

**Hands-Free HWWS stations:** a consolidation of **handwashing with soap stations** with increased desirability due to less hands contact -v4-28May2020  
 Send complements, more models and your feedback to Pierre Fourcassie, [pfourcassie@unicef.org](mailto:pfourcassie@unicef.org) – This brief will be completed/updated twice a month. **Use the latest version.**

**Hands-free HWWS compendium document #1**

Type	Characteristics	Hyperlinks	Cost	Sources
All hand-free types (operated by foot, forearm, knee...)	The purpose of this compendium consolidated by <b>Engineers Without Borders</b> (May 2020) from/for WASH CSOs and stakeholders in Uganda and relevant for other countries affected by COVID-19 crisis. It presents 8 HWWS stations, low cost& low tech, currently in use. This handbook aims to provide the user with a series of options for the installation of handwashing stations. The document is divided into <b>three typologies of hands-free handwashing technologies: push valve (1-3), foot pedal (4-6) and automated (7-8)</b> . Each technology will have an introduction, a key set of criteria with scoring, a Bill of Materials (BoM) and a “How-To” section. This allows the user to identify the most appropriate technology for their own needs, be it rapid deployment, portability or permanence, user friendliness, cultural acceptance, available materials or cost considerations.	Temporary location of the document: <a href="https://drive.google.com/file/d/11LxvikqgBPINBVDmxBzBQ981vhFEg5Oy/view?usp=sharing">https://drive.google.com/file/d/11LxvikqgBPINBVDmxBzBQ981vhFEg5Oy/view?usp=sharing</a>	Cost for all models in the document	<a href="#">EWB Engineer Without Borders-USA</a>



Pictures or drawings:



1-Tap Up Hand Sink



2- WASHalot



3-Steel Barrel



4- Tippy Tap



5- Camp



6- Arup/British RC



7- IUIU Hand Washer

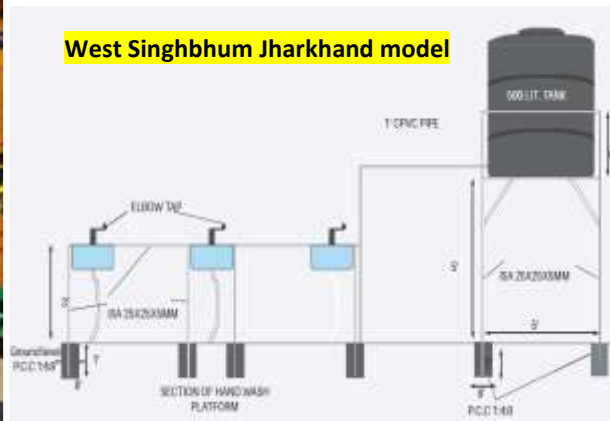


8- SUNami Solar Handwasher

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**Hands-free HWWS compendium document #2**

Type	Characteristics	Hyperlinks	Cost ranges	Sources
Most of HWWS station presented in this compendium are hand-free type	<p>This compendium from <b>UNICEF India</b> (April 2020) presents 7 HWWS stations currently in use, with indicative layout, designs and cost estimates, and pictures. The selection of HWWS has been made to satisfy 11 design criteria relevant for COVID-19 and other public health crisis situations. Finally the document provides checklist for installation and O&amp;M of the stations.</p>	<p>Link to the UNICEF India compendium of HWWS facilities 2020  <a href="https://drive.google.com/open?id=1Zwytk3gfwNRsGDhLMrBmXRSw-3tWxr7R">https://drive.google.com/open?id=1Zwytk3gfwNRsGDhLMrBmXRSw-3tWxr7R</a></p>	Cost for all models in the document	UNICEF India



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### Hands-free HWWS single entry #1

Type	Characteristics	Hyperlinks	Cost ranges	Sources
Hand-free, foot operated device	<ul style="list-style-type: none"> <li>- made locally</li> <li>- adapted with a large container of water, a sink fitted with a hose to collect used water</li> <li>- can be connected to water network</li> <li>- Support shaped in metal</li> <li>- Heavy duty : 4/5</li> </ul>	<a href="https://www.facebook.com/aminatadorothee.zerbo/video/1085227231824331/UzpfSTEyMDA1NzkwNjI6MTAyMjIwNzU4NTE5NDQyNDc/">https://www.facebook.com/aminatadorothee.zerbo/video/1085227231824331/UzpfSTEyMDA1NzkwNjI6MTAyMjIwNzU4NTE5NDQyNDc/</a>	tbc	<b>ACF</b> Action Contre La Faim – Mission Madagascar <small>Catalogue DLM sans            contact Avril 2020- WASH            Cluster Madagascar</small>


