



Water for One Health

An Overview - March 2021

The coming together of water resources management (WRM) and water, sanitation and hygiene (WASH) for “One Health”

WASH and food security interventions for the most vulnerable risk being undermined if they do not include an additional focus on managing the freshwater resources and ecosystems upon which they depend. WWF’s conservation mission forms an important component of a One Health approach to ensuring adequate WASH is possible. To that end, WWF invited expert WASH organizations – Water.org, IRC-WASH, WaterAid and CARE – to collaborate on achieving One Health outcomes through the Blue Heart of Africa Initiative.

The integration of WRM with WASH towards “One Health” is especially pertinent given the unprecedented health and economic impacts stemming from the COVID-19 global pandemic. The pandemic has surfaced the interrelated nature of ecosystems and people in a way that can no longer be overlooked or ignored, especially as a changing climate threatens our ability to anticipate and prepare for seasonal and contextual variations in weather.

What is One Health?

One Health is the recognition and understanding that people and ecosystems are dependent upon each other for sustained wellbeing. Freshwater resources are critical components of livelihoods, ecosystems and economies alike, and mismanagement or over-abstraction places those landscapes and the people who live within them at risk. Despite this interconnection, Water Resources Management (WRM) and Water, Sanitation, Health and Hygiene (WASH) are typically addressed separately. One Health seeks to bridge that divide and tackle the water crisis as a unified whole.

One Health unites three overarching principles:

Water is a foundational component of human health and wellbeing

- Ready access to sufficient, clean water underpins every global health goal, yet billions of people still lack safe water, sanitation and handwashing facilities, resulting in high disease burdens linked to waterborne infections, toxins and pollutants. If there were any doubts or blind spots, Covid-19 has made the connection between water, sanitation, health and the economy abundantly visible. In so doing, it has also forced us to look at watershed health together with the people who depend on its resources¹. One example of this relationship is illustrated by Herrera et al (2017), who found that watershed health, as measured by intact forest, has been shown to reduce the risk of diarrheal disease in children in areas downstream.



Water is a human right

- Access to water and sanitation are recognized by the United Nations as human rights, reflecting the fundamental nature of these basics in every person's life.

Water does not come from a tap

- Water always has a source, and that source is under increasing threat. A WASH focus on 'taps and toilets' overlooks the vital connections between the wider landscape and the multiple ways in which freshwater ecosystems contribute to human health and wellbeing. Similarly, a focus on landscape health within the WRM sector overlooks the fundamental role that natural ecosystems play in people's lives.

Through an integrated One Health approach, the Human Right to Water is realized through healthy watersheds that

1. *Increase access to clean water, reducing preventable deaths and illness from water-borne disease; and*
2. *Ensure water for food systems*

