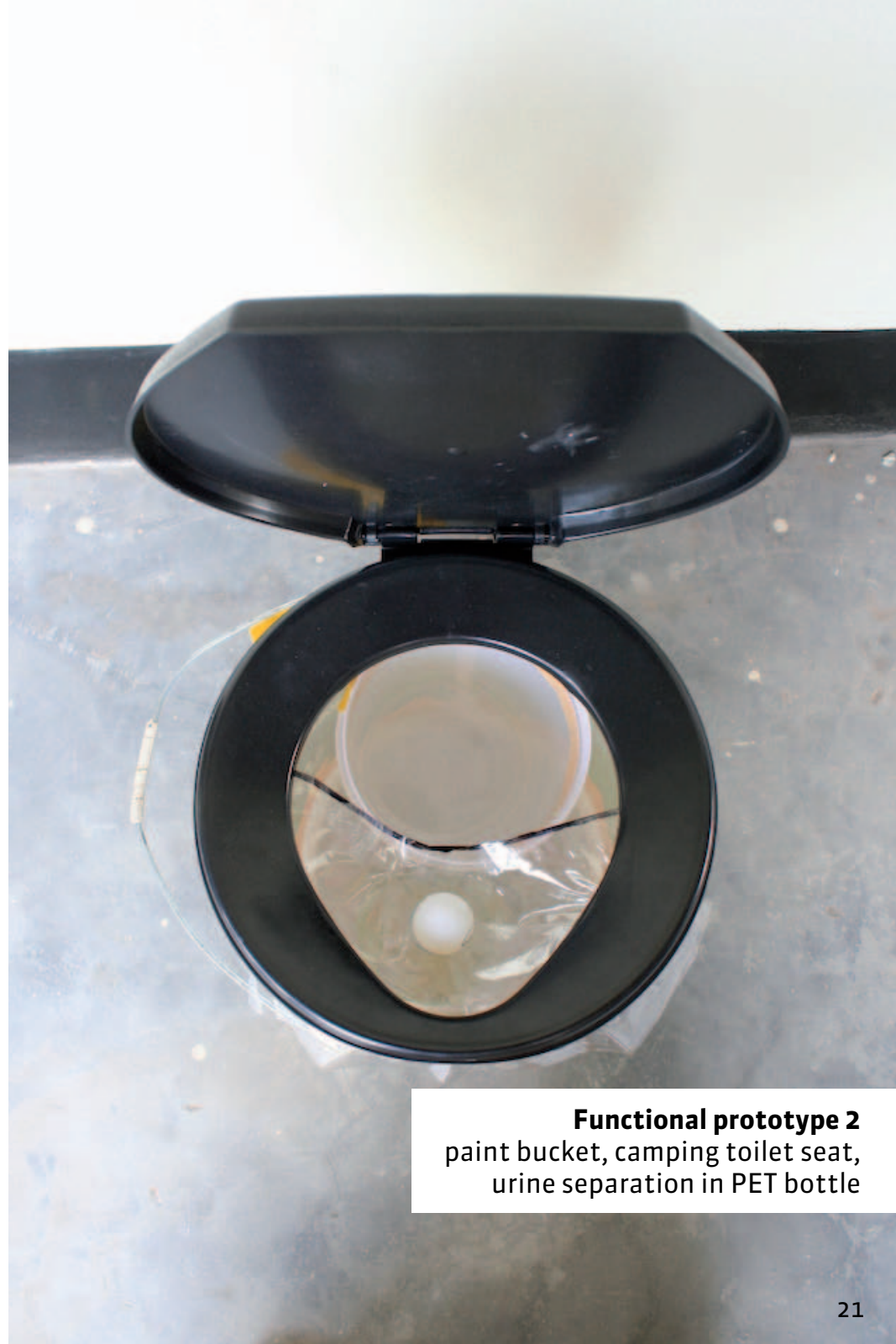




Preparation of functional test
2 families, 2 toilets for 4 days
emptied once a day by us
faeces covered with ash or saw dust
anal washing over separate bowl



