OPERATIONAL NOTE

WASH' NUTRITION

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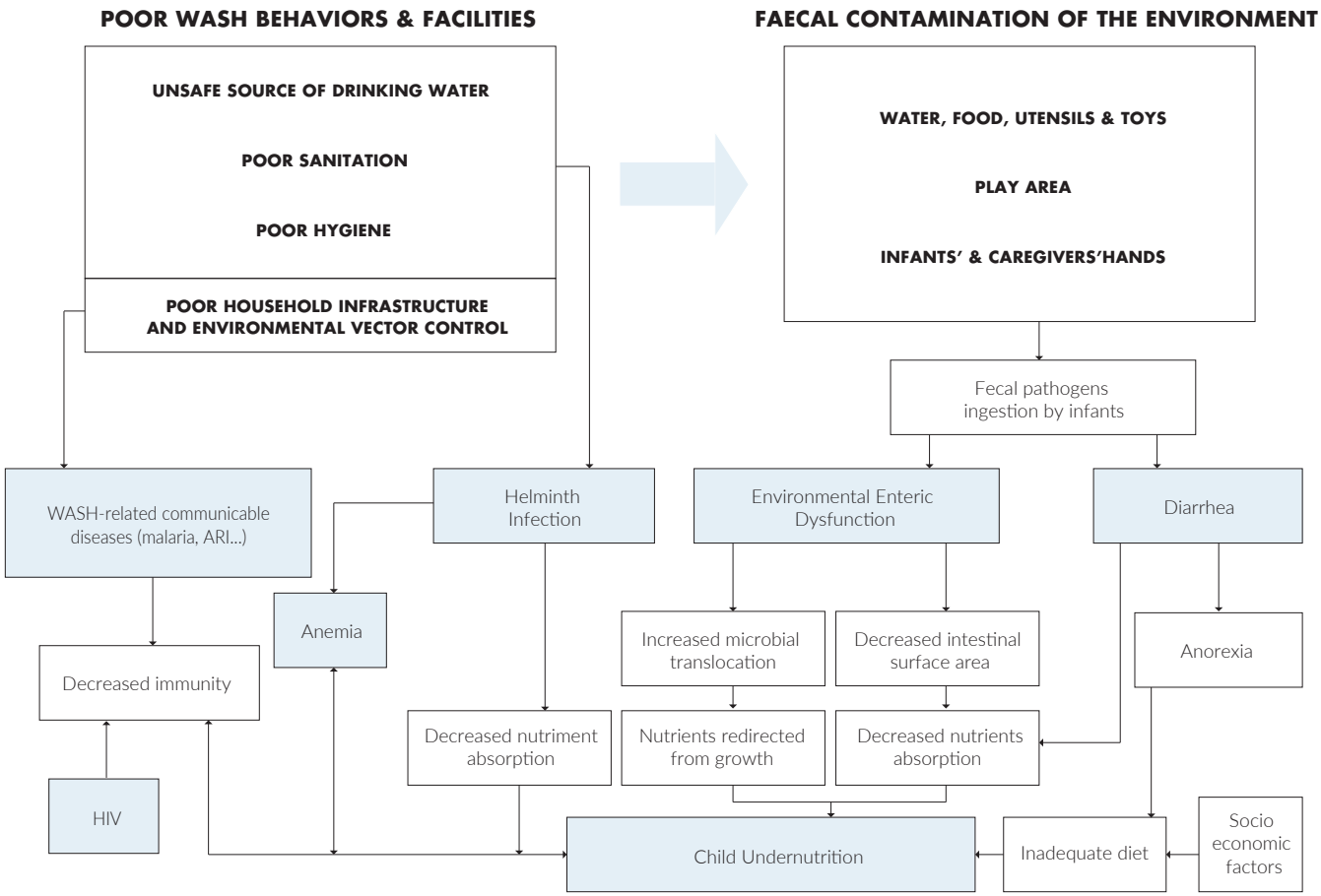
with WASH'Nutrition experts across
the Action Against Hunger network

HOW TO ELABORATE A WASH'NUTRITION STRATEGY

I – UNDERSTANDING THE LINKS BETWEEN UNDERNUTRITION AND THE WASH ENVIRONMENT

45% of under-5 deaths are attributable to undernutrition and 26% of under-5 deaths are linked to Water Sanitation & Hygiene (WASH)-related diseases (diarrhea, malaria and pneumonia[1]). These two causes are closely intertwined in a self-reinforcing cycle. Poor WASH conditions facilitate the ingestion of fecal pathogens which can lead to diarrhea and environmental enteric dysfunction (EED). At the same time, poor WASH conditions also increase the risk of malaria, helminth infection, and Acute Respiratory Infection (ARI). All of these illnesses decrease the body's ability to absorb nutrients, worsening the child's nutritional status.