Pictures or drawings:



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**Hands-free HWWS single entry #2**



Type	Characteristics	Hyperlinks	Cost ranges	Sources
Hand-free, foot operated device	<p><b>PROTOTYPE DLM - to be completed</b></p> <ul style="list-style-type: none"> <li>- Support adaptable to most buckets or other cans available locally (20-25l)</li> <li>- Can be used at health facilities or at community level</li> <li>- Does not require plumbing installation</li> <li>- Maybe made with local materials (Metallic or wooden)</li> <li>- Easy to operate</li> <li>- Heavy duty: 5/5 (metal model)</li> </ul>	 Mise en page DLM 20L VF.pdf	If metal : 26 USD  If wood : 13 USD  Bucket : 6 USD	<p><b>UNICEF Madagascar</b>  <i>Catalogue DLM sans contact Avril 2020- WASH Cluster Madagascar</i></p>

Pictures or drawings:

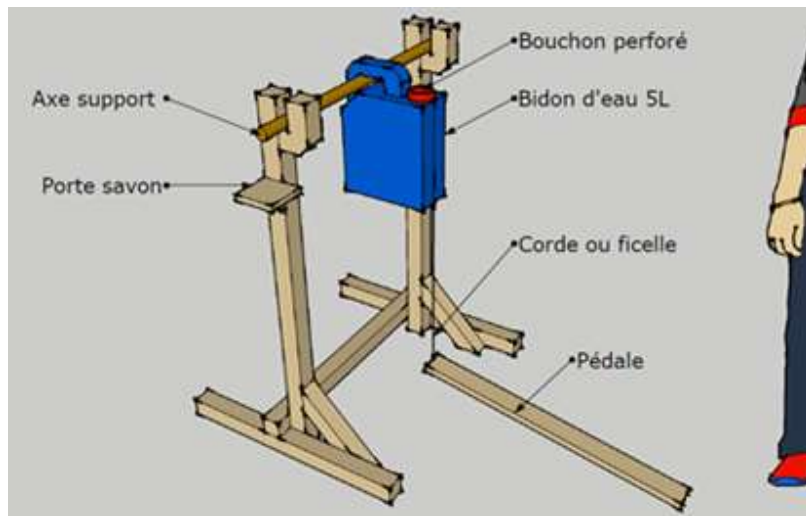


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**Hands-free HWWS single entry #3**

Type	Characteristics	Hyperlinks	Cost ranges	Sources
Hand-free, foot operated device	<ul style="list-style-type: none"> <li>- DLM which can be adapted according to the containers used by households (5l)</li> <li>- Can be used especially at community level</li> <li>- Does not require plumbing installation</li> <li>- The support can be shaped with local materials (metallic or wooden)</li> <li>- Easy to operate ; Easy to move</li> <li>- Heavy duty: 2/5</li> </ul>	 PLAN DLM 5L sans contact type 2.pdf   VID-2020 DLM SC 1.mp4	Coût : Structure en matériaux locaux : 10 USD (38 000 Ar)	UNICEF Madagascar <i>Catalogue DLM sans contact Avril 2020- WASH Cluster Madagascar</i>

Pictures or drawings:



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**Hands-free HWWS single entry #4**

