



Cross-sectoral benefits of action in sanitation

Case studies

Cross-sectoral benefits of action in sanitation

Action in sanitation can generate wide-ranging and impactful benefits across all the sectors covered by the 17 Sustainable Development Goals (SDGs).

To help maximise these synergies and opportunities, three principles have been identified (see the accompanying 'Policy brief' in this series).

This collection of three case studies provides practical insights into:

- **how multiple benefits are achieved through action in sanitation (Principle 1);**
- **where commonly missed opportunities exist (Principle 2);** and
- **how equitable outcomes are leveraged through action in sanitation (Principle 3).**

Case studies

The case studies were jointly selected by WaterAid and UCL based on availability of information, diversity of geography and to cover interventions at the local, regional, and national level.

We used the synergies between sanitation and SDG targets mapped in the global study completed by University College London in 2019 (see Parikh et al., 2021) to analyze the case studies.

A link between the case study and SDG targets is showcased when an action matched the justification for an existing synergy in the global mapping study.

Achieving multiple benefits

Project Malio

Madagascar

A community-led approach to eliminating open defecation and facilitating sustained behaviour change

2014 – 2017

▼ Project Malio team member conducts audit of newly constructed latrines.



SEED Madagascar (2017)

● Lead organisation

SEED Madagascar (UK charity also known as Azafady) was responsible for project implementation, financial management, monitoring and evaluation.

● Funders

UK National Community Lottery Fund (through the International Community grant programme) and Guernsey Overseas Aid and Development Commission.

For public latrines, local communities raised funds for construction materials. Project Malio's construction team provided labour to refurbish existing latrines.

● Project partners

The Madagascar Ministries of Health, Water and Education and regional Diorano-WASH (water, sanitation and hygiene) network were responsible for monitoring and evaluation of WASH progress at schools. Together with the municipal council, these partners gave feedback to the local monitoring committees from each 'fokontany' (districts, small settlements, neighbourhoods, villages) about sanitation action planning.

● Local partner associations

In three years, eight civil society associations were mentored and received financial assistance. The organisations were responsible for awareness-raising, mass mobilisation events (clean-ups and recreational events with sanitation and hygiene educational opportunities). Their participation was evaluated every year for extensions of the partnership agreement.

● Goal

End open defecation and promote sustained behaviour change.

● Location

Tolanaro (former Port-Dauphin) Anosy Region, southeast Madagascar.

● More information

<https://madagascar.co.uk/projects/water-sanitation-and-hygiene/malio>

PRINCIPLE 1

Project Malio

Madagascar

Pathways

Improved access to sanitation facilities

- Support construction and improvement of sanitation infrastructure for 799 households, 17 schools benefiting 7,406 students, and three public latrines with business unit coordination committee.

Awareness raising, capacity building and hygiene and sanitation education

- Community-led total sanitation (CLTS) methodology to develop contextualised community sanitation action plans: 10 developed with ongoing implementation.
- Community meetings to discuss the health benefits of improved hygiene behaviours: 527 focus groups with beneficiary and non-beneficiary households.
- Mass media campaigns (radio communications) and community events: 11 clean-ups of open defecation sites and recreational activities with 9,139 students engaged. The main messages were hand-washing, awareness of faecal-oral contamination and safe use of latrines.

Monitoring and evaluation

- Ongoing monitoring of open defecation levels by Community Sanitation Agents (COSANs) who also monitored implementation of sanitation action plans (10 fokontany monitoring committees).
- School WASH Committee: monitoring of school progress towards the status of School Friend of WASH.¹
- Peer to peer monitoring of sanitation facilities and hygiene practice, 6,567 students participated in WASH educational lessons.
- Satisfaction surveys of community events and trainings and yearly evaluation of partner associations.

¹ Official criteria in Madagascar to evaluate quality of WASH facilities and practices at schools.

