MEDECINS SANS FRONTIERES

Use of bio-degradable plastic bags as context specific emergency alternative to "classical" toilets in Haiti

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(REUTERS/Eduardo Munoz)

(THONY BELIZAIRE/AFP/Getty Images)

Residents sleep in the street after the earthquake (REUTERS/Eduardo Munoz)

Context

- 1.500.000 internally displaced people (IDPs)
- huge needs on overcrowded urban areas
- difficult to identify needs: people moving, ghost camps, existing toilets still in use…
- abundant wild defecation
- limited remaining space for sanitation – ownership, impermeable surfaces, high water table ...
- elevated latrines: limited desludging capacity and reception capacity of official landfill (Truitier)
- approaching rainy season (risk of cholera)
- supply of materials
- very difficult supervision of teams

Bio-degradable plastic bags for defecation

- overstretched response capacity => gaps
- need for innovative approaches to provide sanitation
- first phase complementary approach
- single-use biodegradable plastic bags for defecation
- existing practice in Haiti
- culturally acceptable
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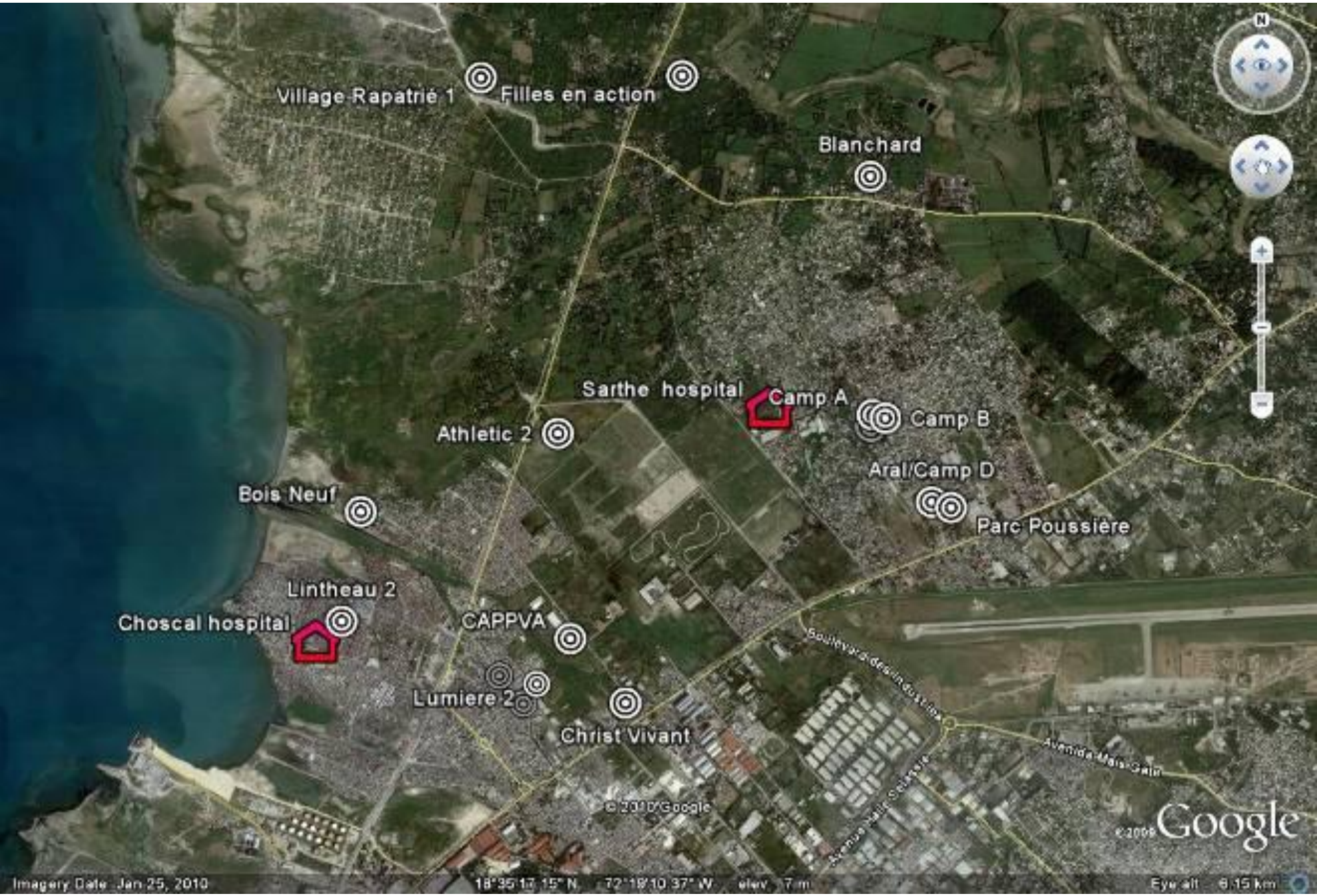
Bio-degradable plastic bags for defecation