Functional prototype 1
faeces bucket, urine separation in
PET bottle, common toilet seat



Functional prototype 2
paint bucket, camping toilet seat,
urine separation in PET bottle



COLLECTION OF FAECES

- removable bucket inside toilet
 - ash/ saw dust base layer in bucket
 - paper inlay (preferred undyed paper)
 - ash/ sawdust to cover faeces
- collector empties bucket into transport container, user gets back the same bucket
or
bucket is replaced with new one
(to be determined, test required)

NO BIODEGRADABLE PLASTIC BAG

- no industry in Bangladesh
 - import leads to dependence
 - even high quality plastic leaves residues after composting
 - only feasible in mass production
- add- on of bag in future possible



Paper inlay for faeces bucket
easier and cleaner emptying



Avoid smell/prepare treatment
by covering faeces with saw dust



Private space
limited space inside her house, she used
the toilet inside existing “kacha toilet”



Transport of prototype

Manual collection system
emptying process tested by us
inner buckets emptied into
collection container





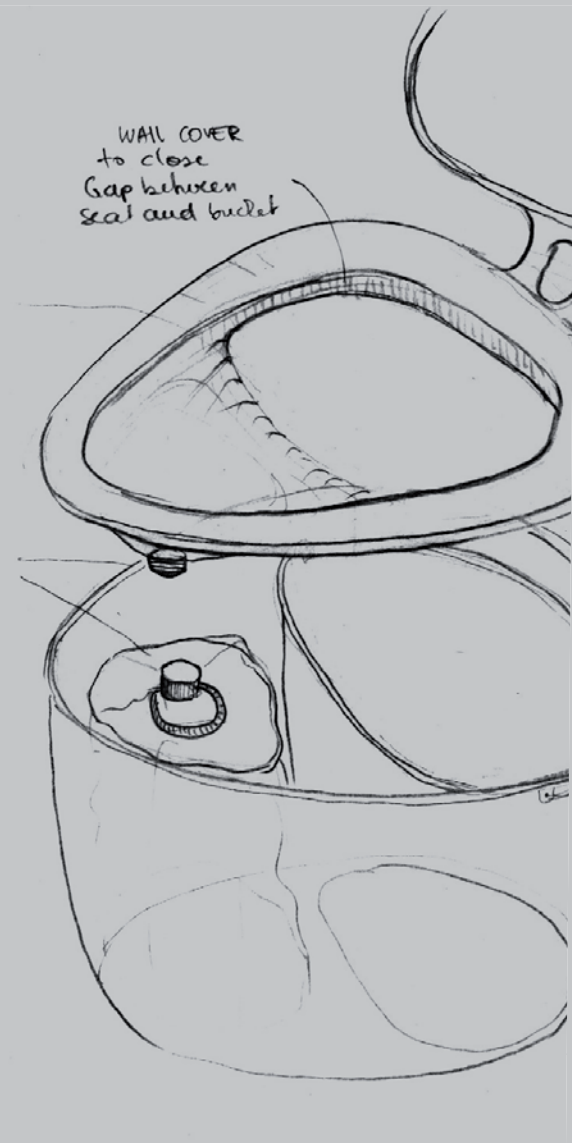
RESULTS 4 DAY PROTOTYPE TEST

- very positive
- children liked sitting
- women drunk more water
- more frequent toilet visits
- more privacy
- no going-outs at night for women

- use of toilet inside and outside house
- storage inside house
- no/little smell

- acceptance of anal washing over separate bowl
- willingness to work as collector

- one women had problems to lift sari for sitting
- urine funnel was too shallow for men
- small child needed help to climb on



CONCEPT MOBILE TOILET

- sitting toilet for private household
- separation dry toilet
- two removable inner containers
- strap for carrying
- two handles

- covering faeces with ash
- paper inlay for faeces bucket

- anal washing separate

- use for 24 h
- manual collection house by house

The following pages show a computer rendering of the current draft (November 2011). Material decisions are made on base of feasibility for coming tests with approximately 50 families.

