# Writers' Supplement to EDN 111

We often come across interesting material related to articles in *EDN* that could not fit into the available space in the issue. We share the most relevant of those here. For more information on the following, click on the article name:

References Cited in the EDN Sand Dams Article and/or Technical Note

Sand Dam Bibliography – For Further Reading

**Water Harvesting Web Pages** 

**Sand Dam Dimensions Design** 

#### References Cited in the EDN Sand Dams Article and/or Technical Note

- Beimers, P.B., van Eijk, A.T., Lam, K.S., and Roos, B. June 2001. Improved Design Sand –Storage Dams, Project Report, SASOL Foundation, Nairobi, Kenya.
- Borst, L. and de Haas, S.A. 2006. Hydrology of Sand storage dams. A case study in the Kiindu catchment, Kitui District, Kenya. Master thesis, Vrije Universiteit, Amsterdam, The Netherlands.
- Brandsma, J., Hofstra, F., Bjorn, L., Masharubu, B., and Mailu, D. 2009. Impact evaluation on Sand Storage dams. SASOL, Wageningen UR, and Van Hall Larenstein UR.
- Bunch, R. 2000. Two Ears of Corn: a Guide to People-Centered Agricultural Improvement. World Neighbors, Oklahoma City, Oklahoma, U.S.A.
- Ertsen, M. 2006. Re-hydrating the Earth in Arid Lands (REAL): systems research on small groundwater retaining structures under local management in arid and semi-arid areas of East Africa. Water Resources Management, Faculty of Civil Engineering and Geosciences, Delft University of Technology, P.O. Box 5048, 2600 GA, Delft, The Netherlands. Contact: m.w.ertsen@tudelft.nl
- Frima, G.A.J., Huijsmans, M.A., van der Sluijs, N., and Wiersma, T.E. 2002. Sand Storage Dams. A manual on monitoring the ground water levels around a sand-storage dam. Delft University of Technology and SASOL. Nairobi, Kenya.
- Hut, R., Ertsen, M., Joeman, N., Vergeer, N., Insemius, H. and Van de Giesen, N. 2006. Effects of sand storage dams on ground water levels with examples from Kenya. Water Resources Management, Faculty of Civil Engineering and Geosciences, Delft University of Technology, P.O. Box 5048, 2600 GA, Delft, The Netherlands; Contact: <a href="m.w.ertsen@tudelft.nl">m.w.ertsen@tudelft.nl</a>
- Nissen-Petersen, E. 1999. Affordable water: a series for designers and builders. ASAL Consultants Ltd, Nairobi, Kenya. Contact: <a href="mailto:asal@wananchi.com">asal@wananchi.com</a>
- Stern, A. 2009. Mobilizing and Sustaining Self Help Groups. Utooni Development Organisation, Kenya. Contact: alverastern@yahoo.com

### Sand Dam Bibliography – For Further Reading

- Aerts, J., Lasage, R., Beets, W., De Moel, H., Mutiso, G., De Vreis, A., 2007. Robustness of sand storage dams under climate change. Vadose Zone Journal 6, 572-580.
- Borst, L., Haas, de, S.A. 2006. Hydrology of Sand storage dams. A case study in the Kiindu catchment, Kitui District, Kenya. Master thesis, Vrije Universiteit, Amsterdam.
- Chleq, J.L. and H. Dupriez. 1988. Vanishing Land and Water. Soil and Water Conservation in Drylands. Macmillan.
- Ertsen, M.W., Biesbrouck, B., Postma, L., van Westerop, M., 2005. Participatory design of sand storage dams. In: Goessling, T., Jansen, R.J.G., Oerlemans, L.A.G. (Eds.) Coalitions and Collisions. Wolf Publishers, Nijmegen, pp.175-185
- Ertsen, M. and Hut, R. 2009. Two waterfalls do not hear each other. Sand-storage dams, science and sustainable development in Kenya. Physics and Chemistry of the Earth. 34 (2009) 14-22
- Gijsbertsen, C. 2007. A study to upscaling of the principle and sediment transport processes behind sand storage dams. Kitui District, Kenya. Vrije Universiteit, Amsterdam.
- Haysom, A. 2006. A study of the factors affecting sustainability of rural water supplies in Tanzania. Institute of water and the environment, Cranfield University, Silsoe.
- Hoogmoed, M. 2007. Analyses of impacts on a sand storage dam on ground water flow and storage. Vrije Universiteit, Amsterdam.
- Hussy, S.W. 2007. Water from sand rivers: guidelines for abstraction. Water, Engineering and Development Centre, Loughborough University, UK. wedc@lboro.
- Hut, R., Ertsen, M.W., Joeman, N., Vergeer, N., Winsemius, H., Van de Giesen, N.C., 2008. Effects of sand storage dams on ground water levels with examples from Kenya. Physics and Chemistry from the Earth 33, 56-66.
- Jansen, J. 2007. The influence of sand dams on rainfall-runoff response and water availability in the semi arid Kiindu catchment, Kitui District, Kenya. Vrije Universiteit, Amsterdam.
- Lasage, R., Aerts, J., Mutiso, G.C.M., de Vries, A., 2008. Potential for community based adaptions to droughts: sand dams in Kitui, Kenya. Physics and Chemistry of the Earth 33, 67-73.
- Lasage, R., Mutiso, S., Mutiso, G.C.M., Odada, E.O., Aerts, J., and de Vries, A.C. 2006. Adaptation to droughts: Developing community based sand dams in Kitui, Kenya. Geophysical Research Abstracts, Vol.8, 01596, European Geosciences Union.
- Lee, M.D. and J.T. Visscher. 1990. Water Harvesting in Five African Countries. IRC Occasional Paper No. 14.