PRINCIPLE 1

Project Malio

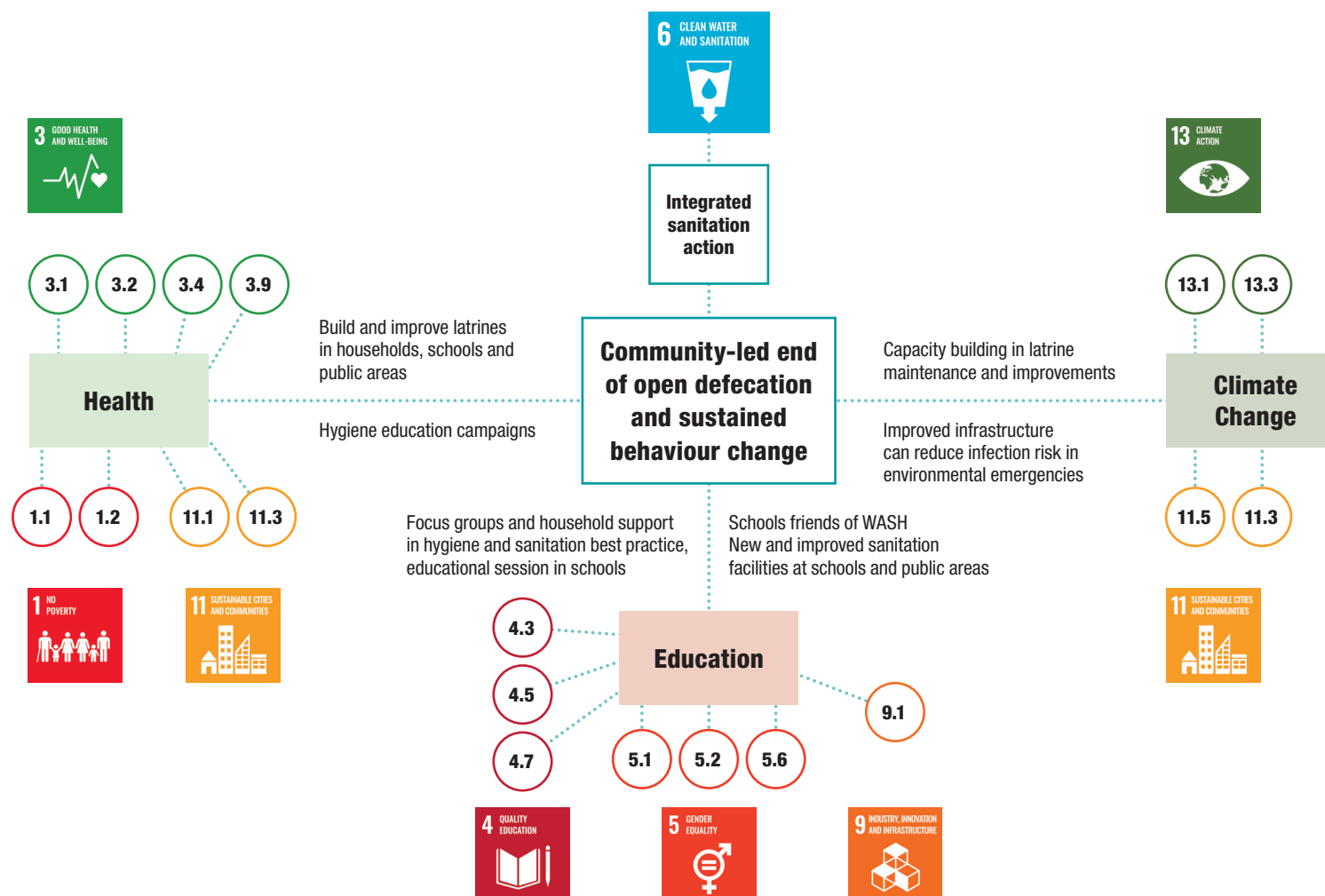
Madagascar

Existing and potential links of Project Malio's integrated sanitation action with SDG targets grouped by type of benefit: health, education and climate change.

The links show project actions that match the rationale for sanitation to have synergies with a target, using the global mapping study completed by University College London in 2019 (see Parikh et al., 2021).

Figure 1.
Sanitation intervention with multiple benefits across health, education and climate change SDGs

Parikh et al., 2021



PRINCIPLE 1

Project Malio

Madagascar

Better health through improved sanitation infrastructure and behaviour change

SDG



TARGETS

- | | |
|--|------------------------|
| ● Improving sanitation infrastructure in households, schools and public areas has synergies with healthy lives and wellbeing (Targets 11.1, 11.3). Awareness raising and education about sanitation and hygiene contribute to these synergies. | 11.1 / 11.3 |
| ● Safe and hygienic sanitation facilities can lead to reduced maternal mortality and improved infant health (Target 3.1) and tackling poverty (Targets 1.1, 1.2). | 3.1 / 1.1 / 1.2 |
| ● Increased access to sanitation facilities can reduce premature mortality from non-communicable diseases and reduce anxiety and stress (Target 3.4). | 3.4 |
| ● Preventable deaths can be reduced (Target 3.2) through sustained behaviour change and improved sanitation infrastructure. Ending open defecation contributes to lower levels of pathogens in the environment. | 3.2 |
| ● Promoting and enabling access to sanitation infrastructure and services can reduce water and soil pollution (Target 3.9). | 3.9 |

Access to safe sanitation facilities can improve school attendance and gender equality

SDG



TARGETS

- | | |
|---|------------------------|
| ● Improved access to sanitation facilities can enhance school attendance among girls (Targets 4.3, 4.5) and reduce discrimination if women and girls' special needs are recognised (Target 5.1). | 4.3 / 4.5 / 5.1 |
| ● Building and improving toilets and creating awareness of safety issues can reduce violence against women e.g., in public toilets and locations of open defecation (Target 5.2). | 5.2 |
| ● Access to safe sanitation facilities for women is linked with potential improvements in reproductive health (Target 5.6). | 5.6 |
| ● Educational campaigns, focus groups and peer monitoring to end open defecation and improve hygiene practices can contribute to sustainable lifestyles and promote sustainable development (Target 4.7). | 4.7 |

PRINCIPLE 1

Project Malio

Madagascar

Contextualised community sanitation plans have synergies for sustainability and climate action