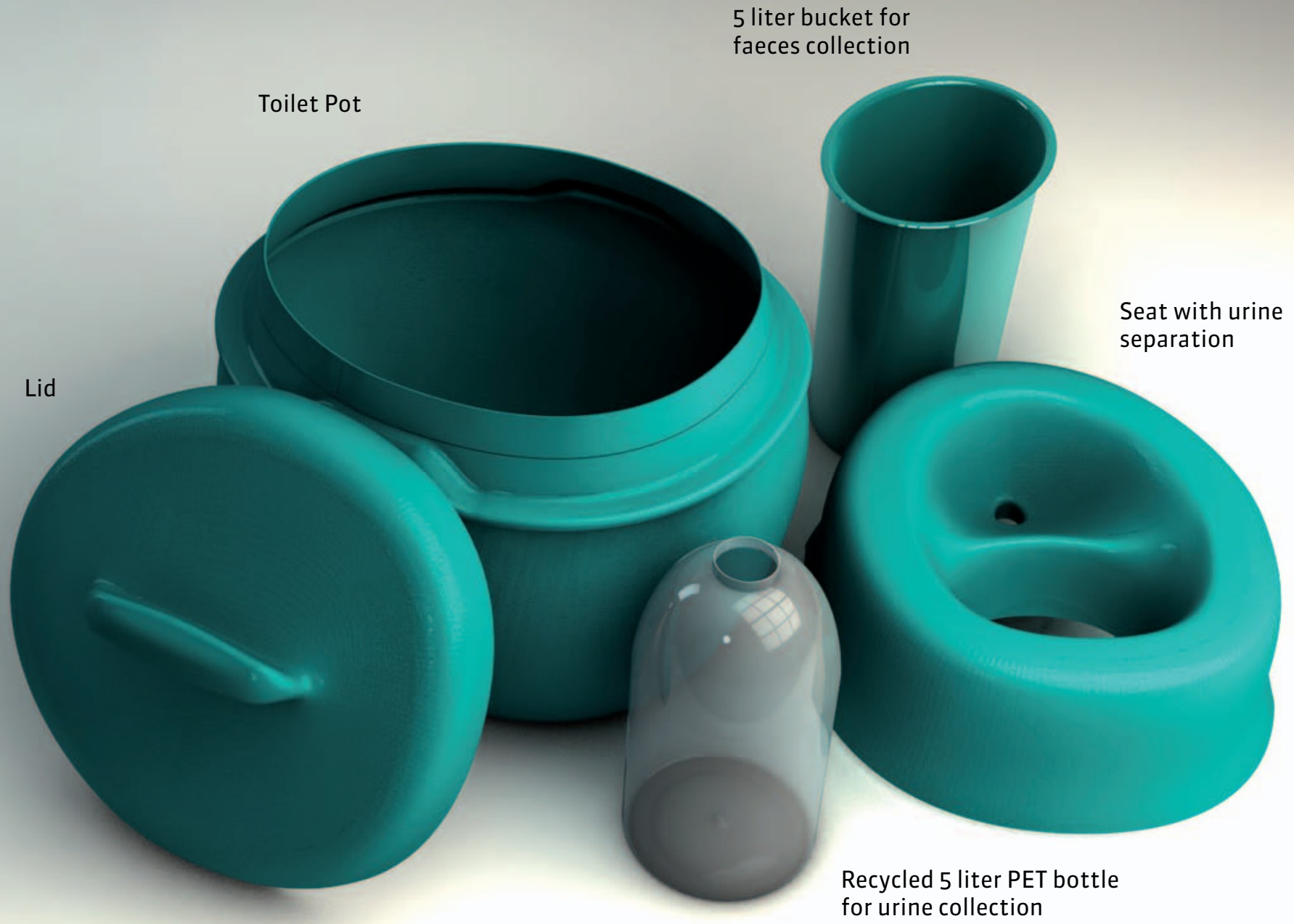
After testing the toilet, the design and the sanitation system will be updated and specified.