Figure 1: Links between poor WASH conditions and undernutrition[2].



1. UN Inter-agency Group for Child Mortality, 2019. Levels & Trends In Child Mortality. New York: UNICEF.

2. Adapted from Rakotomanana H, Komakech JJ, Walters CN, Stoecker BJ. The WHO and UNICEF Joint Monitoring Programme (JMP) Indicators for Water Supply, Sanitation and Hygiene and Their Association with Linear Growth in Children 6 to 23 Months in East Africa. International Journal of Environmental Research and Public Health. 2020; 17(17):6262.

II – UNDERSTANDING THE DISTINCTION BETWEEN CHRONIC UNDERNUTRITION AND ACUTE MALNUTRITION AMONG CHILDREN

Table 1: Differences and commonalities between chronic undernutrition and acute malnutrition

CHRONIC UNDERNUTRITION (STUNTING)	ACUTE MALNUTRITION (WASTING)
Measured by low height-for-age.	Measured by low weight-for-height, and/or small Mid-Upper Arm Circumference (MUAC) and/or presence of bilateral pitting oedema.
Process occurring over the longer term in the period between conception and 24 months of age. It is a consequence of prolonged or repeated episodes of nutritional deficiencies, and can also reflect exposure to repeated infection or other illnesses throughout the early years of life.	Reflects recent weight loss as highlighted by a small weight for a given height. Acute malnutrition occurs as a result of a recent shock to a child's nutritional status, which can result from food shortage, a recent bout of illness, inappropriate care practices or a combination of these factors.
Stunted children are more vulnerable to infection and may experience impaired cognitive development and low work capacity during adulthood. Chronic undernutrition usually develops in children aged less than 2 years old and after a child reaches two or three years of age, chronic undernutrition may be irreversible and damage to the child's development is likely to be permanent.	Severely acutely malnourished children are very susceptible to infections and death. Severe Acute Malnutrition (SAM) is treatable. Treatment lasts 6 to 8 weeks.
• Chronic undernutrition and acute malnutrition often co-exist within the same child. • Chronic undernutrition is a risk factor for acute malnutrition and vice versa. • Chronic undernutrition and acute malnutrition share common risk factors.	

III – INTEGRATING WASH AND NUTRITION STRATEGIES AND PROGRAMMES

Strategic level

At the strategic level, integrating the WASH and Nutrition thematic areas can involve:

- Building an integrated strategy, produced in a collaborative way and based on a joint inter-sectoral analysis, planning and strategic thinking. This can be supported by Action Against Hunger's Nutrition Security Policy.
- Ensuring that a strategy for one sector includes important crosscutting issues and specific objectives of another sector and identifies opportunities for integration e. g. 1000-days window of opportunity. Specifically, this implies aligning national WASH and Nutrition sectors frameworks, policies and strategies. This can mean systemizing the integration of nutrition objectives in all WASH frameworks and strategies from the outset. It can also involve including WASH-related indicators and standards in Nutrition and Health frameworks and strategies.