SDG



TARGETS

- Improving sanitation facilities in households, communities and schools contributes to urban resilience (11.5) and prevent environmental contamination (Target 6.1). **11.5 / 6.1**
- Educational campaigns and capacity building to design community sanitation action plans can develop skills for participatory planning (Target 11.3) and enhance community resilience (Target 13.1). These activities can also support climate change adaptation and mitigation actions (Target 13.3). **11.3 / 13.1 / 13.3**

SDG



TARGETS

Links with other principles and further developments:

- Future work should include menstrual hygiene management to ensure that women and girls' special needs are recognised (Target 5.1) **5.1**
- Community sanitation plans must consider climate change risks and incorporate climate change adaptation actions to improve community resilience.
- Potential to explore safe re-use of human waste to reduce greenhouse gas emissions by storing carbon and by enhancing agricultural yields (Targets 2.4, 11.1, 13.b, 15.1). **2.4 / 11.1 / 13.b / 15.1**

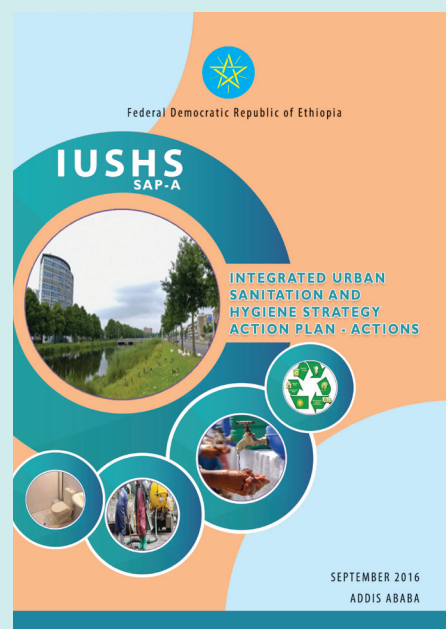
PRINCIPLE 2

Identifying commonly missed opportunities

National Integrated Urban Sanitation and Hygiene Strategy (IUSHS)

Ethiopia

2014 – 2020



● Lead organisations

Key institutions in developing the IUSHS:

Ministry of Health, Ministry of Urban Development and Housing, Ministry of Water, Irrigation and Electricity, Ministry of Environment, Forestry and Climate Change, Ministry of Culture and Tourism, Ethiopian Institute of Water Resources, and the Food, Health Care Medicine Control Agency.

● Coordination

Urban Sanitation and Hygiene Technical Working Group, led by the Ministry of Health.

● Technical and financial support

Water and Sanitation for the Urban Poor (WSUP), UK Foreign, Commonwealth and Development Office (FCDO), UNICEF Ethiopia, the Water and Sanitation Program (WSP)/World Bank, World Health Organisation (WHO) Ethiopia, WaterAid Ethiopia, John Snow, Inc., Population Service International.

● Goal

Develop a robust and sustainable sanitation chain in urban areas not limited to behaviour change and household investment in toilets.

● Location

Ethiopia's urban areas.

● More information

Federal Democratic Republic of Ethiopia (2016).

<https://www.wsup.com/content/uploads/2019/12/D.-FINAL-IUSH-SAP.pdf>



**National Integrated
Urban Sanitation and
Hygiene Strategy
(IUSHS)**

Ethiopia

Pathways

- Overarching integrated strategy supporting decentralised sanitation systems and sanitation-related micro-enterprises, with job creation in and outside of the public sector.
 - Improvement of regulation to assure quality of sanitation services, optimise private sector participation and to systematically manage environmental and public health risks.
 - Sanitation-related interventions should be built into and delivered through city and town development plans.
 - Advocacy campaigns to raise sanitation and hygiene profile and promote behavioral change.
-

PRINCIPLE 2

National Integrated Urban Sanitation and Hygiene Strategy (IUSHS)

