



Calgary, Alberta, T2A 6K4, Canada
Phone: + 1 (403) 243-3285, Fax: + 1 (403) 243-6199
E-mail: cawst@cawst.org, Website: www.cawst.org

CAWST is a Canadian non-profit organization focused on the principle that clean water changes lives. Safe water and basic sanitation are fundamentals necessary to empower the world's poorest people and break the cycle of poverty. CAWST believes that the place to start is to teach people the skills they need to have safe water in their homes.

CAWST transfers knowledge and skills to organizations and individuals in developing countries through education, training and consulting services. This ever expanding network can motivate individual households to take action to meet their own water and sanitation needs.

One of CAWST's core strategies is to make knowledge about water common knowledge. This is achieved, in part, by developing and freely distributing education materials with the intent of increasing its availability to those who need it most. You should feel free to copy and distribute this document in any form, printed or electronic. If you wish to use any parts of this document in the creation of your own materials, please ensure that CAWST is properly acknowledged. Please include our website address: www.cawst.org.

Feel free to include a link from your website to the CAWST website. Please do not host this document to download from your website as we will have updated versions from time to time. Please email us if you have any questions or feedback.

This document is open content and licensed under the Creative Commons Attribution Works 3.0 Unported License. To view a copy of this license, visit: <http://creativecommons.org/licenses/by/3.0>

You are free to:

Share – to copy, distribute and transmit this document

Remix – to adapt this document



Under the following conditions:

Attribution. You must give credit to CAWST as the original source of the document

CAWST and its directors, employees, contractors, and volunteers do not assume any responsibility for and make no warranty with respect to the results that may be obtained from the use of the information provided.

This presentation is used with
Lesson Plan 7: Roof Catchment
System in the Rainwater
Harvesting Trainer Manual.

