

Wildlife Escape Ramps for Water Tanks



Thematic Area:

Environmental sustainability.

Priority: How can biodiversity be improved while maintaining equine activities?

Need: Find solutions to reduce biodiversity loss (and/or even increase biodiversity) in equine farms (positive and negative impacts of horses)

Solution EU Number: BD-6.

Content of the Solution:

This solution involves building a ramp for wildlife (insects and small mammals) to exit water tanks.

Key Contacts:

- Biodiversity organisation of your country.



Reasons for Implementing this Solution

Implementing this solution helps prevent wildlife mortality by providing trapped animals with a safe escape route, thereby promoting biodiversity and ecological balance. Additionally, it reduces the risk of water contamination from decomposing animals, ensuring cleaner and safer water for intended uses.

Description of Solution Strategies

One effective solution for preventing wildlife, such as insects and small mammals, from becoming trapped in water tanks is to construct a specially designed exit ramp. The design should consider the size, grip, and material to ensure usability for different species. Ideally, the ramp should be made from non-slip materials like rough-textured metal, mesh, or natural wood to provide sufficient traction. And be made from durable, weather-resistant materials such as chestnut, black locust, or oak, also. Since constant exposure to water can accelerate wood decay, applying an eco-friendly protective coating can extend its lifespan. Alternatively, recycled plastic or aluminum with a non-slip surface can provide a longer-lasting solution.

For effective use, the ramp should have a gentle incline and a non-slip surface to help animals climb out safely. Suitable options include fine-mesh wire, sandpaper, or small horizontal cleats for better grip. To enhance stability, it is recommended to secure the ramp firmly with nails, screws, or a flexible hinge mechanism that allows adjustment to water level fluctuations. Additionally, rounded or smoothed edges prevent injuries, and side rails can be added for better grip, especially for larger animals.

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Implementation Steps

1. Material Selection and Preparation:

- Choose durable, non-slip materials like metal mesh, wood, or textured plastic.
- Cut the plank to the appropriate length for immersion (at least 50 cm deep in water and 50 cm out).
- Optionally, apply a water-resistant protective coating to extend durability.
- Non-Slip Surface Application: Attach fine mesh or sandpaper for traction; alternatively, install small horizontal cleats at regular intervals to provide additional grip.

2. Ramp Installation:

- Position the ramp with at least 50 cm submerged in water and 50 cm above the waterline.
- Secure it to the water tank using two large iron nails, U-shaped nails, or screws with an electric drill.
- For adjustable positioning, consider using a hinge mechanism to adapt to water level changes.
- Ensure a gradual incline and appropriate width to accommodate various species.

3. Final Adjustments & Safety Enhancements:

- Ensure all edges are rounded or sanded to prevent injury.
- Add optional side rails for better grip and accessibility.

4. Maintenance & Monitoring:

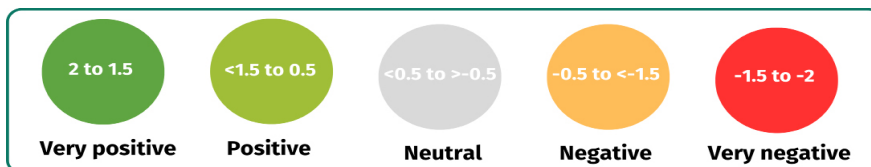
- Regularly check for wear, algae buildup, or detachment.
- Clean and replace components as needed to maintain functionality.
- Observe wildlife interactions and make modifications if needed.



Wildlife Escape Ramps for Water Tanks

How Will this Solution Impact the Performance of your Farm ?

TOPIC	SCORE
Social	0.50
Economics	0
Welfare	0
Health	0.50
Environmental	0.66
Land access and management	0
Global	0.33



Color coding explanation



Socioeconomics: This solution doesn't have any economic impact (neutral score) but can improve the image of the farm (positive social score).



Health & Welfare: This solution will not directly impact welfare of horses (neutral score). It can support health performance (positive score) for better water quality as it can prevent drowning of small animals in water tanks and avoid pollution of water.