Programmatic level

Integration at the strategic level will extend at the programmatic level. This involves:

→ Identifying programmatic joint opportunities based on:

- Context-specific nutritional needs and priorities
- Areas and temporality of common interest (e. g. undernutrition hotspots; 1000-days window of opportunity)
- Mapping of existing WASH'Nutrition actors in the area of intervention

→ Ensuring geographical concentration of WASH projects in the areas of undernutrition "hotspots". The following key indicators could support this targeting:

- Prevalence of Global Acute Malnutrition (GAM)/SAM or stunting
- Prevalence of micronutrient deficiencies and anaemia among pregnant/lactating women
- Prevalence of diarrheal diseases/malaria
- Proportion of health care facilities lacking basic WASH services
- Community access and distance to a safe water source
- Community availability of a safe water source
- Community access and use of adequate and safe sanitation facilities
- Household (HH) hygiene practices

→ Incorporating WASH and Nutrition indicators discussed and chosen jointly in the Monitoring, Evaluation, Accountability & Learning (MEAL) framework of integrated projects. Examples of indicators include:

- The percentage of nutritional centres delivering the WASH minimum package
- The number of children admitted for SAM treatment having received a WASH minimum package of activities (WASH kit with key hygiene messages/behaviours recommended to parents/caregivers, and/or WASH activities at community level)
- At least one qualitative indicator e. g. percentage of nutritional centres with residual chlorine measured in the drinking water used for appetite tests.

IV – DESIGNING WASH INTERVENTIONS TO MAXIMIZE EFFECT ON UNDERNUTRITION

WASH interventions should be designed to maximize their effect on undernutrition, either as a prevention method or accompanying treatment. As such, they aim to intervene in transmission pathways to prevent fecal pathogens in the environment from entering the body, as well as to reduce the risk of other WASH-related diseases impacting the nutritional status (e. g. ARI, malaria, helminth infections).

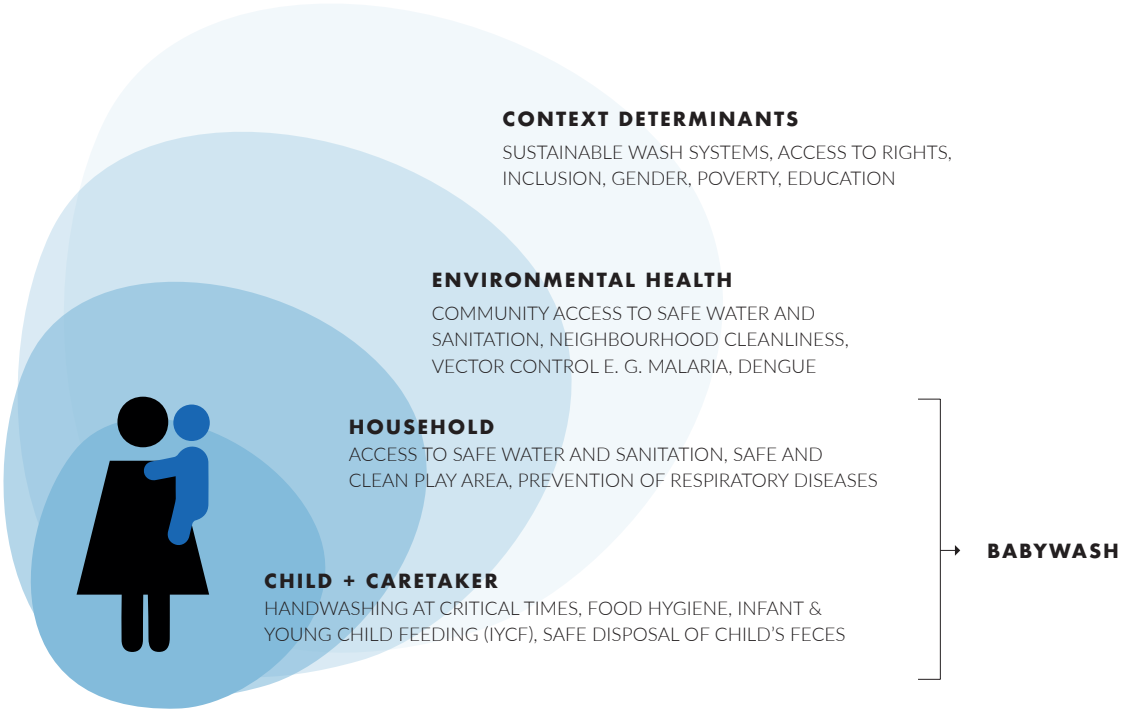
Tailor WASH interventions to context-specific needs and risk factors

This should involve close coordination with Nutrition/Health staff throughout the project cycle. The identification of context-specific needs and risk factors can be fully integrated (ex: joint needs assessment, Link-NCA (Nutritional Causal Analysis)) or aligned (WASH questions included in Nutrition HH surveys/interviews/focus groups, and Nutrition questions included in WASH assessments).