Available at

www.cawst.org/resources



Roof Catchment Systems

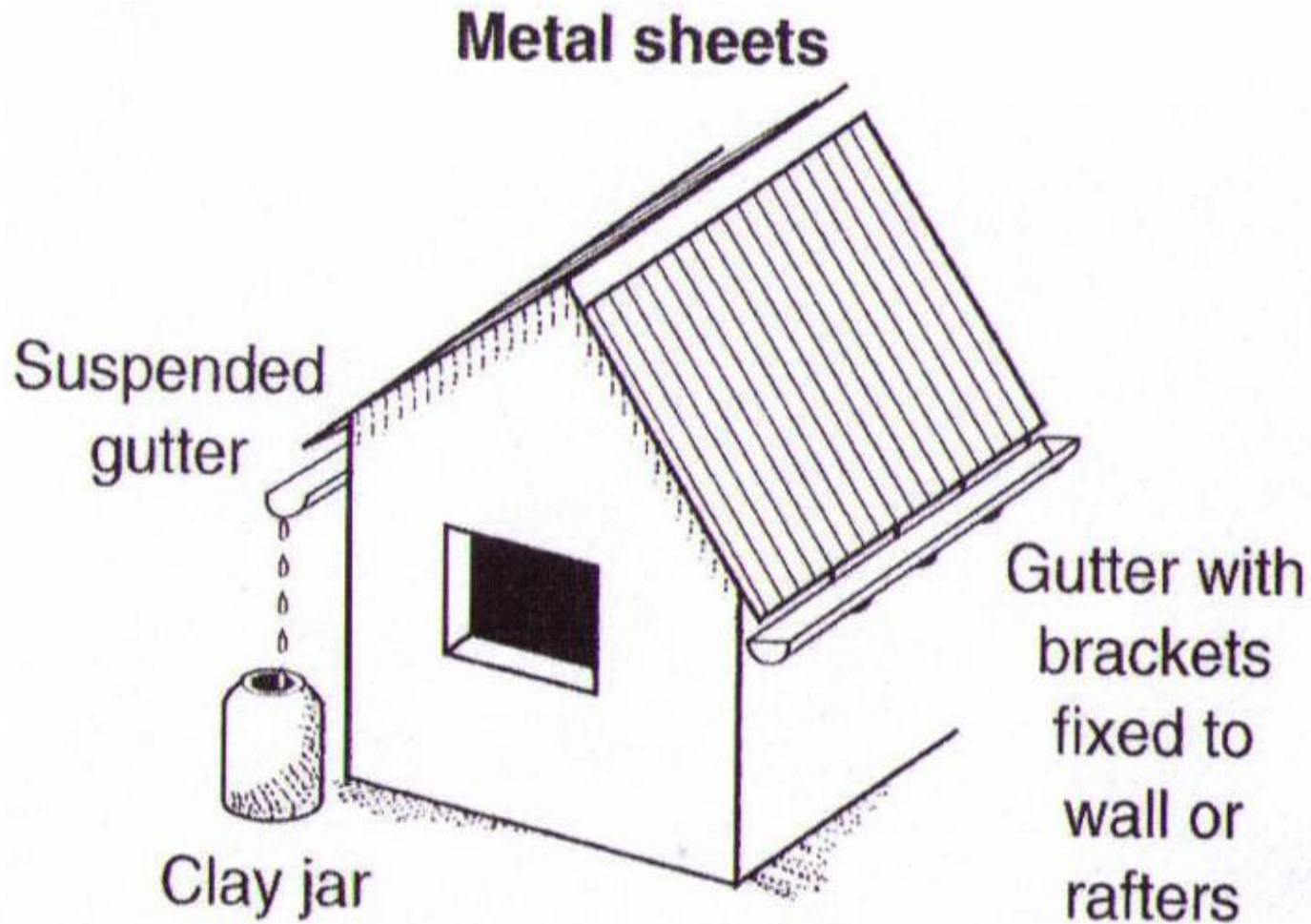


Learning Expectation

1. Discuss current applications of roof catchment systems.
2. Describe a suitable roof material for rainwater harvesting.
3. Explain what a runoff coefficient is.