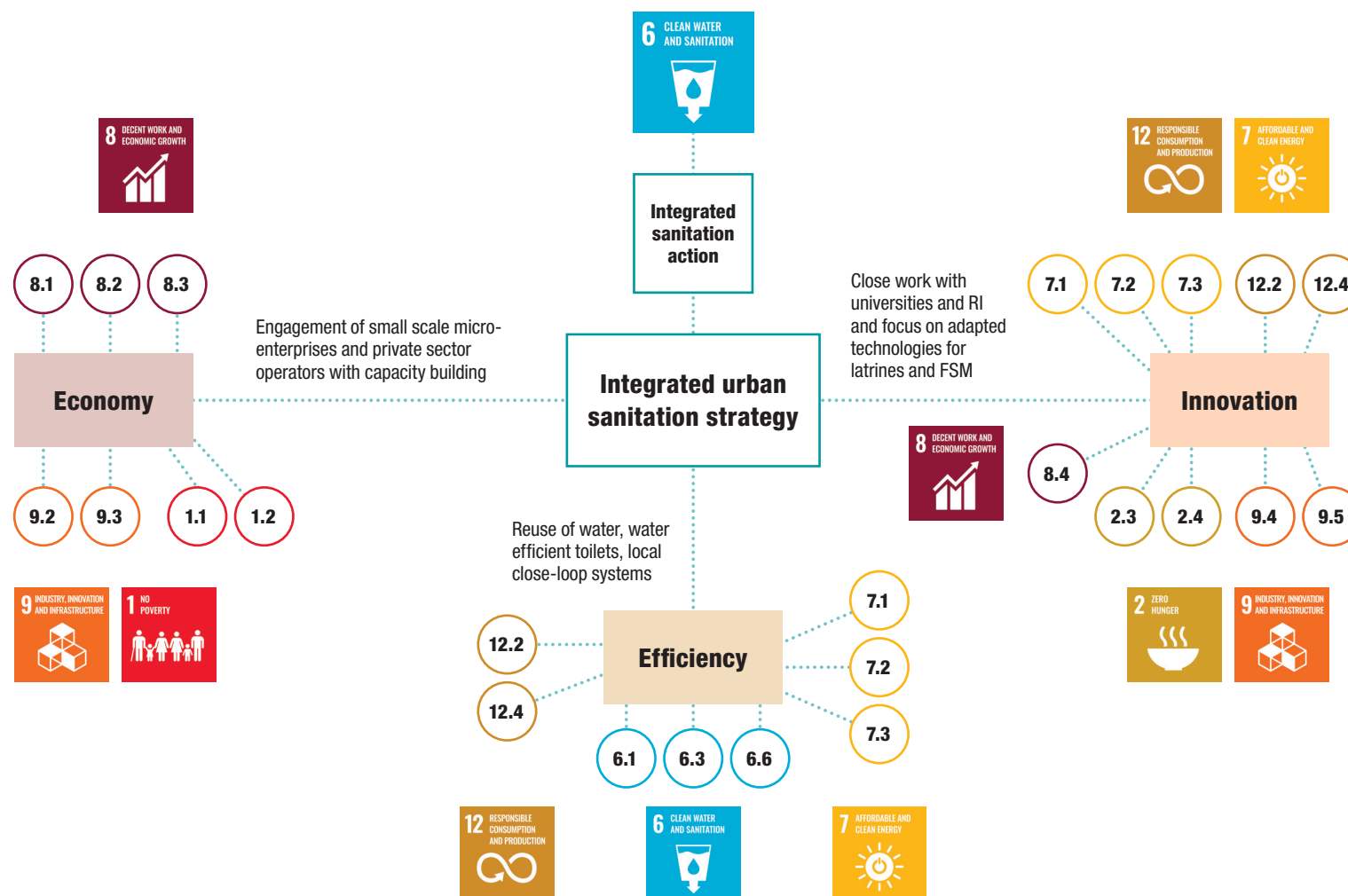
Ethiopia

Existing and potential links of IUSHS with SDG targets grouped by type of commonly missed opportunity: innovation, efficiency and the economy.

The links show project actions that match the rationale for sanitation to have synergies with a target, using the global mapping study completed by University College London in 2019 (see Parikh et al., 2021).

Figure 2.
IUSHS activities guided by innovation, efficiency and the economy, identifying commonly missed opportunities

Parikh et al., 2021



PRINCIPLE 2

National Integrated Urban Sanitation and Hygiene Strategy (IUSHS)

Ethiopia

Promote sustainable economic growth and improved productivity engaging micro-enterprises and creating livelihoods

SDG



TARGETS

- Engaging small-scale micro-enterprises and private sector operators in services along the sanitation chain can support economic growth and productivity (Target 8.3). **8.3**
- By opening markets for the private sector² along the sanitation chain, the IUSHS creates opportunities for livelihoods within the government and beyond (Targets 1.1, 1.2, 8.1, 8.2). **1.1 / 1.2 / 8.1 / 8.2**
- To create a financially viable business environment the IUSHS promotes clustering of different sanitation components, support in accessing finance, tax relief period and capacity building of staff (Target 8.3). **8.3**
- These actions can create synergies for sustainable industrialisation, livelihood creation and integration into value chains and markets (Target 9.2, 9.3). **9.2 / 9.3**

SDG



TARGETS

Encouraging decoupled economic growth with efficient use of resources along the sanitation chain

- The development of a robust sanitation chain is to be based on technical solutions that enhance efficient use of resources. Proposed strategies include small-scale sludge transfer stations that also provide anaerobic primary treatment and biogas generation by local small-scale enterprises (Target 7.1-7.3). **7.1-7.3**
- The IUSHS promotes reuse of water, water efficient toilets and local closed-loop systems (Targets 6.1, 6.3, 6.6) to reduce pressure on natural resources and safeguard ecosystems (Targets 12.2, 12.4). **6.1 / 6.3 / 6.6 / 12.2 / 12.4**

² Consultancy, construction and supervision of facilities, solid and liquid waste collection, manufacturing and supply of sanitation facilities and some scope for sanitation services installation and management.