- around 30 complete set (cabin + seat) produced daily in a dedicated carpentry workshop

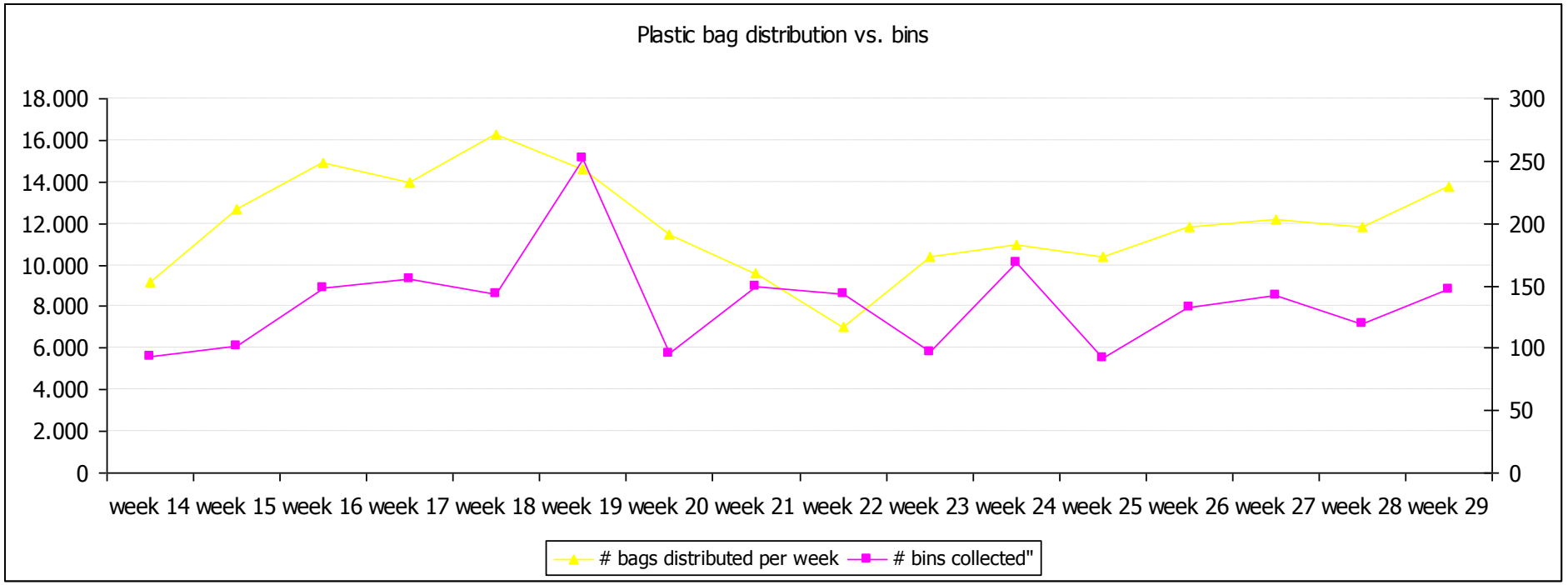
Bio-degradable plastic bags for defecation

- around 30 complete set installed daily (depending on security, distance, …)