This figure identifies the different levels around a child's life at which WASH interventions can maximize their effect on undernutrition.

These levels should also be understood within the broader context of intervention. Factors and pathways leading to undernutrition are diverse, complex, and most often interconnected. The Conceptual Framework of Malnutrition in the WASH'Nutrition Guidebook can support this.

Figure 2: Levels of WASH interventions to maximize effect on the nutritional status of under-5 children.



Towards transformative WASH

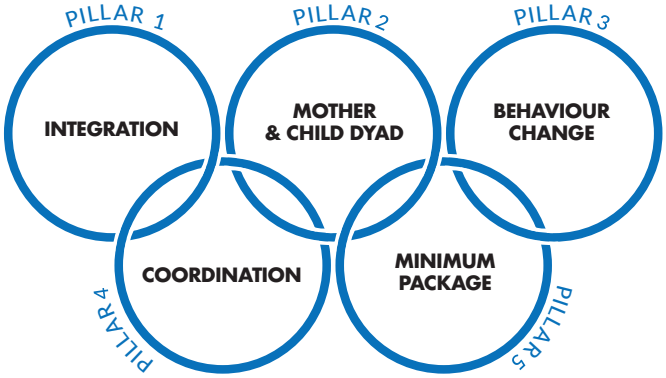
Field actors should aim to address all the transmission pathways in order to produce an effect on undernutrition. The guiding principle of the transformative WASH approach is that – in any context – a comprehensive package of WASH interventions that is tailored to address the local exposure landscape and enteric disease burden is needed. This implies, for instance, recognizing the role of animal feces in causing enteric infections, and the role of mouthing or geophagy as a key pathway to undernutrition during the 1000-days window of opportunity. As such, the aim is to ensure a comprehensive package of WASH services that address all context-specific transmission pathways.[3]

3. To go further on this topic, see the webinar recordings: WASH, Nutrition and Child Growth: Webinar Series for Implementing Partners

GUIDANCE TABLE TO IMPLEMENT THE WASH'NUTRITION APPROACH

STRATEGY

CHRONIC UNDERNUTRITION (STUNTING)	ACUTE MALNUTRITION (WASTING)



WASH'NUTRITION STRATEGY – THE FIVE PILLARS:

Pillar 1 - Integration: Improving coordination and enhancing partnership so as to ensure the integration of health and nutrition goals in all WASH projects from the start.

Pillar 2 - Mother and child dyad: Special attention is given to the mother and child couple in relation with the 1000-days window of opportunity, as the prevention of undernutrition during this period is crucial.

Pillar 3 - Behaviour change: Enhances the importance of behaviour change, knowing that provision of hardware only (access to water and sanitation facilities) brings little benefit to health if it is not accompanied by suitable hygiene behaviours.

Pillar 4 - Coordination: Need to ensure proper coordination with other organisations and partners, as well as appropriate choices depending on the specific characteristics of each project.

Pillar 5 - Minimum package: A set of measures needed to ensure that mothers/caretakers and children have access to safe water in sufficient quantities, adequate sanitation facilities and can practice good hygiene at home. It contains a combination of WASH service delivery, and promotion of good practices, both at the household (HH) level and at the health facility level.

Link: WASH'Nutrition Guidebook

BABYWASH APPROACH:

Objective: Acting in the 1000-days window of opportunity (from conception to 24 months of age) to prevent undernutrition, focusing on the mother-child dyad.
The objectives are to:
- Break the cycle of fecal-oral exposure and transmission pathways in children under 2.
- Achieve optimal health and nutritional-related care practices.

Link: BabyWASH Guidebook

R4ACT (RESEARCH4ACTION):

Process: The 2019 R4ACT Report examined, by systematically screening 600 scientific publications, the impact of WASH activities on acute malnutrition.
Outcome: Six evidence-based recommended activities to ensure HH water quality during Severe Acute Malnutrition (SAM) treatment, developed in a workshop engaging 13 partners.