PRINCIPLE 2

National Integrated Urban Sanitation and Hygiene Strategy (IUSHS)

Ethiopia

Affordable and sustainable sanitation services with innovation and use of technology

SDG



TARGETS

- | | |
|---|--------------------------------------|
| ● Technical innovation, research and development are at the core of the IUSHS to address multiscale solutions for resource efficient sanitation chains (Targets 9.4, 9.5). | 9.4 / 9.5 |
| ● IUSHS plans for specialised training for micro- and small-scale enterprises including skills development and technical innovation (Target 9.5). | 9.5 |
| ● Close collaboration with universities aims to develop resource efficient technologies for latrines and faecal sludge management (FSM). These actions can be linked to waste-to-energy conversions (Target 7.1), boost productivity and cost savings (Targets 8.4, 9.5) and reduce water consumption (Targets 12.2, 12.4). | 7.1 / 8.4 / 9.5 / 12.2 / 12.4 |
| ● The IUSHS stresses local treatment of faecal sludge to recover nutrients for recycling. Technologies to treat and recycle wastewater can enhance agricultural and energy production and improve soils (Targets 2.3, 2.4, 7.1, 7.2). | 2.3 / 2.4 / 7.1 / 7.2 |

SDG



TARGETS

Links with other principles and further developments:

- | | |
|--|------------------------------|
| ● The IUSHS proposes inclusive sanitation facilities that consider gender and vulnerability while ensuring affordability. Sensitivity towards gender and differently abled people in the IUSHS can leverage equitable outcomes for all (Targets 4.5, 5.1, 5.2, 5.6). | 4.5 / 5.1 / 5.2 / 5.6 |
| ● The implementation guidelines propose engagement with youth, women associations and homeless citizens for local participation. The aim is to actively involve vulnerable groups that often have poor sanitation access (Principle 3). | |
| ● The development of robust services across the sanitation chain combined with hygiene awareness, behaviour change and household investment in toilets can have multiple benefits across health, education and climate change (Principle 1). | |

PRINCIPLE 3

Leveraging equitable outcomes

WASH for Public Health (WASH4PH)

Ghana

Latrine artisan training

2016 – 2019



Fauzia Aliu/ WaterAid Ghana

◀ 'Kalira the Master', the nickname her community gave her after being trained as a latrine artisan. Kalira is a 43-year-old mother of five children. She was the first female artisan to be trained.

● Lead organisations

Funder: Global Affairs Canada implemented by WaterAid Ghana with local partners' support: The Centre for Indigenous Knowledge and Organizational Development, Widows and Orphans Movement, Right to Play Ghana, Community Water and Sanitation Agency, Ghana Health Service, Ghana Education Service, Navrongo Health Research center.

● Goal

Access to clean water, decent toilets in 12 health care facilities, 32 educational institutions and 42 communities.

● Location

Communities in two Upper East Region districts: Kassena Nankana West and Bongo District in Ghana.

● More information

WaterAid (2021).

https://www.wateraid.org/ca/sites/g/files/jkxoof281/files/2020-11/20-128S_WAC_2020_AR_Nov6_FINAL.pdf



WASH for Public Health (WASH4PH)

Ghana

Pathways

- Installation of inclusive toilets in 13 schools and 8 health facilities.
 - Training 131 latrine artisans (25% female) including capacity building on Human Rights Based Approach (HRBA).
 - Training of 79 healthcare workers, including cleaners, on WASH-infection prevention and control and WASH facility improvement tools.
 - Workshops held for students on menstrual hygiene management and the making of washable/reusable sanitary pads.
 - Health clubs set up in 32 schools with peer-to-peer learning for good hygiene.
 - Using the innovative 'Healthy Play' model developed by Right to Play, engaging children in social and cultural activities.
-

PRINCIPLE 3

WASH for Public Health (WASH4PH)