- Munyao, J.N., Munywoki, J.M., Kitema, M.I., Kithuku, D.N., Munguti, J.M., and Mutiso, S. 2004. Kitui sand dams: Construction and Operation. SASOL Foundation.
- Nissen-Petersen, Erik. 2006. Water from Dry River Beds. For Danish International Development Assistance (DANIDA). ASAL Consultants Ltd, Nairobi, Kenya. asal@wananchi.com or www.waterforaridland.com
- Nissen-Petersen, Erik. 2006. Water from Small Dams. For Danish International Development Assistance (DANIDA). ASAL Consultants Ltd, Nairobi, Kenya. asal@wananchi.com
- Nissen-Petersen, E. 2006(a). Water surveys and designs. For Danish International Development Assistance (DANIDA). ASAL Consultants Ltd, Nairobi, Kenya. asal@wananchi.com
- Nissen-Petersen, Erik. 2007. Water Supply by Rural Builders. For Danish International Development Assistance (DANIDA). ASAL Consultants Ltd., Nairobi, Kenya.
- Opere, A.O., Awuor, V.O., Kooke, S.O., Omoto, W.O., 2002. Impact of Rainfall Variability on Water Resouces Management: Case Study in Kitui District, Kenya. Third Waternet/Warfsa Symposium Water Demand Management for Sustainable Development, Dar es Salaam, 30-31 October 2002.
- Orient Quilis, R. 2007. Modeling sand storage dams systems in seasonal rivers in arid regions. Applications in Kitui District (Kenya). Master thesis, Delft University of Technology, UNESCO-IHE.
- \_\_\_\_\_\_; A practical guide to sand dam implementation: Water supply through local structures as adaptation to climate change. 2009. Rainwater Harvesting Implementation Network. Rain Foundation, Acacia Water, Ethiopian Rainwater harvesting Association, Action for Development, Sahelian Solutions Foundation (SASOL).
- \_\_\_\_\_\_; Sourcebook of Alternative Technologies for Freshwater Augmentation in Africa, Newsletter and Technical Publications

  <a href="http://www.unep.or.jp/ietc/publications/techpublications/techpub-8a/dams.asp">http://www.unep.or.jp/ietc/publications/techpublications/techpub-8a/dams.asp</a>
  (article in ED UK tech/academic files)
- \_\_\_\_\_; Understanding the hydrology of Kitui sand dams: Short mission report,
  November 2005. Within component 1. Hydrological evaluation of Kitui sand
  dams, of "Recharge Techniques and Water Conservation in East Africa: up
  scaling and dissemination of good practices with the Kitui sand dams."

## **Water Harvesting Web Pages**

#### www.utoonidevelopment.org

This website provides more detailed information about Utooni Development Organization, a Kenyan non-governmental organization working with community self help groups. It also gives the story of its founder, Joshua Mukusya, who has played a leading role in promoting and initiating sand dam projects in Kenya.

#### www.sanddams.org

On this page, note in particular the 'films' link underneath the brief video. This link will lead you to another page with an option to view a video titled 'Walking on Water.' Once you click on this, you will see a list of supporting films that can also be viewed. A more complete DVD is available for purchase.

### www.waterforaridland.com

This website contains a wealth of materials (e.g. handbooks, manuals, slide shows, and videos) on methods for harvesting rainwater in areas with long dry seasons. Some of the information is available for a fee; however, a substantial amount of information can be read online at no cost.

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