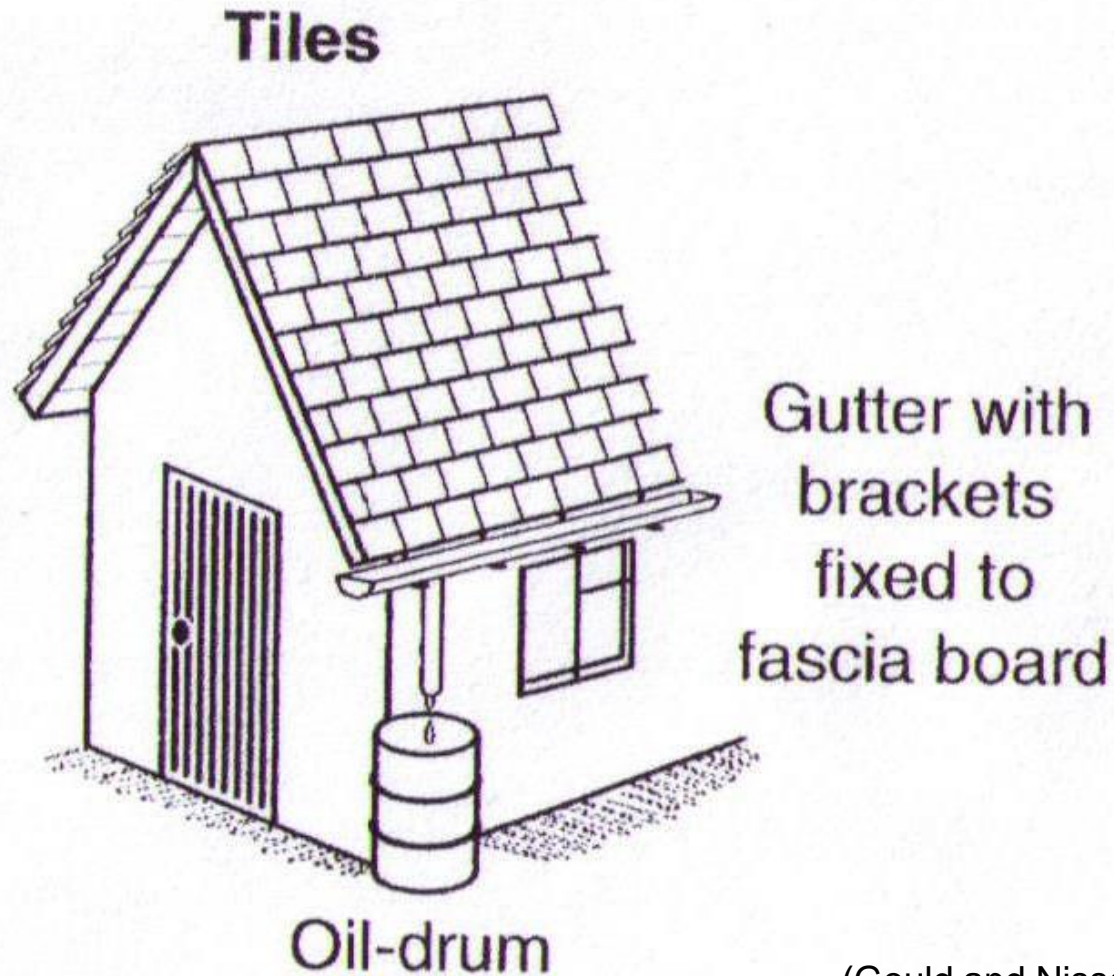


Roof Catchment



(Gould and Nissen-Peterson, 1999)

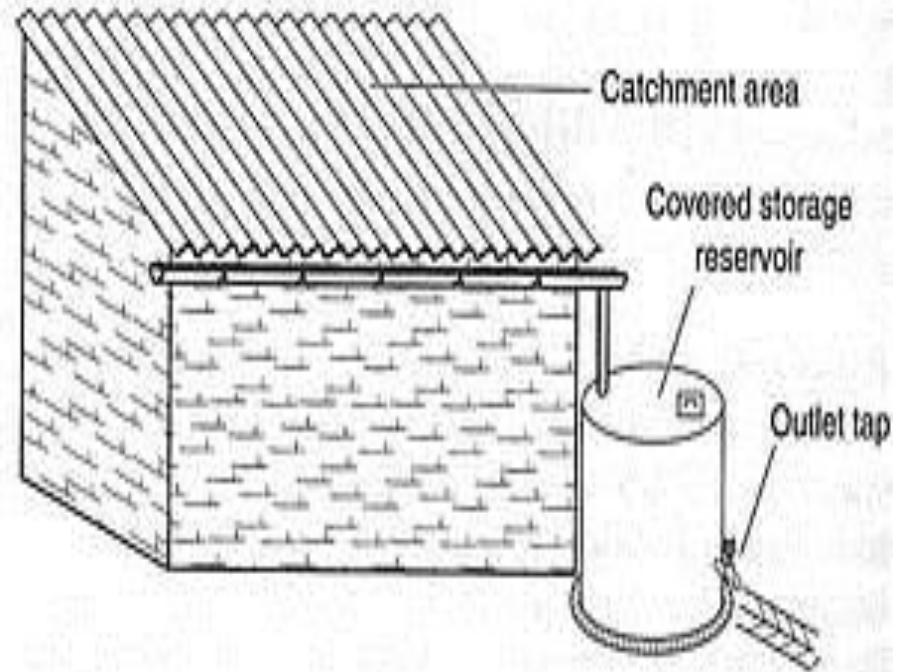
Roof Catchment



(Gould and Nissen-Peterson, 1999)

Design Features

- Catchment area
- Delivery system
 - Gutter and downpipe
 - Splash guards
 - First flush
- Storage reservoir
 - Tank cover
 - Tap or pump
 - Overflow pipe
 - Manhole and ladder



Uganda



Togo



Mexico





Roof Materials

- List as many roof materials as you can.



Runoff Coefficients

Surface type	Runoff coefficient
Galvanized iron sheets ²	> 0.90, 0.80 commonly used
Asbestos sheets ²	0.80 – 0.90
Cement tile ¹	0.62 – 0.69
Glazed tile ²	0.60 – 0.90
Clay tile (machine-made) ¹	0.30 – 0.39
Clay tile (hand-made) ¹	0.24 – 0.31
Thatch ²	0.20

Table 2.5-1 Typical runoff coefficients for various roof surfaces
(¹ Zhu and Liu, 1998 and ² DTU, 2002)