closed toilet pot
with carrying strap made from
recycled cement bags



ergonomic and soft shapes





5 liter bucket for faeces collection

Toilet Pot

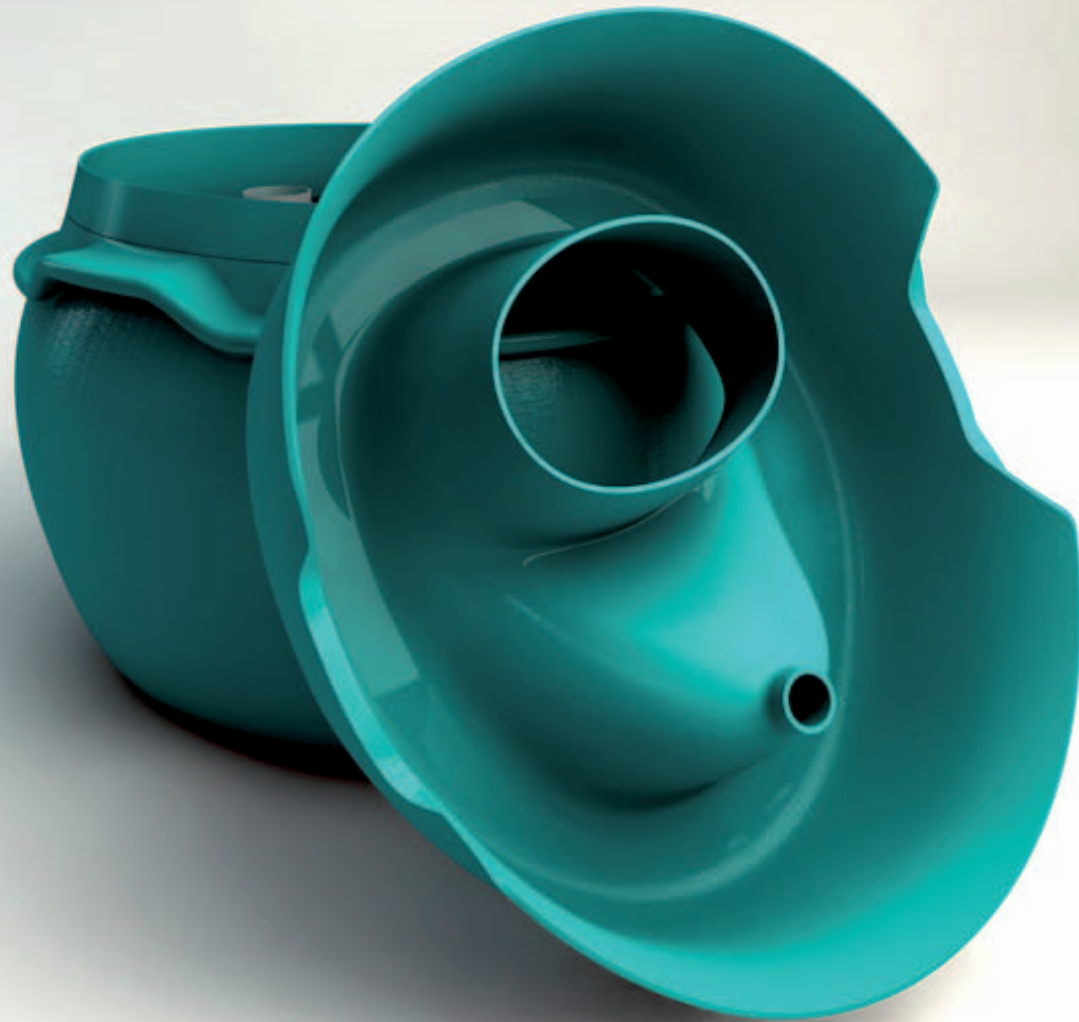