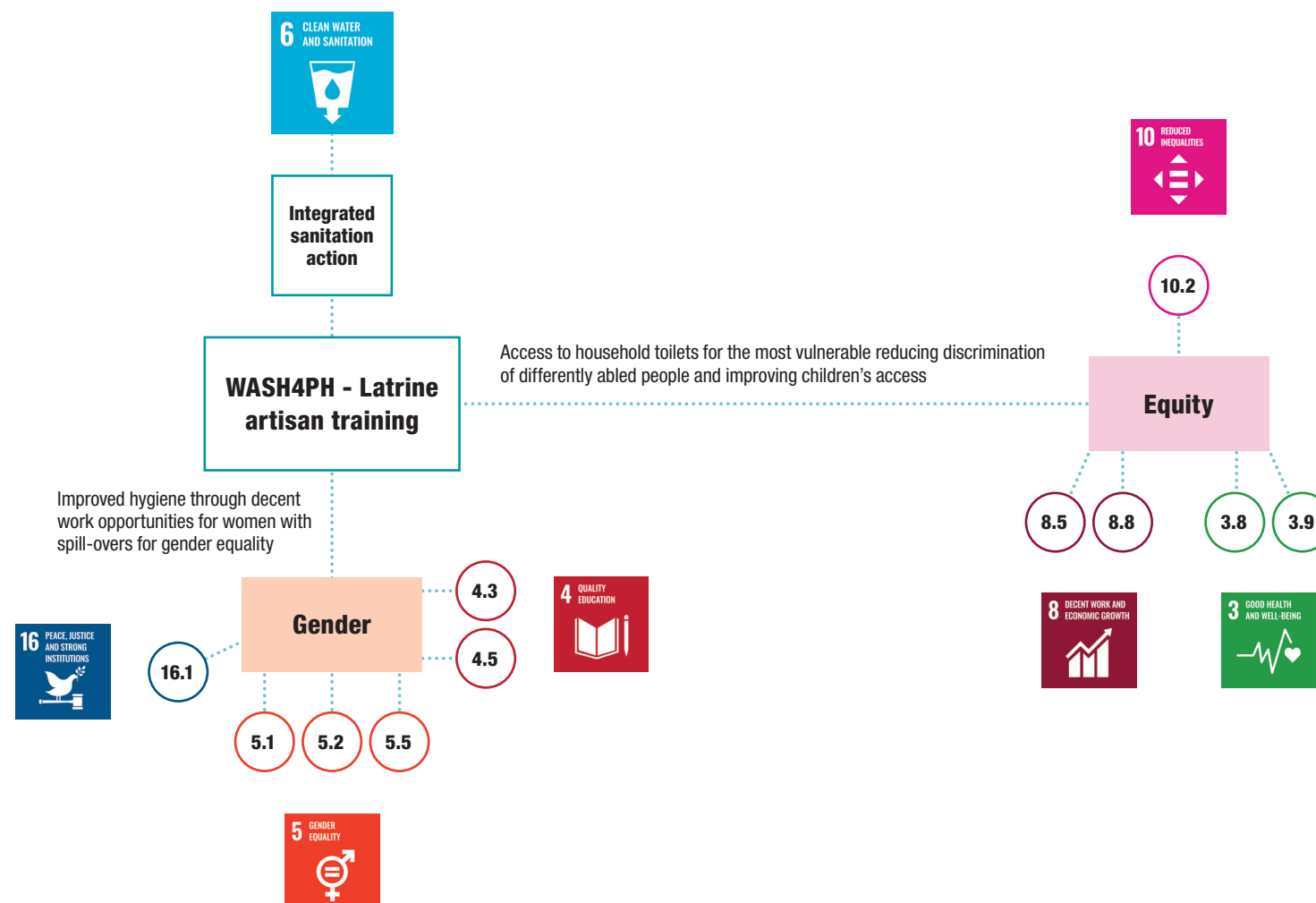
Ghana

Existing and potential links of WASH4PH's integrated sanitation action with SDG targets grouped by gender equality and equity outcomes.

The links show project actions that match the rationale for sanitation to have synergies with a target, using the global mapping study completed by University College London in 2019 (see Parikh et al., 2021).

Figure 3.
Training to build improved sanitation facilities can support equitable outcomes for all

Parikh et al., 2021



PRINCIPLE 3

WASH for Public Health (WASH4PH)

Ghana

Equitable outcomes leveraged through training in sanitation

SDG



TARGETS

- | | |
|---|-------------------------|
| ● Latrine artisan training was integral to improving inclusive access to sanitation, promoting gender equality and hygiene (Target 5.1). | 5.1 |
| ● Training of women as artisans has expanded women's participation in decision making processes (Targets 5.5, 10.2) and created livelihood opportunities (Target 8.5). | 5.5 / 10.2 / 8.5 |
| ● Training of healthcare workers, including cleaners, on safety and sanitation improvement tools ³ can enhance the dignity of sanitation workers (Targets 8.8, 10.2). | 8.8 / 10.2 |
| ● Installation of inclusive toilets ⁴ in schools and vulnerable households reduces discrimination of differently abled people, women and girls (Targets 4.3, 4.5, 10.2). | 4.3 / 4.5 / 10.2 |
| ● Gender inclusive toilets can improve the safety of women and girls (Targets 5.2, 16.1). | 5.2 / 16.1 |
| ● The installation of decent toilets in healthcare facilities has synergies with inclusive access to services and decent work (Targets 3.8, 3.9). | 3.8 / 3.9 |

SDG



TARGETS

Links with other principles and further developments:

- | | |
|--|--------------------------|
| ● The 21 gender inclusive sanitation facilities built were also environmentally sound linking to enhanced urban and community resilience (Targets 11.5, 13.1), reduction of environmental contamination and improvements in health (Target 6.1). | 11.5 / 13.1 / 6.1 |
| ● The training for latrine artisans developed skills to build climate resilient facilities linking up to urban resilience (Target 11.5) and livelihood opportunities, with synergies for the local economy (Target 8.3). | 11.5 / 8.3 |
| ● Future work related to the improvement of households' latrines could be linked to property rights to improve ownership and control of the poor and the vulnerable (Target 1.4). | 1.4 |

³ Specifically, WASH-Infection Prevention and Control and WASH Facility Improvement Tools (WaterAid, 2019)

⁴ Inclusive WASH services according are those that "consider the needs of all genders, persons with disabilities and marginalized groups" (WaterAid, 2020)

Portrait of Hanitra, 33, head teacher of Beanamamy primary school in front of their new school building under construction. Beanamamy village, Bevato commune, Tsiroanomandidy district, Bongolava region, Madagascar. October 2018.

