

September 2020 UNICEF Eastern and Southern Africa Learning Note 2020



Baby WASH Programming

Integrating water, sanitation and hygiene interventions across sectors to impact child health outcomes

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Acronyms

C4D	Communication for Development
CLTS	community-led total sanitation
COVID-19	coronavirus disease
CSO	civil society organization
ECD	early childhood development
EED	environmental enteropathy dysfunction
MNCH	maternal, newborn and child health
NGO	non-governmental organization
ODF	open defecation free
PSA	public service announcement
PTAs	parent teacher associations
SAM	severe acute malnutrition
SDGs	Sustainable Development Goals

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Introduction

The first 1,000 days, from conception to age three, are crucial to a child's development and lifelong health. Yet in this period mothers and their babies and infants face a unique set of challenges. An estimated 1.8–2 million children aged 6–59 months need treatment for severe acute malnutrition (SAM) in Eastern and Southern Africa every year. Chronic malnutrition will result in stunting (low height for age), an irreversible condition that literally stunts the physical and cognitive growth of children¹. Stunting is caused by inadequate intake of nutritious food, frequent illnesses such as diarrhoea and intestinal worms, poor care practices, and lack of access to health and other essential services, especially in the first 1,000 days of a child's life. Ethiopia, Madagascar, Mozambique, Somalia, and the United Republic of Tanzania are among the countries with a high burden of both stunting and severe acute malnutrition².

Inadequate water, sanitation and hygiene (WASH) services can impact child nutritional status through multiple pathways (Figure 1). For example, prolonged exposure to many faecal pathogens leads to frequent episodes of diarrhoea that in turn leads to the flattening of villi and subsequently makes it harder for absorption of nutrients but easier for diseases to take hold³.



Figure 1: Pathways linking inadequate WASH and nutrition

Source: Claire Chase and Francis Ngure, Multisectoral Approaches to Improving Nutrition: Water, Sanitation, and Hygiene, February 2016 www. susana.org/_resources/documents/default/3-2441-7-1455266236.pdf

¹ UNICEF, Eastern and Southern Africa, Reduce Stunting, www.unicef.org/esa/reduce-stunting accessed 23 July 2020

² Ibid

³ World Bank, Reproductive, Maternal, Newborn, and Child Health: Disease Control Priorities, Third Edition (Volume 2), 2016, Chapter 9 Diarrheal Diseases www.ncbi.nlm.nih.gov/books/NBK361905/ accessed 8 September 2020

The risk of stunting at 24 months increases substantially with each diarrheal episode and days of illness before 2 years old. Further, better understanding of environmental enteropathy dysfunction (EED) (a disorder of chronic intestinal inflammation caused by constant faecal-oral contamination) helps explain why purely nutrition-specific interventions have failed to reduce undernutrition in many contexts. In other words, stunting is less of a nutrition issue, and more of a development issue. This is underscored by the fact that multiple studies have shown that the integration of WASH with maternal, newborn and child health (MNCH), nutrition, and early childhood development (ECD) programmes – known as Baby WASH – have profound impact on child health outcomes⁴.

Due to its cross-cutting nature, Baby WASH also supports several of the Sustainable Development Goals (SDGs) including SDG 2 (zero hunger), SDG 3 (good health and well-being), SDG 4 (quality education), SDG 6 (clean water and sanitation) and SDG 17 (partnerships for the goals).

While findings from some recent studies within the region showed little or no impact of selected WASH interventions on reducing childhood diarrhoea and stunting⁵, they did underscore the need for higher levels of WASH services which move whole communities up the ladder, and investing in capacity of services providers and local level governance to sustain use⁶.

3 Principles of Baby WASH

The mainstreaming of Baby WASH follows three key principles, so that interventions are:

- **Context Specific,** with responses tailored to meet the different needs of families in these contexts (development/humanitarian emergency; location such as workplace, school, health facility; urban/rural, etc.).
- **Integrated** into existing sectoral programmes in WASH, MNCH, nutrition and ECD. Stand-alone Baby WASH programmes are less likely to be successful and risk duplication.
- **Based on high-quality research and evidence.** Baby WASH is a relatively new concept and the evidence base is evolving. UNICEF research and evaluations associated with Baby WASH programmes can help inform that evidence base.

