



Animal welfare in the food system and  
**Sustainable Development Goal 6**

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Inputs for the High-Level Political Forum 2026 and the UN Water Conference 2026

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## SUMMARY AND RECOMMENDATIONS

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In 2026, Sustainable Development Goal 6 - Clean Water and Sanitation - will be central to multilateral discussions through the High-Level Political Forum and the UN Water Conference. These processes provide an opportunity to recognise that water security cannot be achieved without transforming food systems and integrating animal health and welfare into One Health policy.

Agriculture is the largest global user of freshwater, and current animal production and consumption patterns are major drivers of water withdrawals, nutrient pollution, chemical contamination, antimicrobial resistance and ecosystem degradation. Animal welfare is not separate from these pressures. The way animals are bred, housed, fed, transported and treated affects water demand, disease risk, waste management and the resilience of food and water systems.

The source material identifies two linked priorities: transition toward integrated, higher-welfare agricultural systems that protect land and water resources; and align consumption patterns, especially in high-consuming regions, with healthy diet principles that reduce pressure on freshwater and ecosystems.

In line with these priorities, the World Federation for Animals urges governments and stakeholders engaged in the HLPF 2026 and the UN Water Conference 2026 to:

- 1. Recognise animal health and welfare as essential to SDG 6 and embed a One Health approach in HLPF and UN Water Conference outcomes;**
- 2. Accelerate the transition to integrated crop-livestock, agroforestry, agroecological, pasture-based, fisheries and aquaculture systems that conserve water, reduce pollution and improve animal welfare;**
- 3. Reduce water-intensive overconsumption of animal-source foods in high-consuming regions and support plant-rich, healthy diets that lower pressure on freshwater resources;**
- 4. Strengthen animal welfare standards, veterinary oversight, working-animal support and WASH and waste-management measures to reduce antimicrobial resistance, water contamination and service disruption.**

# INTRODUCTION:

## WHY SDG 6 NEEDS ANIMAL WELFARE AND ONE HEALTH

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SDG 6 will be reviewed in 2026 at the High-Level Political Forum, while the UN Water Conference will continue global discussions on action and investment for a water-secure future. Food systems are central to both processes because they shape water withdrawals, water quality, ecosystem health and public health risks.

Water and animal health are bidirectionally linked. Unsafe or contaminated water can cause animal mortality and morbidity. Conversely, animal production can pollute water through pathogens, manure, nutrient runoff, veterinary drugs and antimicrobials, creating risks for human health, ecosystems and food-system resilience.

A One Health approach provides a practical framework for addressing these links. Improving animal welfare can reduce disease pressure, lower the need for antimicrobials, support responsible water and waste management, and strengthen the resilience of communities that rely on animals for water transport, sanitation, livelihoods and service delivery.

For this reason, SDG 6 policy should treat animal welfare as a water-security issue. It should support production systems and consumption pathways that reduce freshwater demand, prevent pollution, protect ecosystems and ensure that animals themselves have access to safe water and conditions that support health and welfare.

### KEY CONCEPTS

Animal welfare includes, but is not limited to, animal health. It concerns the physical and mental state of animals in relation to the conditions in which they live and die, including whether they are healthy, comfortable, well nourished, safe, protected from pain, fear and distress, and able to express important behaviours.

The One Health approach recognises that human health, animal health and environmental health are interdependent. In the context of SDG 6, this means water policy must address animal production, animal welfare, antimicrobial resistance, wastewater, ecosystems and the people whose livelihoods depend on animals.

Integrated land and water management refers to agricultural systems that better connect crops, forests, livestock and fisheries, including agroecology, agroforestry, integrated crop-livestock systems, pastoralism and welfare-sensitive aquaculture.

The thesis of this paper is that achieving SDG 6 requires food-system transformation that reduces water demand and pollution while improving animal welfare and protecting the health of people, animals and ecosystems.

# ANIMAL WELFARE, FOOD SYSTEMS AND WATER SECURITY

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Animal welfare is a critical factor in the sustainability and resilience of water and food systems. Intensive animal production can increase disease pressure, antimicrobial use, nutrient runoff, manure and wastewater burdens, and dependence on feed crops that require significant water resources. These risks are directly relevant to SDG 6.

In the context of SDG 6, poor welfare conditions and high-input production systems can:

- Increase water demand through feed production, high stocking densities and resource-intensive animal-source food supply chains.
- Drive nutrient, manure, pharmaceutical and antimicrobial pollution that damages water quality and ecosystems.
- Elevate disease pressure and antimicrobial use, increasing the risk of water-related antimicrobial resistance.
- Weaken livelihoods and water access where working animals support water transport, sanitation, waste management and rural service delivery.