Conclusions

The global mapping study showed the links of integrated sanitation actions with all SDG and multiple targets (see wheel in Figure 4).

Three principles were identified to harness the potential synergies between sanitation interventions and all the SDG (see principles in Figure 4).

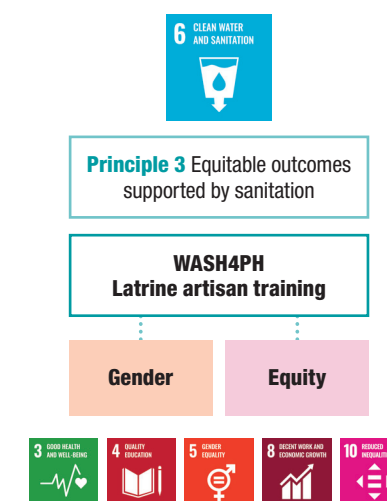
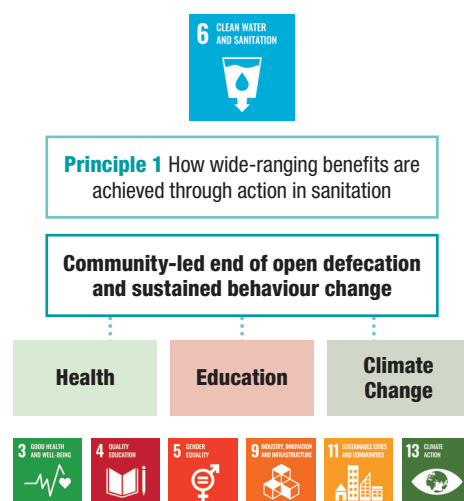
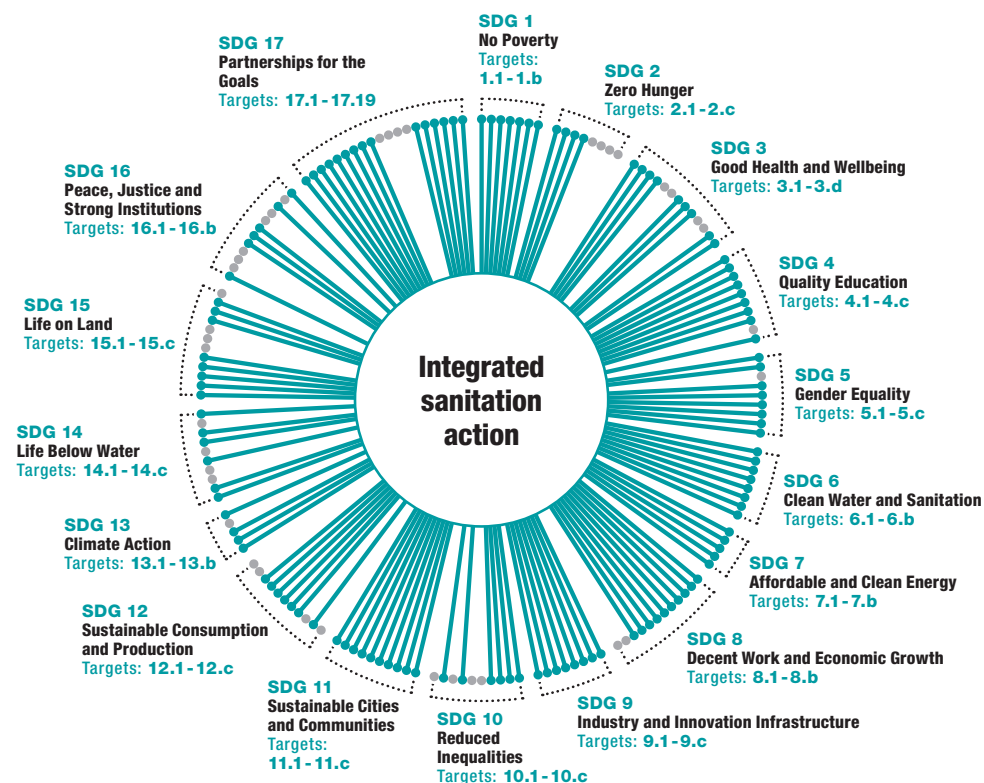
This document highlights through case studies how each of the principles for sanitation interventions can deliver cross-sectoral benefits on the ground (see case studies in Figure 4)

Achieving wide-ranging benefits, picking up on missed opportunities and leveraging equitable outcomes through integrated sanitation interventions can address all SDG. The case studies offer a pathway on how this could be achieved.

Figure 4.
Integrated sanitation actions
have wide-ranging benefits,
seize missed opportunities and
harness equitable outcomes
for all

Illustrating one principle each, the three
case studies show the potential of
integrated sanitation actions to achieve
multiple SDG targets.