The purpose of this Learning Note is to highlight the potential impact of Baby WASH, which sits at the intersection of critical interventions for childhood health, and to illustrate simple entry points and possible approaches to programming in Eastern and Southern Africa. The interventions listed below include key messages for sensitizing communities through Communication for Development (C4D) interventions.

⁴ See a summary of some of the evidence here World Vision, BabyWASH evidence www.wvi.org/babywash/evidence accessed 23 July 2020

⁵ See for example, Null C, Stewart CP, Pickering AJ, Dentz HN, Arnold BF, Arnold CD, et al. Effects of water quality, sanitation, handwashing, and nutritional interventions on diarrhoea and child growth in rural Kenya: a cluster randomized controlled trial. Lancet Glob Health. 2018; 6(3): e316–29. www.thelancet.com/pdfs/journals/langlo/PIIS2214-109X(18)30005-6.pdf; and Humphrey JH, Mbuya MN, Ntozini R, Moulton LH, Stoltzfus RJ, Tavengwa NV, et al. Independent and combined effects of improved water, sanitation, and hygiene, and improved complementary feeding, on child stunting and anaemia in rural Zimbabwe: a cluster-randomised trial. Lancet Glob Health. 2019; 7(1): e132–47. www.thelancet.com/journals/langlo/article/PIIS2214-109X(18)30374-7/fulltext accessed 8 September 2020

⁶ WH0/UNICEF Position Paper: Implications of recent WASH and nutrition studies for WASH policy and practice, 2019 www.who.int/water_ sanitation_health/news-events/who-unicef-position-paper-on-wash-and-nutrition-studies-20191125.pdf

2 Baby WASH implementation modalities

Interventions associated with the Key Areas of Baby WASH

The key entry points and activities for Baby WASH programming are outlined below. Consideration should be given to gender across the interventions.

Gender Programming and Baby WASH

In Eastern and Southern Africa, the burden of domestic chores, childcare responsibilities and water collection fall onto women and girls. It is important to integrate gender-sensitivity into the interventions below to ensure that a) the burden of women and girls is not increased, and b) so that gender transformative approaches can be harnessed to e.g. create a more equitable distribution of childcare and domestic responsibilities.

For guidance, see for example:

- UNICEF, Gender-Responsive Water, Sanitation and Hygiene: Key elements for effective WASH programming, 2017 www.unicef.org/gender/files/Gender_Responsive_WASH.pdf
- UNICEF, Promoting Gender Equality through UNICEF-Supported Programming in Young Child Survival and Development, 2011 www.unicef.org/gender/files/Survival_Layout_Web.pdf
- UNICEF, Gender responsive communication for development, 2018 www.unicef.org/rosa/ reports/gender-responsive-communication-development-0



Childbirth



Risk factors

Exposure of the mother and child to significant health risks and challenges, including infection, sepsis and neonatal death.

Cleanliness of the mother with regular washing of hands and body, as well as proper health of the mother before and during childbirth are strongly associated with a wide variety of health outcomes, diseases and survival rates.

Interventions:

- Provide access to sufficient clean water, pre- and post-delivery, particularly to facilitate bathing and hand washing of mother and baby.
- Support clean birth through the "six cleans" 1. Clean hands of the attendant 2. Clean surface 3. Clean blade 4. Clean cord tie 5. Clean towels to dry the baby and then wrap the baby 6. Clean cloth to wrap the mother⁷.

⁷ The Partnership for Maternal, Newborn and Child Health, Opportunities for Africa's Newborns, 2006 www.who.int/pmnch/media/publications/ oanfullreport.pdf

Breastfeeding



Risk factors

Infection of the child and mother.

Breastfeeding protects against the two leading causes of death in children under 5 years – pneumonia and diarrhea. Nearly half of all diarrhea episodes and one-third of all respiratory infections would be prevented with breastfeeding. On average, infants younger than six months who are not breastfed are 3-4 times more likely to die than those who received any breastmilk⁸.

Interventions:

- Provide access to sufficient clean water, pre- and post-delivery, particularly to facilitate bathing and hand washing of mother and baby.
- A soother, pacifier or other device that a baby may suck on while not breastfeeding should be washed, disinfected and safely stored when not in use.
- Care should be taken to keep contamination from other areas away from the baby's mouth and hands.