The source draft also highlights that working animals contribute directly to SDG 6. In climate-vulnerable pastoral and dryland contexts, healthy equids can reduce the time and labour burden of water collection and support access to markets and services. Declining welfare can therefore become a water-security risk for households and communities.

The table below connects the source material to the SDG 6 targets most directly affected by animal welfare, food-system transformation and One Health.

## WATER PRESSURE FROM FOOD SYSTEMS

Agriculture accounts for 71% of global freshwater withdrawals and 90% of total water consumption, with animal feed production a major indirect driver of water use.

Water systems are being pushed to their productive limits by human pressure and climate impacts, making food-system transformation central to SDG 6.

SDG 6 strategies should account for the water footprint of animal production and the role of welfare in reducing disease, waste and input intensity.

#### INTENSIVE LIVESTOCK POLLUTION

Intensive livestock systems concentrate animals, inputs and waste, increasing point-source pollution risks for water bodies.

Manure, fertiliser, veterinary pharmaceuticals and antibiotics are among the most concerning sources of water pollution from food systems.

Excess nutrients from intensive livestock farming can drive harmful algal blooms, dead zones and contamination of drinking water.

Responsible nutrient and livestock management, including FAO's 4Rs principles, is essential to conserve freshwater and protect ecosystems.

Higher-welfare, lower-density and better-managed systems can reduce disease pressure, waste concentration and pollution burdens.

#### ANIMAL-SOURCE FOOD CONSUMPTION AND WATER EFFICIENCY

In some high-income and upper-middle-income regions, animal-source food consumption is up to three times higher than healthy diet benchmarks.

The source draft notes that animals generally have lower water productivity than crops in kilograms of product per cubic metre of water.

Shifting high-consuming regions toward healthy, plant-rich diets can reduce pressure on freshwater while supporting human health.

Thailand's plant-rich diet initiative shows how protein transition strategies can align health, resource use and sustainable food-system innovation.

Dietary transition can help reduce production pressure and create space for higher-welfare, better-integrated animal systems where animals remain part of food and livelihood systems.

Aligning consumption with nutritional needs, rather than volume-driven growth, supports SDG 6 and broader sustainable-development goals.

#### AQUATIC ANIMAL PRODUCTION AND INLAND WATERS

The expansion of aquaculture affects SDG 6 because cage aquaculture in freshwater lakes and rivers can compete for water use and affect water quality.

In 2022, 38% of aquatic animals were harvested in inland waters, with most coming from aquaculture.

High stocking densities, inefficient feeding and poor waste management can increase nutrient discharge and effluent risks in aquatic animal production.

Antimicrobials used in aquaculture can enter the aquatic environment through feeds, effluent water and residues in faecal material.

Welfare-sensitive aquatic system design can reduce disease pressure, improve survival and lower the need for antimicrobial interventions.

SDG 6 implementation should therefore address both terrestrial and aquatic animal production systems.

#### ONE HEALTH, AMR AND WATER QUALITY

Unsafe water can cause animal disease and mortality, while animal production can pollute water with pathogens, veterinary drugs and antimicrobials.

Farmed terrestrial animals can excrete large shares of administered antimicrobials, which can enter waterways through surface runoff.

The WHO, FAO and WOAAH WASH and AMR brief highlights risks from intensive livestock and aquaculture wastewaters, manure and antimicrobial residues.

Improved welfare, good husbandry, veterinary oversight and prudent antimicrobial use can reduce water-related AMR risks.

#### INTEGRATED LAND AND WATER MANAGEMENT

The FAO's integrated land and water resources management framework calls for systems that better connect crops, forests, livestock and fisheries.

Agroecology, agroforestry, integrated crop-livestock systems and pastoralist approaches can improve soil health, water retention, biodiversity and animal welfare.

Cameroon's Convergence Action Blueprint shows how agroecological transformation for staples and livestock can be incorporated into food-system and climate strategies.

#### WORKING ANIMALS AND WATER ACCESS

Working animals contribute directly to SDG 6 through water transport, sanitation, waste management, construction and service delivery.

In dryland and pastoral areas, healthy equids can reduce the time and labour burden of water collection and maintain access to markets and services.

Declining equid welfare, including dehydration, poor nutrition, hoof problems and harness injuries, can undermine household water security.

The Senegal case study shows how working-equid welfare supports safe and reliable

water access under climate stress.

The Peru case study shows how integrated water resources management can combine pasture and livestock management with ecosystem restoration.

Protecting working animals supports continuity of water services, climate resilience, livelihoods and animal welfare.

SDG 6 policy should include the animals that enable water access, not only the animals raised for food.

#### HIGHER-WELFARE SYSTEMS FOR SDG 6

Lower stocking densities, enriched environments, access to outdoors where appropriate and good husbandry can improve animal health and reduce stress.