Parikh *et al.*, 2021



References

Community Fund, Project Malio Overview, Community Fund UK.
Accessed at <https://www.tnlcommunityfund.org.uk/funding/grants/0031006868>,
(accessed 14 January 2022)

Federal Democratic Republic of Ethiopia (2016) *Integrated Urban Sanitation and Hygiene Strategy Action Plan – Actions (IUSH-SAP-A)*. Addis Ababa.
Available at: <https://www.wsup.com/content/uploads/2019/12/D.-FINAL-IUSH-SAP.pdf>

Federal Democratic Republic of Ethiopia (2016) *Integrated Urban Sanitation and Hygiene Strategy Action Plan*. Addis Ababa.
Available at: <https://watsanmissionassistant.org/wp-content/uploads/2018/10/ethiopia-urban-strategy-by-wsup-a-iushs-english-final.pdf>

Ficek, F, Novotný J. *Comprehending practitioners' assessments of community-led total sanitation*. Health Promotion International. 2019;34(6): e129-38.

Fonseca, C., Kingdom, B., Delmon, V., and L. Pories, 2020.
Water and sanitation: How to make public investment work. A handbook for finance ministers. Sanitation and Water for All: New York.
Accessed at <https://www.sanitationandwaterforall.org/handbook-finance-ministers-how-make-public-investment-work>

Parikh, P., L. Diep, L., P. Hofmann, J. Tomei, L. C. Campos, T. H. Teh, Y. Mulugetta, B. Milligan, B., and M. Lakhanpaul, 2021. *Mapping Synergies and Trade-Offs between Sanitation and the Sustainable Development Goals*.
UCL Open Environment reprint.
Accessed at <https://ucl.scienceopen.com/hosted-document?doi=10.14324/111.444/ucloe.000016>

Richer, J., Mouillier, A., Sheppard., S. (2020) *Reducing Open Defecation Through Community-Led Total Sanitation in Fort Dauphin, Madagascar: A Case Study*.
McGill Journal of Global Health, V. IX (1).

SEED Madagascar (2017) *Project Malio (final report): A community-led approach to eliminating open defecation and facilitating sustained behaviour change, Fort Dauphin, southeast Madagascar*. SEED Madagascar: London.
Accessed at https://madagascar.co.uk/application/files/8515/0461/2575/Project_Malio_Final_Report_July_2017.pdf

SEED Madagascar (2016) *Project Malio (Year 2): A community-led approach to eliminating open defecation and facilitating sustained behaviour change Fort Dauphin, southeast Madagascar*. SEED Madagascar: London.
Accessed at https://madagascar.co.uk/application/files/2715/0459/9912/Project_Malio_Interim_Report_May_2016.pdf

SEED Madagascar (2015) *Project Malio (Year 1): A community-led approach to eliminating open defecation and facilitating sustained behaviour change Fort Dauphin, southeast Madagascar*. SEED Madagascar: London.
Accessed at https://madagascar.co.uk/application/files/9515/0459/9481/Project_Malio_Interim_Report_May_2015.pdf

Tillett – Aguaconsult (2017) *WaterAid Ethiopia's Twenty Town Utility Strengthening Project Brief No. 5 of 11: Urban Environmental Sanitation*.

WaterAid (2020). *Sanitation framework*. WaterAid: London.
Accessed at washmatters.wateraid.org/publications/sanitation-framework

WaterAid (2020a) *Annual Report 2019/2020. Canada*.
Accessed at https://www.wateraid.org/ca/sites/g/files/jkxoof281/files/2020-11/20-128S_WAC_2020_AR_Nov6_FINAL.pdf

WaterAid (2019) *Annual Report 2018/2019. Canada*.
Accessed at https://www.wateraid.org/ca/sites/g/files/jkxoof281/files/2019-10/WAC_2019_Annual_Report_WEB.pdf

WaterAid (2019a) *My dignity comes first*. Yvonne Kafui Nyaku, WaterAid Ghana.

References

continued

WaterAid Ghana (2019b) *Kalira the master*. Fauzia Aliu, WaterAid Ghana World Health.

WaterAid (2018) *Delivering integrated wash in the face of challenges*. Sampson Atiisi, CIKOD, Ghana.

WaterAid (2018a) *Providing Satisfaction*. Ruth Atengdem, Lambert Asaa, Mustapha Ayawini, Sampson Atiisi, and Thomas Apinaba. CIKOD, Ghana.

WaterAid (2017) *Good hygiene, Good health: WaterAid launches program in Ghana*.

Accessed at <https://www.wateraid.org/ca/media/good-hygiene-good-health-wateraid-launches-program-in-ghana>

WaterAid (2017a) *Safe sanitation for the vulnerable*. Abubakari Issifu, CIKOD, Ghana.

World Health Organisation, 2020. *Global progress report on WASH in health care facilities: Fundamentals first*. World Health Organisation: Switzerland.

Accessed at <https://www.who.int/publications/i/item/9789240017542>

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Cover photo: Midwife Fostina Sedjoah, 36,
washes her hands at the Katiu CHPS health centre,
Katiu Community, Kassena Nankana West District,
Upper East Region, Ghana.

February 2019.

WaterAid/ Eliza Powell

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