8 The Lancet, Breastfeeding in the 21st Century, 2016 www.who.int/pmnch/media/news/2016/breastfeeding_brief.pdf

Hygiene in preparation of food



Risk factors

Contaminated food and associated infections and parasites.

People become infected with intestinal parasitic worms (also known as helminths) by eating contaminated food or through contact with contaminated soil (see below). Intestinal worms infect about 10 per cent of the population in the developing world and, depending upon the severity of the infection, lead to malnutrition, anaemia or retarded growth. Children are particularly susceptible and typically have the largest number of worms. Diseases such as typhoid fever – a bacterial infection – are also caused by ingesting contaminated food or water⁹.

Interventions:

- Store food to protect it against vermin, moisture, rot, and contamination from nearby activities.
- Ensure the cleanliness of hands, surfaces used for food preparation, and containers.
- Protect food preparation areas and activities from insects, pests, people who have not engaged in hygiene practices, children and domesticated animals and pets.
- Use safe water in any application where the water may be ingested, such as washing fruits and vegetables that are eaten raw. Even when food may have been grown with dirty water, washing it with clean water should make the food safe. Cooking is another good step to ensure food safety from gut diseases.
- Boil water used to prepare baby foods and drinks; this may be done during cooking.
- Ensure thorough cleanup of ingredients, especially animal slaughter and meat preparation.
- Control disease vectors such as flies, mosquitoes, cockroaches and rats by cleaning breeding spots, protecting or covering food, and using bug nets as necessary.
- To reduce nearby vectors, improve drainage, safely dispose of garbage, and ensure waste water is disposed of via a waste receptacle or protected pit.

9 UNICEF, Common water and sanitation-related diseases www.unicef.org/wash/index_wes_related.html accessed 9 September 2020

Exploration playground



Risk factors

Exposure of the child to pathogens and disease vectors.

During the first year of life, infants spend substantial amounts of time exploring objects (with their eyes, mouths, and hands) that they encounter in their daily environments, including in areas of the house and outhouses. Information gained through these experiences provides a foundation for later developmental advances in cognition and language¹⁰. A baby or infant's playground may include usually clean areas which may be contaminated temporarily, such as when animals escape, when caring for a sick person, and when preparing food or cleaning up. Areas where a child is allowed to explore, must be clean of harmful disease vectors.

Interventions:

- Regularly clear external areas of any animal or child faeces, and clean contaminated areas immediately.
- Physical separation between animals and children, and between children and sources of contaminated soil or contaminated drainage (see below).
- Put potentially harmful items out of reach which the child may enjoy exploring with their mouth. These include medicines, cleaning agents, disinfectants etc.
- Regular cleaning of floors with soap and water (and bleach if available).

10 Erin A Koterba, Nina B Leezenbaum, and Jana M Iverson, Object exploration at 6 and 9 months in infants with and without risk for autism, Autism. 2014 Feb; 18(2): 97–105. https://doi.org/10.1177/1362361312464826

Handwashing



Risk factors

Transmission of vectors: cross contamination may happen in the absence of handwashing.

There is very clear evidence showing the importance of hygienic behaviour, in particular hand-washing with soap at critical times: after defecating and before eating or preparing food. Hand-washing with soap can significantly reduce the incidence of diarrhoea, which is the second leading cause of death amongst children under five years old. Recent studies suggest that regular hand-washing with soap at critical times can reduce the number of diarrhoea bouts by almost 50 per cent¹¹.

Interventions:

- A practical method of handwashing with water and soap must be available or must be established.
- Diagrams at handwashing stations to include critical times for handwashing *before* and *after* an activity.
- (Before) preparing food or cooking.
- (Before) eating or feeding a child.
- (Before) breastfeeding.
- (After) safely disposing of adult or child faeces.
- (After) cleaning up animal manure and working with animals.
- (After) washing items that may be contaminated with faeces.
- (After) touching the face or blowing the nose.
- (After) returning home during the coronavirus disease (COVID-19) pandemic.

11 UNICEF, The Importance of Hygeine www.unicef.org/wash/index_hygiene.html accessed 9 September 2020

Household Cleanliness



Risk factors

Risk of vectors in the home defeats any other measures to stay healthy.