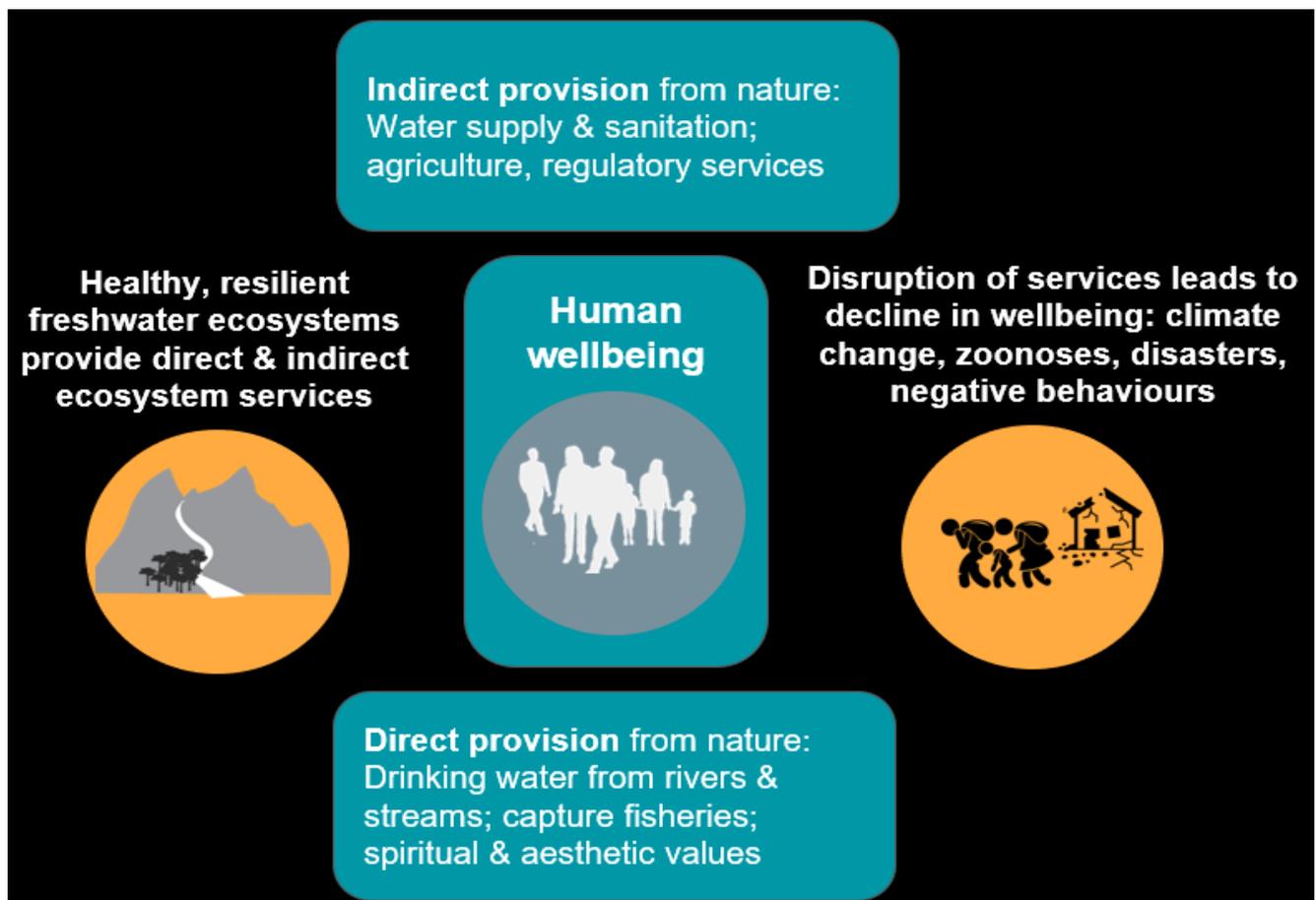


¹ <https://smartwatermagazine.com/blogs/lesley-pories/covid-19-building-bridges-within-water-sector-and-across-other-sectors>

The One Health framework illustrates the intersection between the direct and indirect provisioning services of freshwater ecosystems and their contribution to health and human wellbeing.

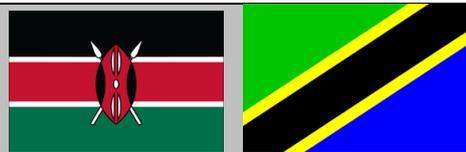
- **Indirect provisioning** includes the delivery of all those services that sustain human wellbeing but which are no longer visibly linked to freshwater ecosystems. Water from the tap, food on the table – they all rely on water flowing into utilities or infrastructure, such as dams and reservoirs, to be transferred by pipes to households, businesses, places of learning, workshop or government or into irrigation networks and other agriculture systems.
- **Direct provisioning** includes access to clean water that doesn't necessarily rely on infrastructure. Inland fisheries, for example, continue to serve as a vital source of nutrition in large parts of Asia, Africa and South America. Investments to sustainably manage freshwater fisheries (lakes and rivers) could also reduce levels of wild meat hunting, thus contributing to reducing risks of diseases transmitted through animals to humans. Many cultures around the world, often nomadic, rely upon water supplies sustained by clean rivers and streams. Rivers, lakes and streams additionally fulfil important cultural and aesthetic functions - contributing to mental wellbeing and quality of life.