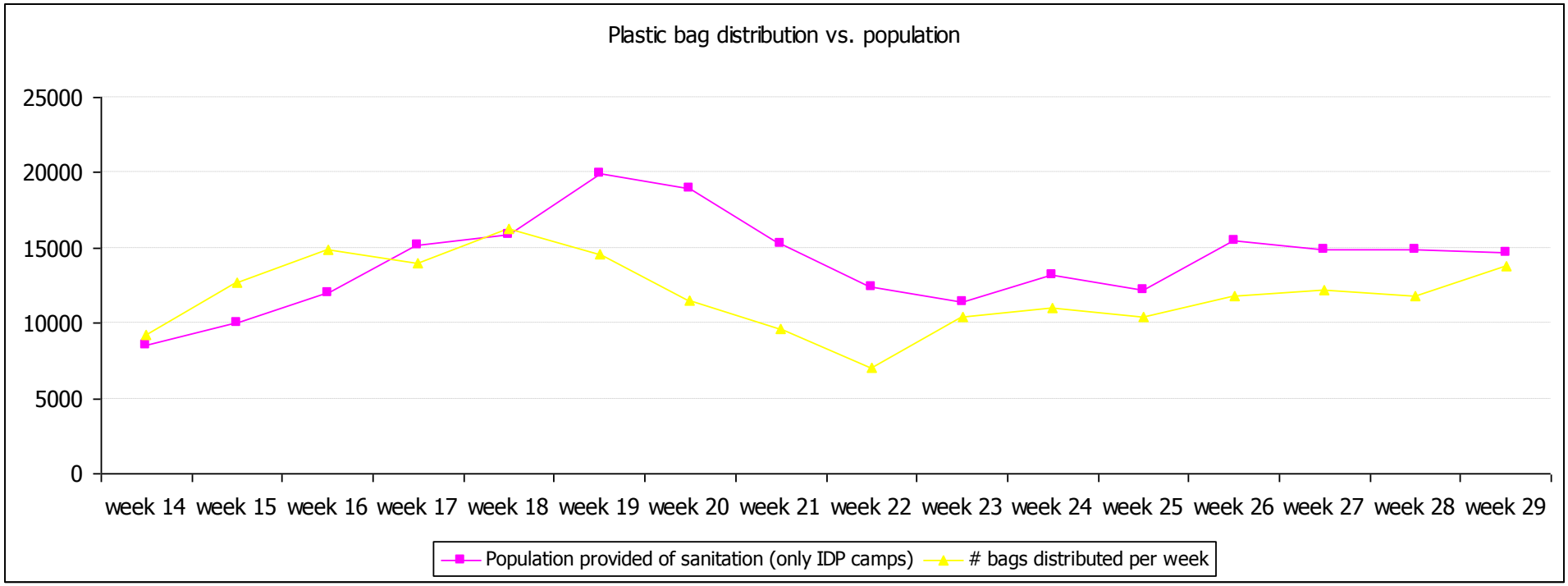
Geographical location of the 196 emergency plastic bag toilet installed

bag distribution vs. bins collected



Monitoring of bag consumption and bin collection

bag distribution vs. population



➔ over 16 weeks 191.200 bags distributed in total

Weekly use of bio-degradable plastic bags

➔9 (3-15) camps with pilot sanitation

➔119 (49-196) plastic bag toilet in use

➔14.065 (8575-19965) persons provided

➔ 136 (92 – 169) bins collected

➔11.950 (9200 – 16300) bags distributed

➔**13 (8 – 18) %** population using 1 bag/day

Use of bio-degradable plastic bags

☹ low use 13 % of population one bag/day

☹ environmental burden at disposal landfill

☹ availability bio degradable plastic bags

☹ strength bags

☹ compatibility of superstructure ?

☹ delayed installation of semi- permanent blocks

Use of bio-degradable plastic bags

☺ flexible collection of used bags (via big buckets)

☺ easy + to install, (re-)move, … to follow IDPs

☺ no problem of nuisances (odours, flies controlled)

☺ no contamination of water tables on site

☺ easy to keep clean

☺ no special issues expressed by the population

☺ physical/ mental safety (household excreta disposal)

Conclusion

bio-degradable plastic bags included in emergency stock as context specific emergency alternative to "classical" toilets

<u>BAGS</u>:
1000 families of 5 persons = 5000 people
Using 2 bags /day – family = 10000 bags
10 days or 100.000 bags

<u>BUCKETS</u>:
1 bucket for 20 people or 4 families
250 buckets for 10 000 people

<u>OTHERS</u>:
Anal cleansing ?

Acknowledgements

(in alphabetic order)

