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# Cost Sheet for Rain- and Floodwater Harvesting

## Construction, Operation, and Maintenance of Rainwater Harvesting Facilities: Pond

*Information based on the CuveWaters Project facilitated in the Cuvelai-Etoshia Basin in central-northern Namibia.*



Federal Ministry of Education and Research

Institute for Social-Ecological Research



TECHNISCHE UNIVERSITÄT DARMSTADT

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# Cost Sheet for Rain- and Floodwater Harvesting - Pond

## Preface

„CuveWaters – Integrated Water Resources Management in central-northern Namibia” is a joint research project of German and Namibian partners funded by the German Federal Ministry of Education and Research (BMBF). Main research partners are the Institute for Social-Ecological Research (Frankfurt, Germany) and the Technische Universität Darmstadt (Darmstadt, Germany). Partners in Namibia are for example the Ministry of Agriculture, Water and Forestry (MAWF) and the Desert Research Foundation of Namibia (DRFN), the project furthermore closely cooperates with One World Consultants (OWC) from Kenya. CuveWaters has developed different technologies for water supply and sanitation in central-northern Namibia, ranging from groundwater desalination to rain- and floodwater harvesting (RFWH) as well as sanitation and water-reuse. Between 2009 and 2013 different pilot plants were constructed at different places all over central-northern Namibia.

This cost sheet is part of a broad offer of information material on rain- and floodwater harvesting in Namibia. Beside this document, the “CuveWaters Rain- and Floodwater Harvesting Toolkit” promotes the extension of RFWH in northern Namibia and other water scarce regions. This document succeeds a series of rain- and floodwater harvesting manuals for Namibia which form the basis for RWH extension:

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For more information on organisational, institutional and other general aspects of rain- and floodwater harvesting please have a look in the "CuveWaters Rain- and Floodwater Harvesting Toolkit":  
<http://www.cuvewaters.net/Toolkits.112.0.html>

For more information on the CuveWaters project please visit <http://www.cuvewaters.net>

Alexander Jokisch

Technische Universität Darmstadt

Darmstadt, 26.10.2015

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# Cost Sheet for Rain- and Floodwater Harvesting - Pond

## About

Cost Sheet for Rain- and Floodwater Harvesting

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CuveWaters – Integrated Water Resources Management in Namibia

2015

This manual is also available on <http://www.cuvewaters.net/Toolkits.112.0.html>

For more information on Rainwater Harvesting in Namibia please contact

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## Material Cost Sheet Pond

Size: 80 m<sup>3</sup>

The following list shows material that is required for the construction rainwater storage pond. Some of material may be required during the operation of a pond or for maintenance reasons and repair work.

|   | Material     | Description             | Price per Unit (in N\$) | Quantity Required |
|---|--------------|-------------------------|-------------------------|-------------------|
| 1 | Gum Poles    | CCA 50/75mm x 3.6m      | 70                      | 20                |
| 2 | Gum Poles    | CCA 75/100mm x 4.2      | 145                     | 5                 |
| 3 | Binding Wire | 2mm x 200m              | 100                     | 1                 |
| 4 | Twine Sisal  | 1 Ply 500gr.            | 26                      | 8                 |
| 5 | Nails Wire   | 120mm x 5mm 1kg         | 22                      | 4                 |
| 6 | Dam Liner    | 26m x 9m                | 9500                    | 1                 |
| 7 | Shade Cloth  | 80%, 3m (running meter) | 75                      | 65                |

## Tool Cost Sheet Pond

Size: 80 m<sup>3</sup>

The following list shows tools that are required for the construction of a rainwater storage pond. Some of tools may be required during the operation of a pond or maintenance reasons and repair work.

|   | Tools               | Description | Price per Unit (in N\$) | Quantity Required |
|---|---------------------|-------------|-------------------------|-------------------|
| 1 | Spade               |             | 105                     | 2                 |
| 2 | Shovel Round        |             | 100                     | 4                 |
| 3 | Handle Hoe          |             | 36                      | 3                 |
| 4 | Hoe Head            |             | 45                      | 3                 |
| 5 | Hammer Claw         | 500gr       | 170                     | 2                 |
| 6 | Pliers, combination |             | 50                      | 2                 |
| 7 | Sewing Needles      |             | 4                       | 5                 |
| 8 | Hand Saw            | 550mm       | 105                     | 2                 |
| 9 | Tape Measure        | 5m x 25mm   | 40                      | 2                 |