The provision of indirect and direct services is underpinned by **healthy, resilient and well-managed ecosystems** that ensure there is enough water, of good quality, at the right time of year. Resilient ecosystems depend on clean source water areas and vibrant freshwater ecosystems that are able to carry out provisioning services appropriately. Access to clean water is ultimately driven not only by the availability and health of freshwater resources, but also by surface water and groundwater. For surface water, particularly rivers, this means healthy source areas with flows of water that are clean, follow reliable seasonal patterns, and are allocated with upstream and downstream users in mind.



What does One Health look like in practice?

Under WWF's Blue Heart of Africa initiative, promoting a One Health approach across conservation landscapes has become a priority for WWF. In order to achieve this vision, WWF is collaborating with partners with significant experience and expertise in health and WASH to take a more integrated approach to freshwater conservation. The following cases are examples of where WWF and its partners have started to implement One Health on the ground.



WWF and Water Aid have come together to develop a programme in one of Africa's most important conservation landscapes, Southern Kenya-Northern Tanzania (SOKNOT). Healthy freshwater resources are the cornerstone of SOKNOT's livelihoods, ecosystems and economies. Population growth, poor water management and inadequate governance have resulted in an increased pressure on freshwater resources. Combined with changing weather patterns, less predictable rainfall, and increased instances of drought, these changes have major implications not only for wildlife, but also for the communities that share the landscape and the additional communities that depend on habitat and wildlife health to attract safari tourism, which is a major component of the economy.

Sustainable WRM that integrates catchment health with WASH services is an important component of a climate resilient freshwater security plan. A reliable source of clean water that can withstand floods and drought, together with well-managed sanitation systems and handwashing facilities to protect against illness, can reduce the health and livelihood risks faced by poor and marginalized communities.

The project will ensure improved access to managed, safe, and sustainable freshwater sources for communities and wildlife from source to point of use by integrating WRM and WASH under One Health by:

- Increased access and use of climate resilient WASH services (technologies) and freshwater resource management;
- Improved sustainable community livelihoods;
- Increased access to sustainable and safe WASH infrastructure; and,
- Enhanced freshwater and WASH governance at catchment and sub-catchment levels

A call to action for actors in the WRM and WASH sectors:

WRM and WASH actors need to expand beyond their areas of comfort and forge new alliances to truly tackle the multidimensional challenges we face. WASH and food security interventions for the most vulnerable risk being undermined if they do not include an additional focus on managing the freshwater resources and ecosystems upon which they depend. There are a number of strategies that both WRM and WASH actors should deploy in an effort to increase the focus on integrating WRM and WASH towards a common goal of One Health:

Effective governance: Good governance underpins good decision-making on WRM as well as WASH and is necessary for all types of interventions identified in this initiative. Partnerships with WASH and health organizations will also create opportunities for better coordination across WRM and WASH ministries – entities that currently look at water from different, sometimes competing, angles.