The home must be thought of as a safe zone in which everyone can stay clean and healthy. This may take agreement and cooperation among the members of the home, and it is important that the burden does not fall disproportionately onto women and girls (see box above).

Interventions:

- As in the case of bedbugs, many viruses, pathogenic bacteria, giardia and helminthic eggs can be destroyed by heat treatment*, disinfectants and by ultraviolet light.
- Regular cleaning of key surfaces e.g. latrines, basins and kitchen floors and surfaces with soap and water (and bleach if available).
- Feet or shoes should be inspected and cleaned upon entry, or removed.
- Control disease vectors such as flies, mosquitoes, cockroaches and rats by removing breeding spots, covering food, improving drainage and safely disposing of garbage into a waste receptacle or protected pit.

*Heat treatment: for example, of blankets or critical items in the home, may be done cheaply and easily in Eastern and Southern Africa by solar heater/black container or on a cookstove.

Separation of children from animals



Risk factors

Gut diseases such as E-Coli and salmonella can have a highly detrimental impact on nutritional status in the first 24 months of life.

Animals may spread contaminated material as well as possible direct animal to child infection. Livestock are crucial to rural livelihoods. However, exposure to animal faeces is currently an under-recognized threat to human health, requiring the safe management of animal faeces¹².

Interventions:

- Clear boundaries and separation between young children and animal enclosures, with recommended separation of all domesticated animals and pets, and children under the age of 3 years.
- Regularly clear compounds of any animal or child faeces, at least daily.

12 Andrew J Prendergast et al, Putting the "A" into WaSH: a call for integrated management of water, animals, sanitation, and hygiene, The Lancet Planetary Health, Volume 3, Issue 8, August 2019, Pages e336-e337, August 2019 https://doi.org/10.1016/S2542-5196(19)30129-9

Separation of the child from contaminated soil



Risk factors

Transmission of disease vectors: Helminth eggs and worms, other parasites, repeated diarrhea, infection. Parasite eggs can last months in soil.

Contaminated soil quickly leads to contaminated water. People become infected with intestinal parasitic worms through contact with soil that has been contaminated with human faeces from an infected person, as well as through eating contaminated food (see above).

Interventions:

- Elimination of open defecation which requires community actions such as through community-led total sanitation (CLTS).
- Create drainage pits from a community or farm, so that soil does not retain waste or contaminated water.
- Create waste pits for animal manure.
- Consider possible rain events or flooding events and how they will spread contamination. For example, in areas next to and especially downhill from outhouses, latrines, and areas of open defecation.
- Promote household water treatment and safe storage to ensure residual chlorine at the point of use.
- Create a physical boundary between children and human and animal faeces, or soil that may be contaminated. This also means reducing access to contaminated soil, such as with vented containers (with bug screen), pit latrines, or shallow bury.
- Regularly clear compounds of any animal or child faeces, at least daily.

Baby WASH Case studies

Ethiopia develops Guidelines to mainstream Baby WASH through national WASH programme

In 2017, Ethiopia's Ministry of Health developed national Baby WASH Guidelines, supported by UNICEF¹³. The Guidelines detail how Ethiopia's One WASH National Programme provides a platform for mainstreaming Baby WASH through the country's WASH structure. This brings together four ministries – Education, Finance, Health, and Water Resources – in addition to Agriculture and Rural Development, and Women, Children, and Youth Affairs in some regions.

The guidelines advocate for the correction of common misconceptions that children's faeces are not hazardous to health together with better integration with organizations working to end open defecation to promote elimination of unsafe child faeces management and disposal.

Programming was harmonized to ensure the inclusion of WASH in all health and nutrition interventions targeted at parents and caregivers with children under 3 years of age. At the federal level, actions taken included provision of guidelines; promotion and advocacy (World Toilet Day and other awareness events); and facilitation of the design, prototyping and supply of products and services. At the regional level, actions included the translation of guidelines into local languages and promotion and support for health centers to inform mothers or caregivers of risks of intestinal diseases in young children. Meanwhile community health workers already deliver many Baby WASH compatible messages to parents throughout the country.