Seat with urine separation

Lid

Recycled 5 liter PET bottle for urine collection



seat with funnel shape
fixes position of inner containers

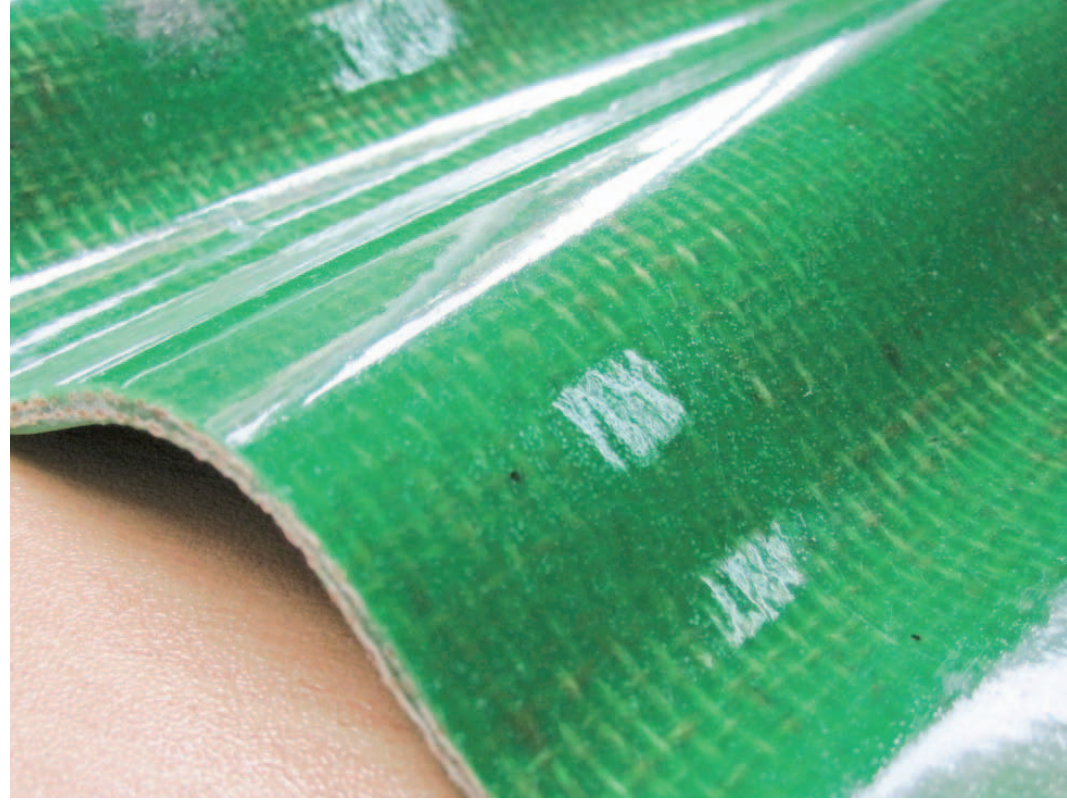