Type	Characteristics	Hyperlinks	Cost ranges	Sources
Hand-free, forearm operated device	 <p><b>OCRS</b> "HOW TO MAKE A DISPOSITIF DE LAVAGE DE MAIN"</p> <p><b>DLM sans contamination</b> Ce nouveau modèle de dispositif de lavage des mains (DLM) adhésif est fabriqué en plastique dans la région de l'océan indien pour contribuer à la lutte contre COVID-19. Ce modèle, qui ne va pas toucher les mains, est fait de plastique recyclé, sans la présence de produits chimiques nocifs pour la santé. Il est facile à fabriquer et à utiliser. Il permet de laver les mains facilement avec du savon. Ce DLM peut se monter devant les tables, les bancs, les chaises, les bureaux.</p> <p><b>Quel sont les besoins ?</b> - Un trou dans le couvercle amovible du bidon pour y passer des ficelles et un bouchon de 20L avec l'ouverture.</p> <p><b>Outils,</b> - Une scie à main pour couper le plastique (ou un couteau si vous êtes très habile). - Un cutter pour faire le trou dans le couvercle et le trou de diamètre du bouchon de 20L dans le couvercle. - Des ficelles (cords) de 20cm à 30cm de long pour le montage de la partie supérieure et la partie inférieure.</p> <p><b>Comment fonctionne ?</b> - Presser pour faire marcher. - Tirer pour arrêter.</p> <p><b>Avantage</b> - Sans utilisation de savon.</p>	<p>Ingenious mechanism, low-cost, low tech, partly made of reused plastic bottle. Heavy duty: 2/5 Watch the video!</p> <p>Photos DLM.msg</p> <p>VID-2020-DLM SC 8.mp4</p>	<p>Coût support Structure en matériaux locaux :</p> <p><b>10 USD (38 000 Ar)</b></p>	 <p>Madagascar   <a href="http://crs.org">crs.org</a>   <a href="http://crsespanol.org">crsespanol.org</a> Catalogue DLM sans contact Avril 2020- WASH Cluster Madagascar</p>



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**Hands-free HWWS single entry #5**


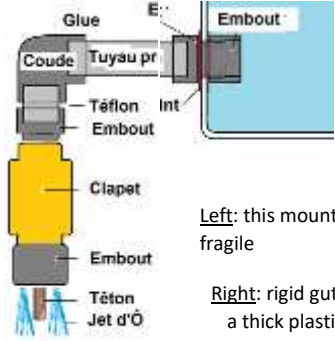
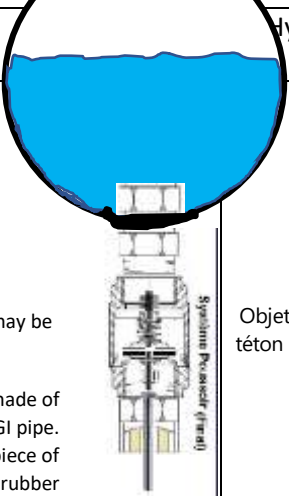


Type	Characteristics	Hyperlinks	Cost ranges	Sources
Hand-free, foot operated device	<ul style="list-style-type: none"> <li>- Locally made</li> <li>- Suitable with a large container of water and a bucket to collect the used water</li> <li>- Support shaped in metal, with the existence of a hydroalcoholic gel and / or liquid soap holder</li> <li>- Difficult to move</li> <li>- Heavy duty : 4/5</li> </ul>	 VID- 2020 DLM SC 4.mp4	tbc	<a href="#">ACF</a> <i>Madagascar Catalogue DLM sans contact Avril 2020- WASH Cluster Madagascar</i>

Pictures or drawings:



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**Hands-free HWWS single entry #6**

Type	Characteristics	Hyperlinks	Cost ranges	Sources
<p>Device operated with the back of the palm</p> 	<p>Push system, various type of mounting. Suitable for multiple push taps along a robust plastic or GI pipe (&gt;1m apart)            Heavy duty: 3/5</p>  <p>Left: this mounting may be fragile</p> <p>Right: rigid gutter made of a thick plastic or GI pipe. Water seal with piece of inner tube rubber</p> 	 <p>Objet Fabrication de téton de DLM et de su</p>	<p>Push system only: 15 USD</p>	

Pictures or drawings:

Note: this model is the same or very similar to the “WASHalot” presented in the compilation entry #1: [Hands Free HWWS EWB-USA](#)



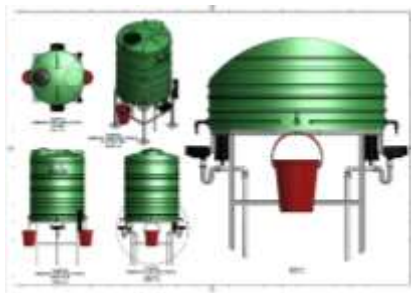


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**Hands-free HWWS single entry #7**

Type	Characteristics	Hyperlinks	Cost ranges	Sources
Device operated with the back of the palm	4 outlets; heavy duty → durable; high storage; grey water: soak pit; can be connected to water network and sewage; We are working on a next generation more robust and child-friendly	<a href="https://drive.google.com/open?id=1mCuWgnhtvkUiZPcC4LVLNs4axnWJDk">https://drive.google.com/open?id=1mCuWgnhtvkUiZPcC4LVLNs4axnWJDk</a> <a href="https://drive.google.com/open?id=17nvDCzCI8iZf0mxZqWw--rjrhxAV5_J">https://drive.google.com/open?id=17nvDCzCI8iZf0mxZqWw--rjrhxAV5_J</a>	1,100 USD installed	UNICEF South Africa  More info : <a href="mailto:ismulders@unicef.org">ismulders@unicef.org</a>