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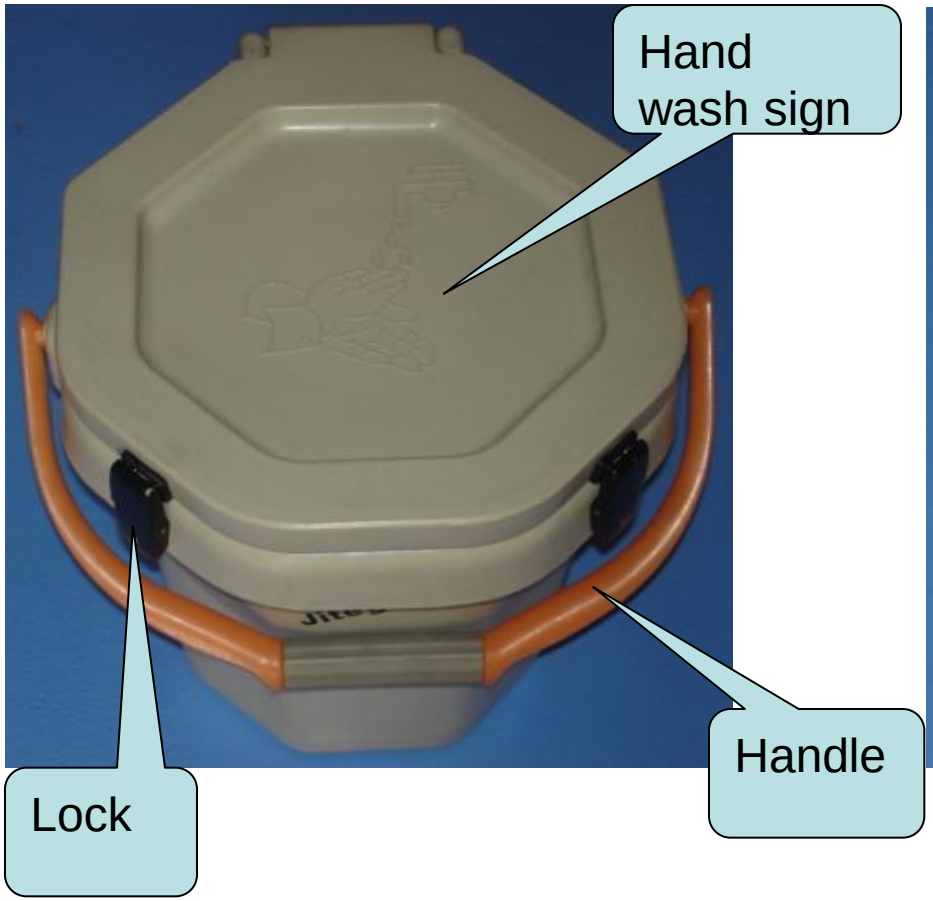
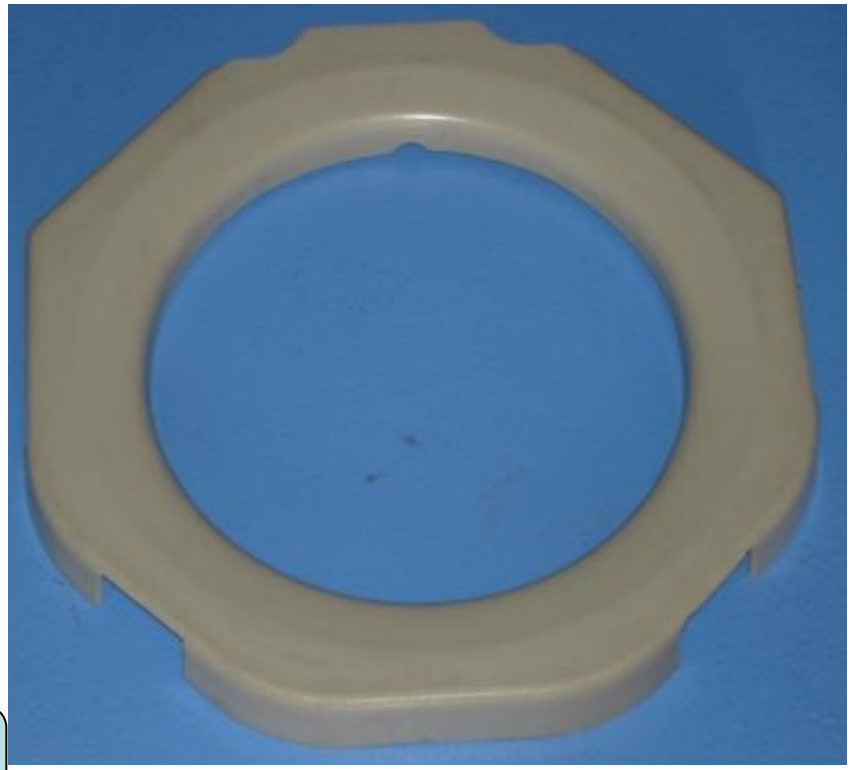
- Maes Peter
- Tavernier Patrick
- Haiti team

Portable toilet in assembled condition without seat



Portable toilet seat



Portable toilet in open condition without seat

Portable toilet in open condition with seat

Top view in nesting condition

Front view in nesting condition

Packing description.

a.Pallet size – 1200 x 800
b.CFB box size – 1200 x 800 x 350
c.Boxes per pallet – 6 Nos.
d.Portable toilets quantity per box – 8 Nos.
e.Portable toilets total quantity per pallet – 48 Nos.
f.38 euro / psc

EMERGENCY BIO-DIGESTIBLE PLASTIC BAGS

Example: camp of **3.000 people**, 50% m., 50% f.

➔1 cabin for 100 users (no accumulation rate)

➔30 cabins + seats produced and installed in 1 day

➔Theory: (3000/2+ (4x3000/2))x30 = **225.000 bags** for 1 month coverage