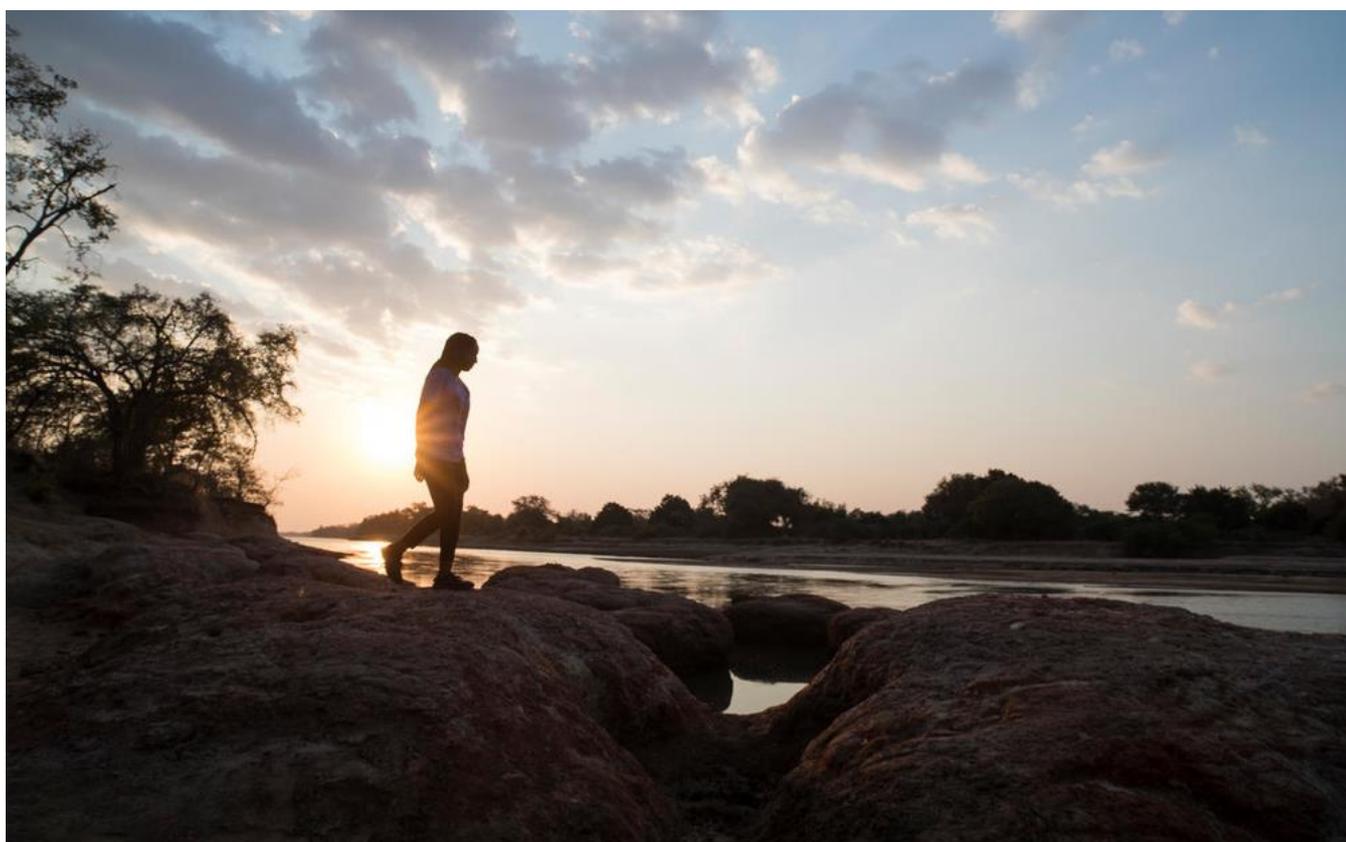
Bankable water solutions: Investors, banks and private companies have the appetite to invest in more sustainable water projects, but there is no pipeline of viable opportunities. WWF and its partners are taking action to support the development of a pipeline of investable or 'bankable' projects and to ensure that these are delivering against a broader landscape financing plan to support the development of more climate resilient and sustainable landscapes and economies. By investing in broader catchment landscape health, bankable projects also help to ensure the security of WASH within a particular catchment.

Influencing finance: The finance gap for Sustainable Development Goal 6 for water and sanitation cannot be closed by government and philanthropy alone. Building partnerships with financial institutions and influencing investments in water is a key approach to a more sustainable future, and early innovation is likely to require mechanisms that blend the public and donor funds with private capital as we build trust and confidence in the

solutions. Coordination across WRM and WASH opportunities in a landscape can also create more value for money since the two sectors can blend their traditionally disparate funding sources towards a common goal.

Water stewardship: WWF subscribes to the definition of water stewardship provided by the Alliance for Water Stewardship: “the use of water that is socially and culturally equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder-inclusive process that includes both site- and catchment-based actions.”² Approaches that prioritize good water stewardship are key to working with private sector stakeholders and can be a useful way of bridging the WRM and WASH sectors.

Community empowerment: Any intervention should be designed in close cooperation with local communities, strengthening their ownership over freshwater resources and WASH solutions. In a One Health context, it is particularly important to pay attention to the impacts of different WRM or WASH initiatives on communities upstream as well as downstream.



² <https://a4ws.org/about/>