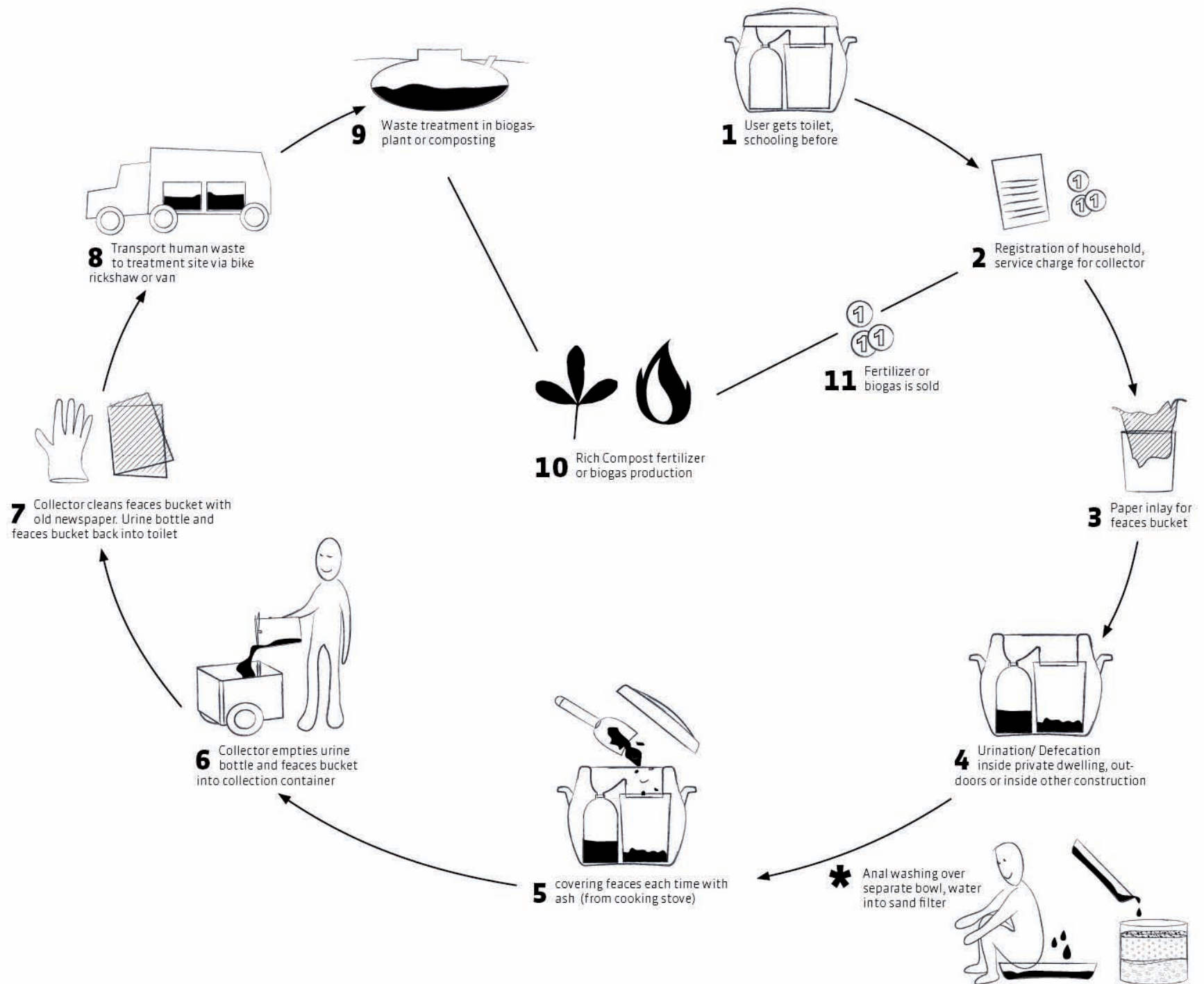
Materials

recycling of PET bottle for urine collection,
cement bags recycled for carrying strap,
use of jute reinforced plastic for
production of main parts

