on proven technologies combined in a user friendly, economical and climate protecting manner adopted to needs of stakeholders. Every activity is realized in close co-operation with Ikwezi LM and its community. Scientific research and balancing of all processes are executed together with Universities and research institutions.

More information and contacts

Interested person and groups, or institutions, are kindly invited to visit the plant to get informed on benefits and use options.

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Communal Waterhouse

Safe and sustainable basic sanitation and solar energy use in rural regions and in densely populated areas



science & technology
Department: Science and Technology
REPUBLIC OF SOUTH AFRICA



Federal Ministry of Education and Research



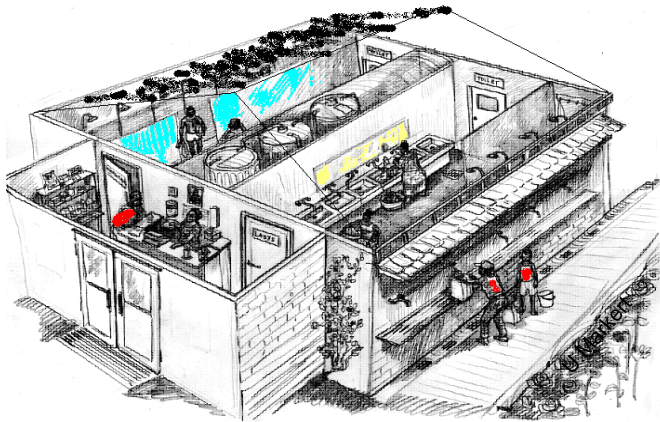
Sponsored by German Federal Ministry of Education and Research (BMBF; Grant No. 02WD0737) and South African Department of Science and Technology (DST)

Illustrations: D. Baier, T. Bellon, E. Hollmann, R. Ettl, J. Kasten, U.M. arkert, J. Richter, K. Soyez, F. Wagner

The basic layout

CWH

is a facility constructed for use of 4-500 people. It includes wash basins, showers and toilets, separate for male and female. The communal room is usable for functions, education activities, and meetings. Technical room comprises storage tanks, and solar energy supply devices. Containers for grey water treatment are positioned under shelter. Principal construction shall be adopted to local needs.



CWH standard outlay

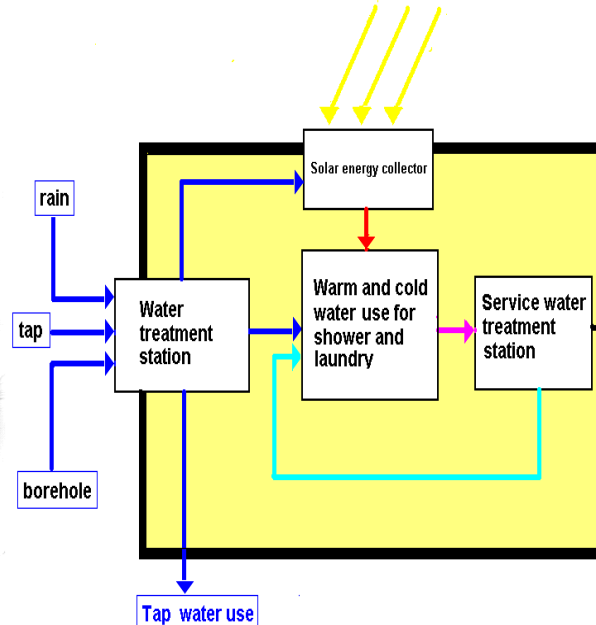
RSA patent 200609618

The technology

CWH

consists of four long term proven moduls of sustainable technologies, successfully applied worldwide, combined in an innovative manner, including

- fresh water aeration
- water recycling for high quality service water (after EU regulation)
- solar electricity supply
- water heating by solar energy
- solar room heating and conditioning
- modern water saving toilet systems.



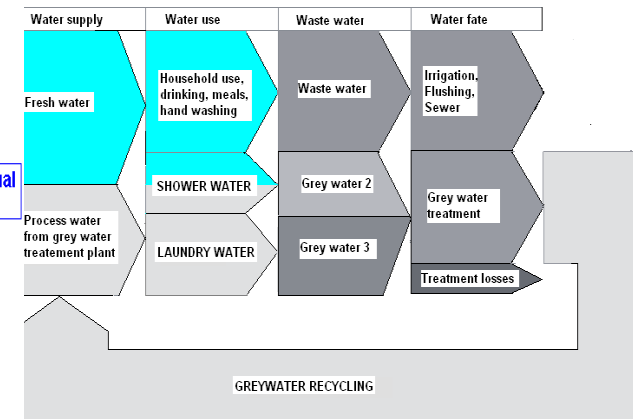
Principal scheme of CWH technology

The effects

CWH

results in improved water supply, higher water use efficiency and better sanitary conditions and provides locally produced renewable energy at good cost/benefit ratio.

- Water use efficiency is improved up to 2-3 times.
- Energy need is reduced by 100 MWh per year.
- Climate effect is up to 100 ton of CO₂ equivalents per unit annually.



Grey water recycling and balance scheme