Pictures or drawings:



**LET'S FIGHT COVID-19 TOGETHER**

**EaziWash**

2700L WATER TANK FITTED WITH 4 X WATER OUTLETS AND 4 X 5L LIQUID SOAP DISPENSERS

**PRACTICE GOOD HYGIENE:**  
 Stop handshaking • Wash hands regularly • Avoid touching your face • Cover nose and mouth whilst sneezing or coughing • Increase ventilation by opening windows • Keep yourself at least 1M apart from others.

5L Liquid Soap Dispenser fitted with a self-cleaning and self-closing Tip The Valve which can be operated with the back of the hand.

2700L Water Tank with 4 outlets, each more than 1m apart. Fitted with a self-cleaning and self-closing Tip The Valve to dispense water without touching the valve with your open hand.

**IDEAL FOR USE AT CLINICS, SCHOOLS ETC.**

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**Hands-free HWWS single entry #9** -note: single entry #8 was removed

Type	Characteristics	Hyperlinks	Cost ranges	Sources
Hand-free, forearm operated device	Heavy duty, with/without connections to water and wastewater network Recommended to add a GI pipe to the tap to make it easier to operate with forearm Heavy duty: 4/5 More info: tbc	tbc	tbc	<a href="#">Save the Children Somalia</a>

Pictures or drawings:



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**Hands-free HWWS single entry #10**

Type	Characteristics	Hyperlinks to tech docs	Cost ranges	Sources
Hand-free, foot operated device	<ul style="list-style-type: none"> <li>- Liquid soap and push tap actioned by foot;</li> <li>- made locally;</li> <li>- storage up to 200 litres; grey water to soakpit or manually poured to sewage network</li> <li>- heavy duty 4/5</li> </ul>	<a href="https://drive.google.com/open?id=1a7nfQoVF8aFTjBKUCzr-8cAyDM7YWIG">Link to video https://drive.google.com/open?id=1a7nfQoVF8aFTjBKUCzr-8cAyDM7YWIG</a>	-large HWWS for community use unit price - 635 USD -HWWS station portable (20L) - 22USD -HWWS portable (60L_ - 81 USD	<a href="#">UNICEF Uganda</a>

Pictures or drawings:



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**Hands-free HWWS single entry #11**

Type	Characteristics	Hyperlinks	Cost ranges	Sources
Hand-free, foot operated device	Liquid soap and push tap actioned by foot; made locally; heavy duty 4/5; storage up to tbc litres; grey water to soakpit or manually poured to sewage network Currently, there are at least three manufacturers in Zambia who are producing these. UNICEF is working with them and the Disability Association of Zambia to make the facility disability-friendly Heavy duty: 4/5	<a href="https://drive.google.com/file/d/16c5EATY6TIPxTmh4utbwQ4tvpQXvC_/view?usp=sharing">https://drive.google.com/file/d/16c5EATY6TIPxTmh4utbwQ4tvpQXvC_/view?usp=sharing</a> <a href="https://drive.google.com/file/d/18wh7YVAz9HcD0jg-8OP9x7X9HdKk4P/view?usp=sharing">https://drive.google.com/file/d/18wh7YVAz9HcD0jg-8OP9x7X9HdKk4P/view?usp=sharing</a> <a href="https://drive.google.com/file/d/1AITp0-F4gfkAS7d9yZT758XZF98fz7/view?usp=sharing">https://drive.google.com/file/d/1AITp0-F4gfkAS7d9yZT758XZF98fz7/view?usp=sharing</a> <a href="https://drive.google.com/file/d/1wju5wVz9gkT0TK8s_b4vwpYBersQ/view?usp=sharing">https://drive.google.com/file/d/1wju5wVz9gkT0TK8s_b4vwpYBersQ/view?usp=sharing</a> <a href="https://drive.google.com/file/d/1pOKAFB4HTBkTXRRh-nXMVdXXr-zrMk/view?usp=sharing">https://drive.google.com/file/d/1pOKAFB4HTBkTXRRh-nXMVdXXr-zrMk/view?usp=sharing</a>	tbc	UNICEF Zambia

Pictures or drawings:



