

Towards a Circular economy through Sustainable Management of Wastewater and Re-use

Introducing Sustainable Wastewater and
Nutrient Management in Rural Georgia

Rostom Gamisonia, Claudia Wendland, Bistra Mihaylova



Our project



Sustainable Sanitation ⁶ (SDG 4, 6, 10, 12)

The **Ecosan Toilet** (Urine Diverting Dry Toilet) can be implemented in or adjacent to the **house**, does not smell due to the separate collection and management of urine and faeces.

The Ecosan Toilet provides improved hygiene and **comfort**.



The Ecosan Toilet does not need water but **wood ash or saw dust** for "flushing".
The human excreta are safely managed.

Sustainable Energy ¹ (SDG 3, 7, 13)

Solar Water Heaters (SWH) provide **hot water** for households.



Provides increased comfort and saves time.
Does not contribute to climate change.
No running costs or electricity are needed to run the **Solar Water Heater**.

Safe Use of Human Excreta ⁵ (SDG 1, 6, 8, 12)

Human excreta is safely **managed** and does not pollute the groundwater and the environment.



Faecal **compost** is safely used as soil conditioner and organic fertiliser.

Human urine is safely used in gardening and agriculture as a nitrogen rich **liquid fertiliser**.

The use of organic fertilisers can enhance food **security**.

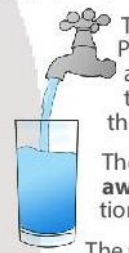
Gender equality ⁷ (SDG 4, 5, 6, 8, 10, 11)

Women and men have equal say in decision making through **participatory approach**.
The women save **time** and can do income generation activities.



Girls and boys, women and men have **equal** access to safe water and sanitation.
The women enjoy the increased **comfort** of the technologies.

Water and Sanitation Safety Planning ² (SDG 3, 4, 6, 10, 11, 17)

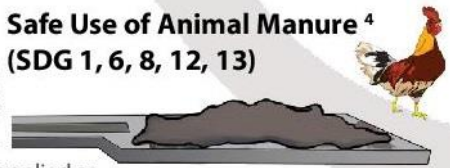


The Water and Sanitation Safety Planning (**WSSP**) is a risk based approach developed by WHO to protect public health and the environment.

The WSSP increases people's **awareness** about water, sanitation, health and environment.
The population starts to take **actions** to improve their living conditions.

Safe Use of Animal Manure ⁴ (SDG 1, 6, 8, 12, 13)

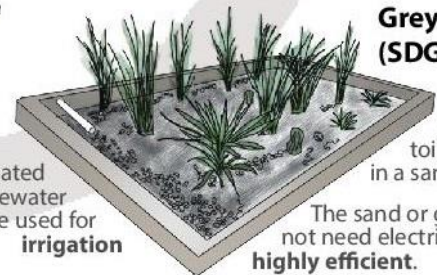
The manure platform ensures the **safe containment** of animal excreta.



The manure can be applied as **organic fertiliser** in gardening and agriculture.

The animal excreta are safely managed and do not pollute the **groundwater** and the environment.

Greywater Management ³ (SDG 6, 11, 12, 13)



The treated wastewater can be used for **irrigation**

The greywater (wastewater from households without toilet wastewater) is **treated** in a sand or gravel filter.

The sand or gravel filter does not need electricity and is **highly efficient**.

Sustainable Sanitation and Safe Use of Human Excreta

The **Ecosan Toilet** (Urine Diverting Dry Toilet) can be implemented in or adjacent to the **house**, does not smell due to the separate collection and management of urine and faeces.

Linking the following SDGs:

- SDG 1 – no poverty
- SDG 3 – good health and well being
- SDG 5 – gender equality
- SDG 6 – water and sanitation
- SDG 10 – reduced inequality
- SDG 12 – responsible consumption and production



Rostom Gamisonia
rurcom@gmail.com

Water and Sanitation Safety Planning (WSSP)

The Water and Sanitation Safety Planning (WSSP) is a risk based Approach and can be implemented in small communities. The WSSP increases people`s awareness about water, sanitation, health and environment. The population starts to take actions to improve their living conditions.

Linking the following SDGs:

- SDG 3 – good health and well being
- SDG 4 – quality education
- SDG 6 – water and sanitation
- SDG 10 – reduced inequality
- SDG 11 – sustainable cities and communities
- SDG 17 – partnerships for the goals



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rurcom@gmail.com

Recommendations

Promotion of sustainable technologies that link the SDGs

In particular:

- recognize wastewater as a valuable resource in terms of macro and micro nutrients, energy, organic matter and can play a relevant part in the circular economy.
- implement sustainable and resilient wastewater management which takes social, economic and gender-sensitive aspects into account.
- implement adequate water policies that support safe wastewater recycling and re-use.



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rurcom@gmail.com

Thank you!



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