Link: R4ACT Report

IMPLEMENTATION

CHRONIC UNDERNUTRITION (STUNTING)	ACUTE MALNUTRITION (WASTING)

WASH'NUTRITION STRATEGY IMPLEMENTATION EXAMPLES:

Example **Pillar 1 – Integration:** Geographical co-siting of WASH activities in nutritionally vulnerable areas; Joint situation analysis and planning.
Example **Pillar 2 - Mother and child dyad:** Ensuring a safe and clean play space for the child; Safe disposal of child feces.
Example **Pillar 3 - Behaviour change:** Joint WASH and nutrition hygiene promotion in health facilities (food hygiene, Infant and Young Child Feeding (IYCF), hand washing at critical times) to reduce overburdening and complexity in messaging and increase the chances for adopting promoted practices.
Example **Pillar 4 – Coordination:** Technical working group on WASH'Nutrition (Clusters); Coordination with relevant ministries to design an integrated national WASH'Nutrition plan.
Example **Pillar 5 - Minimum package:** HH water treatment products and soap kit during SAM treatment; Water quality, hand washing stations in health facilities.

BABYWASH APPROACH:

• Pregnancy: Access to adequate, safe water; Household sanitation and personal hygiene; Knowledge of danger signs and care-seeking for illness.

• Labour, delivery & neonatal: Safe water and adequate sanitation; access to safe and clean health facilities; World Health Organization (WHO)'s 5 Cleans´ Comprehensive Essential Newborn Care; Hygienic, exclusive breastfeeding; Hand-washing with soap; Knowledge of danger signs and care-seeking for illness.

• Early infancy: Exclusive breastfeeding; Mother/ caregiver handwashing at critical times; Hygiene for baby; Household hygiene; Safe feces disposal.

• Complementary feeding: Freshly cooked, diverse, nutritious diet; Safe food handling; Protected eating spaces; Treated drinking water; Hand-washing with soap.

• Mobility and exploration: Safe and sanitary spaces for exploration and play; Hygiene for baby: regular bathing and handwashing, clean play and mouthing objects; Clean and protected eating spaces.

R4ACT STEPPED ACTIVITIES:

1 - Select the most appropriate HH water treatment method in the area covered by SAM treatment through a participatory approach.

2 - Systematically coordinate the delivery of HH water treatment adapted to the context with SAM management.

3 - Train identified health facilities staff on a) health center water system management and b) building caregivers' capacity on correct use HH water treatment products.

4 – Improve water system in health facilities.

5 – Develop behaviour change on water treatment in areas covered by SAM treatment.

6 - Ensure information, knowledge and data sharing between the WASH and Nutrition sectors.

EXAMPLE OF A BABYWASH KIT:

Action Against Hunger, Nigeria:

- Play mat
- Jerry can
- 250 grams of soap monthly for 17 months
- Cup with lid
- Bowl with lid, spoon, and fork

EXAMPLE OF A WASH MINIMUM PACKAGE KIT TO ACCOMPANY SAM TREATMENT:

Action Against Hunger, Chad (Ouadinut study, 2018):

- Water disinfection consumables (180 chlorine tablets)
- Safe drinking water storage container with a lid
- 12 bars of soap for hand washing
- A plastic cup with handle (for the child's safe water drinking practice)
- A laminated leaflet representing the main hygiene messages

WASH kits must be adapted to the context of intervention (local preferences and availability of products, potential for sustainability).

RELAPSE PREVENTION ACTIVITIES:

- Document relapse in the nutrition programme (Nutrition/Health team).
- Follow-up post discharge and exit treatment: HH visits following discharge by Community Health Workers in order to follow the child's nutritional status.
- Extended or Complete Package: extending the minimum package beyond the sole duration of the SAM treatment until the end of the high relapse-risk period (60 days on average). Consists mainly of renewing the consumables involved in access to safe water and hygiene practices.