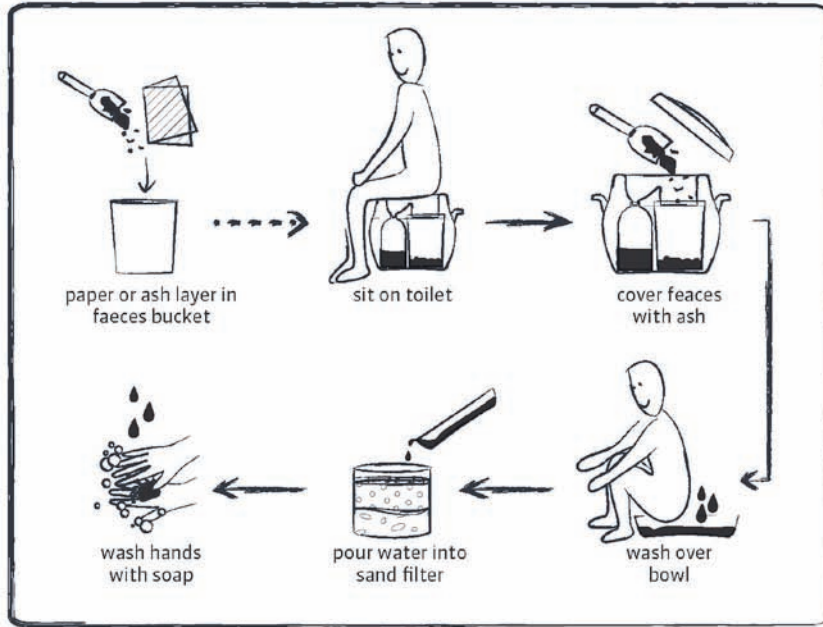


Collection system
manual collection from house to house
possible to link with solid waste collection





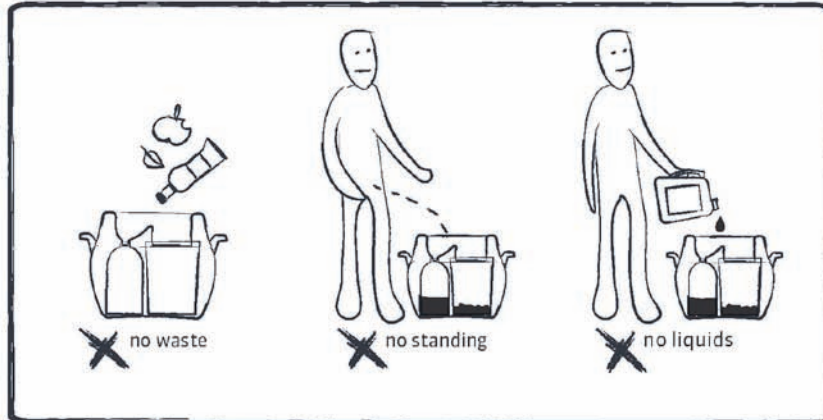
USE A MOBILE TOILET



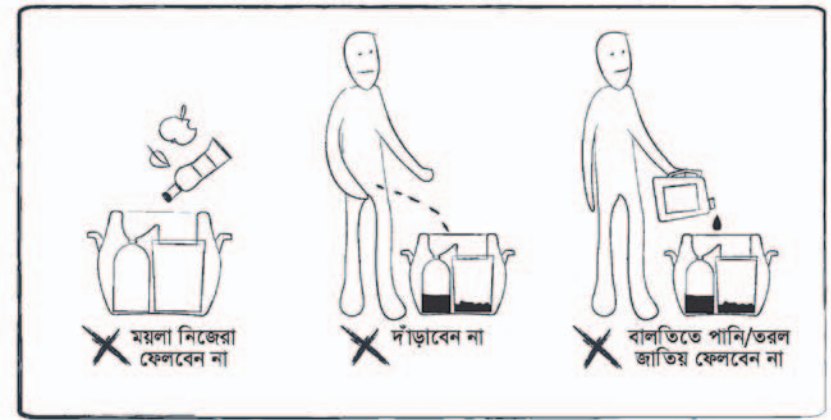
ভ্রাম্যমান টয়লেটের ব্যবহার বিধি



DON'TS



যা করবেন না



PDF by Mona Mijthab, November 2011
All Photographs and illustrations by Mona Mijthab,
except photos on pages 18-26 and 38 by Ashley Wheaton

web sources

- 1 <http://data.worldbank.org/country/bangladesh?display=graph> (03.11.2011, 12:09)
- 2 <http://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS> (03.11.2011, 12:45)
- 3 <http://data.worldbank.org/country/bangladesh?display=graph> (03.11.2011, 14:00)
- 4 Wikipedia: Floods in Bangladesh: http://en.wikipedia.org/wiki/Floods_in_Bangladesh
(03.11.2011, 13:00)
- 5 Wikipedia: Bangladesh: <http://en.wikipedia.org/wiki/Bangladesh> (03.11.2011, 13:25)
- 6 http://www.unicef.org/infobycountry/bangladesh_bangladesh_statistics.html
(03.11.2011, 14:15)