Better welfare can reduce disease burden and the need for veterinary drugs, including antimicrobials that can contaminate water.

Integrated systems can lower water withdrawals and pollution while strengthening resilience for farmers, pastoralists, fisherfolk and forest-dependent communities.

Animal Welfare Impact Assessments can help align water, agriculture and infrastructure decisions with SDG 6 and One Health outcomes.

## HIGH-WELFARE AND WATER-SMART PRODUCTION SYSTEMS AS SDG 6 ACTION

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The SDG 6 source material points toward production systems that conserve water, protect water quality and improve animal welfare together. These include agroecology, agroforestry, integrated crop-livestock systems, pastoralism, regenerative grazing and welfare-sensitive aquaculture. It also highlights the need to address structural features that place pressure on animals and water systems, including:

1. High stocking densities and confinement, which increase stress, disease pressure, antimicrobial use and concentrated waste;
2. Poorly managed manure, fertiliser and feed inputs, which increase nutrient and chemical pollution;
3. Water-scarce and climate-shocked systems, which place animals, including working equids, under greater welfare strain;
4. Overreliance on high-input animal-source food production, which locks in inefficient water use and fragile supply chains.

Integrated agricultural systems can reduce these pressures by linking crops, forests, livestock and fisheries in ways that improve soil health, protect water resources, reduce waste and support more resilient livelihoods. The FAO's work on integrated land and water resources management identifies these approaches as essential for sustainable food systems and SDG 6 implementation.

Higher-welfare production can also reduce biological risk. Lower stocking densities, better housing, environmental enrichment, good husbandry and veterinary oversight support stronger animal health, reduce the need for routine antimicrobial use and help prevent veterinary drugs and resistant organisms from entering waterways.

Several examples in the source draft illustrate these pathways. Thailand's protein transition initiative shows how plant-rich diets can reduce resource use. Cameroon's food-systems blueprint identifies agroecological transformation for staples and livestock. Peru's Nor Yauyos Cochabambas experience links pasture and livestock management with integrated water resources

management. Senegal's working-equid case shows why animal welfare matters for safe and reliable household water access.

Consumption pathways also matter. Where animal-source food consumption is far above healthy diet principles, shifting toward plant-rich diets can reduce pressure on freshwater resources while supporting human health. This is especially important because animals generally have lower water productivity than crops in kilograms of product per cubic metre of water.

Achieving SDG 6 therefore requires a systems approach: reduce demand where overconsumption drives pressure; improve production where animals are part of resilient livelihoods; protect working animals that enable water access; and make animal welfare a recognised component of water, food, health and environmental policy.

The HLPF 2026 and the UN Water Conference 2026 should use SDG 6 discussions to align agricultural transformation, animal welfare, antimicrobial-resistance prevention, water quality and climate resilience. This would strengthen the One Health approach and help ensure that clean water and sanitation policies address the food-system drivers of water insecurity.

Animal welfare is not an add-on to SDG 6. It is a practical condition for reducing disease and antimicrobial use, protecting water quality, improving resilience and supporting communities whose daily access to safe water depends on healthy animals and healthy ecosystems.

## RECOMMENDATIONS

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In order to strengthen SDG 6 implementation through a One Health and animal welfare lens, the World Federation for Animals urges governments and stakeholders engaged in the High-Level Political Forum 2026 and the UN Water Conference 2026 to align food-system transformation, water policy and animal welfare with public health, ecosystem protection and climate resilience.

### IN PARTICULAR, WE ISSUE THE FOLLOWING RECOMMENDATIONS:

1. **Recognise animal health and welfare as essential to SDG 6 and embed a One Health approach in HLPF and UN Water Conference outcomes;**
2. **Accelerate the transition to integrated crop-livestock, agroforestry, agroecological, pasture-based, fisheries and aquaculture systems that conserve water, reduce pollution and improve animal welfare;**
3. **Reduce water-intensive overconsumption of animal-source foods in high-consuming regions and support plant-rich, healthy diets that lower pressure on freshwater resources;**
4. **Strengthen animal welfare standards, veterinary oversight, working-animal support and WASH and waste-management measures to reduce antimicrobial resistance, water contamination and service disruption.**



## ABOUT WORLD FEDERATION FOR ANIMALS

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We are a federation of more than 70 NGOs working towards the recognition of animal welfare as an essential component of the sustainable development agenda. Our efforts focus on integrating animal welfare into international health, food, and environmental regimes, as well as trade and development finance rules.

We are accredited observers to the FAO Committee on Agriculture, the UN Environment Programme and to the UN Framework Convention on Climate Change, and we have Special Consultative Status with the UN Economic and Social Council. We are also members of GASL's Action Network on Animal Welfare and of the CFS' Civil Society and Indigenous Peoples' Mechanism.

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