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**Hands-free HWWS single entry #12**

Type	Characteristics	Hyperlinks	Cost	Sources
Dip & hang up device	This low-cost low-tech HWWS device is presented in the excellent booklet How to Make Simple Handwashing Device (Teaching ecological sanitation series) by Peter Morgan and Annie Kanyemba. This device can be adapted (with precautions) to situation with disease outbreak risks (cholera, COVID-19) using water with diluted chlorine @ 0.05% FRC Heavy duty: 2/5	<a href="https://www.aquam.or.info/uploads/3/4/2/5/34257237/ess.15.how_to_make_simple_hand_washing_devices.pdf">https://www.aquam.or.info/uploads/3/4/2/5/34257237/ess.15.how_to_make_simple_hand_washing_devices.pdf</a>	Few cents of a dollar (metal wire) and reusing material	Peter Morgan and Annie Kanyemba. Zimbabwe.

**1/ Take the HandWasher from the line and dip it into the water**

Pictures or drawings:



**2/ quickly wet your hands and put the washer back into the bucket**



**4/ hang up the handwasher and rinse. Do not touch it again. YOU'RE DONE**



The pupils prepared large numbers of hand washers

**3/ Rub your hand with soap for 20 seconds**




Hundreds of pupils from other schools were shown how to make them.

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**Hands-free HWWS single entry #13**

Type	Characteristics	Hyperlinks	Cost ranges	Sources
Pull & slap up HWWS device	<p>SaniTap</p> <ul style="list-style-type: none"> <li>- No contamination on "second touch" (the tap closes without touching the fingers). Prevention of recontamination</li> <li>- Collapsible design: Allows high volume air movement for quick response</li> <li>- Control of economic water flows: Vital in environments where water is scarce (slums, camps) 3 liters per 10 minutes, enough for a family of 5 to wash their hands 3x / day</li> <li>- Heavy duty: 2/5</li> </ul>	<p><a href="https://www.globallinnovationexchange.org/innovation/sanitap-7f0cf4f8-b708-4ea4-bda4-bfefe75bf3aa">https://www.globallinnovationexchange.org/innovation/sanitap-7f0cf4f8-b708-4ea4-bda4-bfefe75bf3aa</a></p> <p> SaniTap.pptx</p>	4 USD	<p>Serge RANAIVOJAONA General Manager</p> <p>Practical water supply solutions for remote &amp; difficult environments <a href="mailto:madagascar@bushproof.com">madagascar@bushproof.com</a> W: <a href="http://www.bushproof.com">www.bushproof.com</a> &amp; <a href="http://www.bushproof-madagascar.com">www.bushproof-madagascar.com</a> <b>BushProof</b> Catalogue DLM sans contact Avril 2020- WASH Cluster Madagascar</p>

Pictures or drawings:



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**Hands-free HWWS single entry #14**

Type	Characteristics	Hyperlinks	Cost ranges	Sources
Hands-free, knee operated device	<p>Model on the picture made by Sheffield Africa, Nairobi</p> <ul style="list-style-type: none"> <li>- HWWS block made of stainless steel</li> <li>- Water saving device: <b>percussion or push tap, self-closing, with adjustable automatic cut off after 1-30 seconds.</b> Can be used with flow restrictor.</li> <li>- Ready-to-use: connected to water network; Grey water connected to sewer drain or collected in a tank holder (emptied frequently)</li> <li>- Fully equipped: liquid soap dispenser, tissue dispenser, bin</li> <li>- Heavy duty: 4/5</li> </ul> <p>The principle of knee push tap can be designed by you and made by an artisanal workshop. It should be heavy and cubic shape HWWS stations, made of metal or wood. However stainless still will resist to wet environment.</p>	<a href="https://sheffieldafrica.com/products/html/?p=product_full_details&amp;id=2970">https://sheffieldafrica.com/products/html/?p=product_full_details&amp;id=2970</a>	480 USD approx	<a href="#">Pictures from Sarit Centre, Nairobi</a>

Pictures or drawings:







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**Hands-free HWWS single entry #16**

Type	Characteristics	Hyperlinks	Cost ranges	Sources
	-			X

Pictures or drawings:

**Hands-free HWWS single entry #17**

Type	Characteristics	Hyperlinks	Cost ranges	Sources
	-			X

Pictures or drawings:

**Hands-free HWWS single entry #18**

Type	Characteristics	Hyperlinks	Cost ranges	Sources
	-			X

Pictures or drawings:

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