UNICEF Ethiopia supported the Government programme through its integrated ECD initiative. Communications reached around 1 million people, focussed on critical behavioral practices. An evaluation found that over 70 per cent of those who listened to the radio programs and public service announcements (PSAs) made some changes, such as in protective play and shoe wearing. Hand washing with soap after disposing of baby faeces increased by 70 per cent.

¹³ Federal Democratic Republic of Ethiopia, Ministry of Health, Baby and Mother WASH, Implementation Guideline, October 2017 www.unicef.org/ ethiopia/reports/baby-and-mother-wash

Baby WASH practices in Mali reduce wasting by over 40 per cent

The USAID Hygiene and Nutrition Project aimed to improve the nutritional status of pregnant and lactating women and children under 2 years of age through an integrated nutrition and WASH approach. Save the Children organized the project's WASH component around the concept of clean household model coupled with support for the Government's CLTS effort¹⁴.

The project achieved the construction and rehabilitation of 5,011 latrines and 7,799 handwashing stations, has supported over 137,000 people to gain access to a latrine and improved access to a latrine for over 27,000 people. Community nutrition groups facilitated neighborhood nutrition group sessions and household visits to help caregivers improve their daily household nutrition and hygiene practices. Essential hygiene actions in addition to always using a latrine were emphasized:

- 1. Treat drinking water for children under 5 years and households.
- 2. Wash hands at appropriate times before touching food and after defecation.
- 3. Have children (especially those under age 2) play in clean spaces free of faeces.
- 4. Ensure families have, and support their children to use a potty.
- 5. Encourage households to construct handwashing stations and keep them supplied with running water and soap
- 6. Safely dispose of child faeces, either in a latrine or a covered garbage pit.

Through the improved hand-washing practices and access to clean water at the community level, the project has contributed to a 22 percent decline in underweight in children under 0–59 months and a 41 percent decline in wasting.



14 Save the Children, Learning Brief, Strengthening WASH Approaches to Improve Nutritional Status among Women and Children in Sikasso, Mali, June 2019 https://resourcecentre.savethechildren.net/node/16103/pdf/WASH_Brief_PNH.final.pdf

3 Key recommendations for UNICEF Country Offices

UNICEF Country Offices can draw on the following recommendations when undertaking Baby WASH programming.

- **1. National mapping:** Conduct a mapping of stakeholders working across sectors to ensure that UNICEF Baby WASH activity maximize efficiencies for working with existing initiatives. The mapping will also allow gaps to be identified.
- 2. Multisectoral collaboration: Within UNICEF, collaborate with sections to optimize the efficient use of the resources and so that entry points for Baby WASH can be identified and leveraged, such as community outreach on MNCH and neglected tropical diseases. Collaboration can be formalized in Programme Strategy Notes, with the need for close joint planning and field monitoring by both UNICEF and local government staff.
- **3. Caregiver participation, especially of women:** Empower caregivers, especially women, to make inputs into the design and monitoring of Baby WASH initiatives, including the development of guidelines (point 4). While WASH programming in CLTS and water supply may take longer to implement than community-based nutrition activities, engagement can be combined, especially when targeting caregivers.
- **4. Baby WASH Guidelines:** Advocate with Government for the development of Baby WASH Guidelines, such as used by Ethiopia (see case study above), which clearly identify the roles and responsibilities of different Ministries and stakeholders in delivering Baby WASH.
- **5. Capacity building:** Support the production of guidelines with training materials, manuals, and capacity building of key stakeholders.
- **6. Resource mobilization:** Solicit financial support for Baby WASH including through resource mobilization via existing sectors such as C4D, education, health, nutrition and WASH, and through private sector engagement.
- 7. Awareness raising: Organize awareness raising around established annual events such as Menstrual Hygiene Day 28 May https://menstrualhygieneday.org/; Food Safety Day 7 June www.who.int/news-room/campaigns/world-food-safety-day/2020; Global Hand Washing Day 15 October https://globalhandwashing.org/global-handwashing-day/; World Toilet Day 19 November https://www.worldtoiletday.info/.¹⁵
- 8. Monitoring, evaluation and knowledge management: Monitor and evaluate Baby WASH activities, document lessons learned and organize experience-sharing platforms and events at the national and regional level.