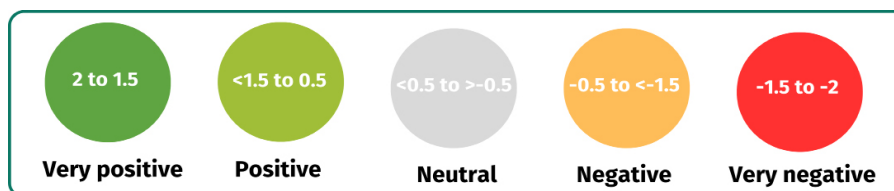


Environmental Sustainability: This solution does not have an effect on pasture management or access to land (neutral score). But it can support environmental performance by halting biodiversity loss because decrease death of small mammals and insects. It also reduces waste of water by reducing cleaning of water tank.

Wildlife Escape Ramps for Water Tanks

How Will this Solution Impact the Resilience of your Farm?

TOPIC	SCORE
Social	0
Economics	0
Welfare	0
Health	0.08
Environmental	0.22
Land access and management	0
Global	0.07



Socioeconomics: This solution doesn't have any socioeconomic impact on equine farm resilience, neither positive nor negative.



Health & Welfare: This solution will not impact welfare performance of the farm facing external challenges. This solution can slightly support health performance of the farm facing external challenges assessed as it helps to preserve a good quality of water.



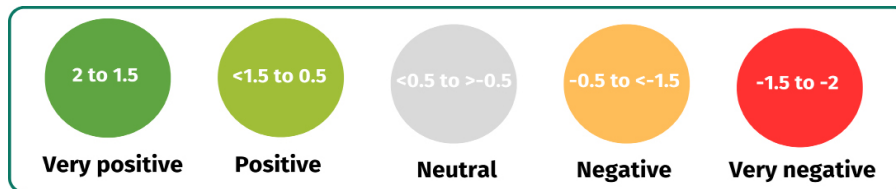
Environmental Sustainability: This solution will impact pasture management and land access performance facing external challenges but can slightly support environmental performance facing external challenges thanks to the limitation of waste of water and biodiversity loss in a case of drought.

Globally, the effect of the solution on farm resilience is neutral.

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How Can this Solution Help your Farm Cope with Specific External Challenges to Become More Resilient?

CHALLENGES	SCORE
Inflation	0
Pandemic	0
High welfare standards	0
High infectious diseases	0
Extreme weather event	0.42
Loss or limited access to grassland	0



Inflation & Social Crises: This solution doesn't have a significant impact on global performance in case of inflation or pandemic. It can help to limit water cost by saving waste of water in case of inflation.



Welfare & Diseases: This solution doesn't have impact on global performance in case of high infectious disease. But the farm with such a solution is better prepared for the requirements for high health standards in terms of preventing health issue by drinking the water from tanks. Care must be taken when choosing non-toxic materials for building the ramps.



Climate Change & Access to Land: This solution will not have effect on global performance of the farm facing loss or limited access to land. But the solution can help to slightly support global performance of the farm in case of drought by halting biodiversity loss and water management.

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Cost-Benefit Analysis

Costs

Socioeconomics:

- Occasional maintenance or replacement due to wear and tear.



Health & Welfare:

- Paying attention to the choice of material: materials can be toxic for horses or if badly installed can lead to injuries.



Environmental Sustainability:

- Potential environmental impact if non-sustainable materials (e.g., treated wood, certain plastics) are used.



Cooperation between farms:

- No effects.



Benefits

- Reduces costs associated with cleaning and maintaining water quality by preventing wildlife drowning.
- Minimizes potential health risks (e.g., bacteria from decomposing animals) that could affect livestock and farmworkers.
- Low-cost solution with long-term benefits, requiring minimal investment and maintenance.

- Prevents contamination of drinking water, reducing the risk of infections and disease in horses.
- Promotes a safer and healthier environment for horses and other farm animals.