TABLE OUTLINING THE STATE OF EVIDENCE ON THE IMPACT OF WASH INTERVENTIONS ON UNDERNUTRITION (NON-EXHAUSTIVE)

PREVENTION OF CHRONIC UNDERNUTRITION (STUNTING)	TREATMENT OF SEVERE ACUTE MALNUTRITION (SAM, WASTING)
Rakotomanana et al. (2020) WHO and UNICEF Joint Monitoring Programme (JMP) Indicators for Water Supply, Sanitation and Hygiene and Their Association with Linear Growth in Children 6 to 23 Months in East Africa. Findings: Models predicted significantly higher length-for-age z-scores (LAZ) for children living in households with safely managed drinking water compared to those living in households drinking from surface water in Kenya and Tanzania. Children living in households with improved sanitation facilities not shared with other households were also taller than children living in households practicing open defecation in Ethiopia and Tanzania. Gizaw and Worku (2019) Effects of single and combined water, sanitation and hygiene (WASH) interventions on nutritional status of children: a systematic review and meta-analysis. Findings: WASH interventions were significantly associated with increased pooled mean height-for-age-z-score The effect of WASH on HAZ was heterogeneous in age and types of interventions. WASH intervention had more effect on HAZ among under two children. Children who received combined WASH interventions grew better compared with children who received single interventions. Pickering et al. (2015) Effect of a community-led sanitation intervention on child diarrhoea and child growth in rural Mali: a cluster-randomised controlled trial. Findings: Children in Community Led Total Sanitation (CLTS) villages were taller and less likely to be stunted than those in the control group, however no differences were observed in terms of diarrhoeal prevalence. Quattri and Smets (2014) Lack of community-level improved sanitation causes stunting in rural villages of Lao PDR and Vietnam. Findings: Community-level unimproved sanitation causes stunting in rural Vietnam and Lao PDR, regardless of whether a child's household uses improved toilets. Thus, policies, programmatic interventions and incentives would best focus on community-wide (rather than household) outcomes and behavioural change. Spears (2012) Effects of Rural Sanitation on Infant Mortality and Human Capital: Evidence from India's Total Sanitation Campaign. Findings: At the mean program intensity, infant mortality decreased by 4 per 1000 and children's height increased by 0.2 standard deviations.	Stobaugh et al (2019) Impacts of WASH on acute malnutrition. From available scientific evidence to informed action (R4ACT). Findings: Moderate evidence that treating HH drinking water has a positive effect on treatment duration (shorter) and recovery rates (higher), moderate evidence that HH sanitation has no impact on SAM treatment. Altmann et al. (2018) Effectiveness of a Household Water, Sanitation and Hygiene Package on an Outpatient Program for Severe Acute Malnutrition: A Pragmatic Cluster-Randomized Controlled Trial in Chad. (Ouadinut) Findings: For intervention group with WASH package: increased recovery rate (of 10.5%) and shorter time-to-recovery (4.4 days shorter), no impact on relapse. Dodos et al. (2018) Individual and household risk factors of severe acute malnutrition among under-five children in Mao, Chad: a matched case-control study. Findings: At the individual level, SAM was significantly associated with diarrhoea, fever, vomiting, being stunted, and type of complementary meal. At the HH level, SAM was significantly associated with undernourished caretaker, caretaker's hand washing habits, absence of toilet, caretaker's marriage status, and low household food diversity. Doocy et al. (2018) Point-of-use water treatment improves recovery rates among children with severe acute malnutrition in Pakistan: results from a site-randomized trial (PUR2). Findings: Higher recovery rates for group receiving water treatment products, no difference between the types of water treatment methods, no impact on diarrhoeal prevalence, no impact on relapse. ACF (2013) A comparative study on the effects of Ready to Use Therapeutic Food + PUR® in the management of severe acute undernutrition in children under 5 years. (PUR1) Findings: Reduced length of stay of 4 days for RUTF+PUR intervention group. The reduction of 4 days treatment time would be able to cover 90.9% of the supplementary cost.

FOR FOOD.
AGAINST HUNGER
AND MALNUTRITION.

FOR CLEAN WATER.
AGAINST KILLER DISEASES.

FOR CHILDREN THAT GROW UP STRONG.
AGAINST LIVES CUT SHORT.

FOR CROPS THIS YEAR, AND NEXT.
AGAINST DROUGHT
AND DISASTER.

FOR CHANGING MINDS.
AGAINST IGNORANCE AND INDIFFERENCE.

FOR FREEDOM FROM HUNGER.
FOR EVERYONE. FOR GOOD.

FOR ACTION.
AGAINST HUNGER.

ACTION AGAINST HUNGER