¹⁵ For a list of international days currently observed by the United Nations see https://www.un.org/en/sections/observances/international-days/

Resources

- Clean, Fed & Nurtured community of practice that brings together practitioners and researchers in the ECD, nutrition and WASH sectors www.cleanfednurtured.org
- Federal Democratic Republic of Ethiopia, Ministry of Health, Baby and Mother WASH, Implementation Guideline, October 2017 www.unicef.org/ethiopia/reports/baby-andmother-wash
- World Vision International, BabyWASH Toolkit Version 1, May 2017 www.wvi.org/sites/ default/files/2019-05/Baby%20WASH%20Toolkit-%20External.pdf
- WaterAid Healthy Start www.wateraid.org/policy-practice-and-advocacy/healthy-start

Further information

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Annex: Key stakeholders and their role in Baby WASH programming

The table below summarizes the key stakeholders for Baby WASH programming and their respective roles. These roles should acknowledge gender dimensions and the active participation of women (see box above).

Stakeholder	Role in Baby WASH Programming
Members of the community	 Challenge common misconceptions to promote the safe disposal of child faeces. Underline the importance of Baby WASH to achieving 'true' open defecation free (ODF) communities and promote a norm of disgust around improper practices. Encourage all households to have methods or facilities for the safe disposal of child faeces. Create norms that all children should be potty trained at a certain age. Share information on good Baby WASH practices. Ensure equitable and sustainable access to community water and sanitation facilities.
Health sector	 Provide accurate and user-friendly information on the biological and medical facts around the relationship between Baby WASH and improved health outcomes. Monitor Baby WASH guideline implementation by responsible institutions. Facilitate advocacy and promotion activities on Baby WASH at all levels including education of young and/or expectant mothers at health facilities and after delivery of children. Solicit technical and financial support in the initials stage of implementation. Ensure the integration of Baby WASH in hygiene and sanitation policy documents, guidelines and standards. Ensure the incorporation of Baby WASH in existing programmes and interventions including community outreach, service delivery, capacity development, sanitation marketing, WASH in schools, participatory hygiene and sanitation transformation. Baby WASH focus in relevant policy, guidelines and training of community health care workers, care givers and nurses.
Water and irrigation sector	 Increase focus on functionality of water source and reliable water supply. Facilitate advocacy and promotion activities on Baby WASH at all levels. Guidance and tools to support the elimination of open defecation and provision of improved sanitation facilities and relevant support for sustainability of WASH services. Health and hygiene promotion.

Stakeholder	Role in Baby WASH Programming
Nutrition sector	• Ensure the incorporation of Baby WASH in existing programmes and interventions including community outreach, service delivery, capacity development.
Educational organizations	 Sensitize teachers, students (particularly girls) and parent teacher associations (PTAs) about the importance of WASH for young children as well as themselves. Many students will have younger siblings and can play a role of 'change agent' to promote Baby WASH. Incorporate Baby WASH learning into the school curriculum and professional training for teachers.
Women's and children's organizations and groups	 Involve women's groups in the design of Baby WASH programmes. Advocate for inclusion of Baby WASH focus in relevant policy manuals, guidelines and programmes. Promote Baby WASH in collaboration with civil society and monitor progress. Work with schools on Baby WASH messaging.
Agricultural and rural extension services	 Provide stronger guidance on the importance of keeping livestock and children under the ages of 3 years separate. Provide stronger guidance on the importance of demarcating the yard/child play area; regularly cleaning/removing animal faeces; or restricting access of animals to a child's environment.
Local non- governmental organizations (NGOs) and civil society organizations (CSOs)	 Facilitate linkages with different development actors at the local level to address Baby WASH holistically and break down silos between nutrition, WASH, health and other programmes. Support community enterprises to provide low cost Baby WASH products – particularly constructed using local materials. Promote WASH information to community organizations, particularly those that work with caregivers.
UN Agencies including UNICEF, and international NGOs	See recommendations under section 3 above
Private sector	 Produce and distribute affordable and appropriate Baby WASH products such as potties, hoes/scoops for child faeces and playmats. Improve supply chain into rural areas.

Source: Based on World Vision Baby WASH Toolkit, and Ethiopia National Baby and Mother WASH Guidelines.

...the integration of WASH with maternal, newborn and child health, nutrition, and early childhood development programmes, has a profound impact on child health outcomes.



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