- Supports local biodiversity by preventing unnecessary wildlife deaths.
- Reduces ecological disruption by maintaining a balanced habitat.
- Reduces water waste.

- No effects.



Technical Sheet for Solution Implementation

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Additional Resources

Publication

- <https://www.nrcs.usda.gov/sites/default/files/2023-03/bio55a1.pdf>
- <https://mcrd.org/willits/wildlife-friendly-escape-ramps>

Video

- [Wildlife Escape Ramp for Stock Tanks](#)



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Ideas to Ideas to Animate a Workshop about the Solution

- Ask *environmental organizations/animal welfare groups/ecologists* to join the workshop.
- Find a suitable location, such as a farm or wildlife conservation area, where the workshop can take place.
- Complete the construction of a water tank exit system for demonstration and let the participants engage in building or testing the system. Ask environmental organizations/animal welfare groups/ecologists to join the workshop.

Proposed Structure for the Workshop on Wild Ecosystem Preservation: Exits in Water Through (for wildlife in water tanks)

1. Introduction to Wild Ecosystem Preservation: Exits in Water Through

- What is the solution? Explain how the water tank exit ramp works and its role in preserving wildlife.
- Key features and components: materials used (wood, nails, mesh, etc.), construction techniques, and functionality.
- Types of similar solutions available: Compare this solution with others aimed at providing wildlife exits for water tanks.

2. Benefits of Wild Ecosystem Preservation: Exits in Water Through in Water Tanks

- **Wildlife Conservation:** Prevents the drowning of small mammals and insects by providing them with a safe exit from water tanks.
- **Eco-Friendly:** Contributes to the preservation of biodiversity and reduces the risk of water pollution caused by dead animals.
- **Simple and Affordable:** Low-cost solution with minimal maintenance required.

3. Practical Applications in the Field

- **Adaptable for Different Water Tanks:** The ramp can be customized to suit various tank sizes.
- **Simple Installation:** Easy for anyone to build and install with basic tools and materials.
- **Sustainability Impact:** Helps maintain local ecosystems by giving small animals access to water without risking drowning.

4. How to Choose the Most Suitable Exit Ramp for Water Tanks

- Evaluation of water tank sizes and location.
- Assessment of local wildlife species that might benefit from the exit ramp.
- Selection of appropriate materials (e.g., wood, wire mesh) and construction methods based on tank and environmental conditions.

5. Hands-On Demonstration

- Live demonstration of the construction process: cutting the plank, securing nails, adding mesh or cleats, and setting up the ramp in a water tank.
- Allow participants to build a simple ramp or test various design options for different water tank configurations.



6. Maintenance and Troubleshooting

- **Regular Inspections:** How to check the integrity of the ramp and ensure it stays accessible.
- **Cleaning:** How to keep the ramp and the surrounding area clean to prevent any build-up of algae or other materials.
- **Adjustments:** Modifications to ensure that the ramp remains functional as water levels change (e.g., adding cleats or modifying the length).

7. Case Studies and Real-World Examples

- Examples of farms or conservation areas where this system has been implemented.
- Discussion on how the ramp has been integrated into existing water management practices and its benefits to the local ecosystem.
- Lessons learned and tips from users who have successfully adopted this system.

8. Cost Analysis and Return on Investment (ROI)

- **Initial Costs:** Cost of materials (wood, nails, mesh, etc.) for one ramp versus long-term benefits.
- **Financial Savings:** Reduced need for cleaning water tanks due to fewer dead animals.
- **Environmental ROI:** Contribution to local biodiversity and the prevention of water contamination from dead wildlife.

9. Q&A Session

- Open floor for participants to ask questions about specific concerns or experiences with the solution.
- Address any uncertainties about the cost, durability, or effectiveness of the ramp in different environmental conditions.

10. Wrap-Up and Resources

- Summary of key points covered in the workshop.
- Additional resources for further learning: websites on wildlife conservation, suppliers of materials, and online communities.
- How to access discounts or offers from suppliers for bulk purchases of materials.