

An ecological approach to sanitation in Africa - A compilation of experiences

In sending you this CD my aim is simple – to pass on the knowledge I have gained during a period of researching the topic known as ecological sanitation – a method which involves recycling human excreta. It is an attempt to make “eco-san” simple and cost-effective for use by low income communities in Africa. The ultimate aim is to form much stronger links between sanitation, agriculture and food production that actually work in practice, and can benefit the users beyond the requirement of providing a toilet alone. It also aims to demonstrate that effective toilets for use in Africa can be built by a family with very little support from outside. I have also attempted to place shallow pit composting eco-toilets under the umbrella of ecological sanitation, as the pit latrine is the most commonly used toilet in Africa, and is likely to remain so for some time. It makes sense therefore to form stronger links between eco-san and existing well established systems like the pit toilet. The work also describes simple urine diversion systems, which are more familiar in programmes promoting eco-san. No attempt has been made here to describe the full range of eco-sanitary options or programmes, which are described in detail elsewhere. This work describes personal experiences only. It has become clear to me that this story of eco-san is exciting and may have far reaching implications in the future. It adds new dimensions to the rather drab story of conventional sanitation and offers ways to overcome several existing problems.

The work which backs up this document is recorded in many hundreds of research files and a number of research manuals. This particular CD version is a simplified version of the original. For practical field use, this sort of work is best written down and distributed in the form of a book or specific booklets. Books or booklets can be thrown into a bag and referred to at any time. CD's cannot. But the contents of this CD, or parts of it, can be transformed into hard copy, by printing, and the reader is encouraged to do this. The aim is put the fruits of this work into practice. The work can and should be adapted to suit local conditions – it is the basic principles which are most important. The CD format also provides the opportunity to add new material from time to time, because it is the nature of research and development work that new results and information come in all the time. There is a constant need for updating. This particular version is based on knowledge gained by September 2004. New work is currently being undertaken on the application of toilet compost and urine to maize and vegetable crops in the field and will be added to a later version of this CD. Please copy this CD and pass on to others who may find its contents useful. Four Power Point presentations have also been added to this CD (not on the website), as these provide a convenient method of conveniently absorbing much of the information presented in the main text.

This CD has files for the CD jacket cover, main Book cover, Table of contents, Acknowledgements, Appendix (The *Arborloo* Book and the Compost Toilet Starter Kit) and Bibliography.

The 14 chapters of the book have the following titles.

- 1. An introduction - Understanding the concept of ecological sanitation**
- 2. The answer lies in the soil**
- 3. Modifications of the pit toilet**
- 4. How to build and manage the *Arborloo***
- 5. How to build and manage the *Fossa alterna***
- 6. A question of health**
- 7. The eco-toilet and agriculture**
- 8. The *Arborloo* and growing trees**
- 9. The *Fossa alterna* & the vegetable garden**
- 10. The usefulness of urine**
- 11. Urine diversion – how to build and manage a single vault composting toilet**
- 12. Gardening techniques that assist eco-san supported vegetable production**
- 13. Some special constructional techniques**
- 14. Summing up**

This work is primarily intended for South-Eastern and East Africa, where the climate is warm, and the need for low cost approaches in sanitation desperate. It may also have application for other parts of Africa, and possibly some other parts of the developing world.

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Peter Morgan

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