



Ol Klin komiuniti

Wan praktikal gaedlaen blong bildimap
mo lukaotgud long ol toelet long Pasifik



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Ol klin komiuniti

Wan praktikal gaedlaen blong bildimap
mo lukaotgud long ol toalet long Pasifik



LIVE&LEARN
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Ol material blong Live & Learn Environmental Education WASH

Live & Learn Environmental Education hemi bilif se ol komiuniti long Pasifik oli gat raet, save mo skil blong jusum mo yusum ol solusen blong stret sanitesen we i sutum stret nid blong olgeta. Dimand aproj long sanitesen long ol komiuniti blong Pasifik oli meksua se ol toelet mo ples blo haejin (olsem ol ples blong wasem han) oli mas stap gud oltaem, long taem we olgeta we oli stap yusum oli stap developem mo lukaotemgud. Wetem ol risos ia, Live & Learn hemi mekem stret tingting blong prisentem ol kaen aproj blong sapotem ol nid blong sanitesen insaed long ol aelan blong Pasifik.

Developmen blong fasin blong tijim sanitesen mo haejin risos long komiuniti.

Olsem pat blo gudfala proses ia, wan grup blong risos abaot sanitesen mo haejin i bin develop blo sapotem wok blong Live & Learn.

Ol i inkludum:

- *Diskaverem wan fasin blong laef we i helti: Participatory Hygiene and Sanitation Transformation (PHAST) long ol aelan blong Pasifik*
- *Putum ol toti blong yu long stret ples: A Community Led Total Sanitation (CLTS) aproj blong ol aelan blong Pasifik*
- *Bildimap ol strong mo helti komiuniti: Setemap wan kampani blong sanitesen long komiuniti blong yu*
- *Setemap mo manejem wan smol kampani: Wan gaedlaen blong Pasifik*
- *Ol klin komiuniti: Wan praktikal gaedlaen blong bildimap mo lukaotgud ol toelet long ol aelan blong Pasifik*
- *Ol han antap blong haejin! tijim fasin blong haejin long ol skul blong Pasifik: Gaedlaen blong Tija*
- *Faerap long Jem: Buk blong wok blong stiuden*
- *Ol posta/bod blo ol jem/ol stika*

Whu i save yusum ol risos ia?

Ol komiuniti nao oli save yusum ol risos ia. ol NGO mo gavman blong impruvum sanitesen mo promotem fasin blong haejin long ol aelan blong Pasifik.

Olsem wanem blong yusum ol risos ia

Ol risos ia oli disaen long wan fasin we oli komplimentem olgeta bakegen blong sapotem wei blong patisipetri aproj we i bigwan blong impruvum sanitesen long ol komiuniti mo ol skul long Pasifik. Mo tu, Live & Learn hemi luksave mo ting save se ol difdifen kaen nid blong tijim long rijen blong Pasifik oli meksua se wanwan long ol risos ia oli disaen wetem lukluk se oli save yusum olgeta wanwan be oli no hapen olsem wan bigfala pat nomo. Oli disaenem ol risos ia blong sapotem mo mekem i isi long ol aktiviti blong ol skul mo ol komiuniti, mo samfala risos ia oli nidim spesel save mo expiriens. Long ples we istret long kes ia, hemi kam klia nomo istap long aotlaen blong ol pej blong introdaksen blong wanwan risos.



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Introdaksen

Sanitesen hemi stap minim wei blong sakemaot toti blong man. Nating se hemi evridei nid, i no kasem haf blong ol man blong ol aelan blong Pasifik nating we oli gat akses long ol seves long klin mo sef wei blong sanitesen olsem ol toelet (WHO 2008).

Fasin blong nogat ol toelet i save givim ol rabis kondisen olsem daerea, we istap kilim laef blong klosap 3,000 pipol blong Pasifik long evri yia we plante long olgeta oli no kasem 5 yia blong olgeta iet (WHO 2008).

Live & Learn Environmental Education hemi stap wok wetem ol lokal komiuniti blong Pasifik blong setemap ol 'sanitesen entapraes': fasin blong wok we i karem tingting blong provaedem ol seves blong sanitesen (olsem ol toelet) blong impruvum sanitesen ia long ol aelan blong Pasifik. Long beses blong 'maket blong sanitesen', pawa mo saksas blong ol tingting ia i stanap long ol valiu we ol komiuniti i putum long ol toelet mo sanitesen we igat impruvman long hem.

Manual ia hemi isi gaedlaen blong yusum we hemi givhan blong bildimap mo lukaotgud ol toelet long ol Pasifik komiuniti.

Ol infomesen blong manual ia oli save givhan blong bildimap dimand blong impruvum sanitesen long ol komiuniti, mo semtaem tu oli givim aweanes long ol narafala ki fasin blong haejin olsem wasem han wetem sop.

Semak long eni narafala risos blong komiuniti we i bigwan long tingting, manual ia hemi wan 'wok we istap prokres' mo bambae hemi kontiniu blong gruap wetem fasin blong yusum mo rifea plante long hem. Live & Learn hemi welkamem mo enkarejem ol tingting we i givhan long manual ia blong meksua se olgeta komiuniti blong Pasifik oli mitim nid mo gudfala tingting we istap.



Olsem wanem blong yusum hanbuk ia

Buk ia hemi blong whu?

Risos ia hemi taketem sapot blong bildimap ol toelet long ol komiunit long Pasifik blong impruvum sanitesen. Olgeta Non Government Organaesesen (NGOs), gavman, ol praevet kampani mo ol ejen we oli stap givim mane oli save yusum. Folem level blong teknik blong risos ia, olgeta we oli stap ridim oli nid blong gat wan besik skil mo sam expiriens blong bildimap.

Hanbuk ia hemi karem infomesen long:

- olsem wan ol toelet oli impoten
- ol difdifren kaen disaen blong ol toelet we igat: ol adventej mo disadventej blong wanwan disaen; olsem wanem blong bildim wanwan toelet; ol material mo tul we i nid; ol saksesten blong ples blong bild long hem; mo fasin blong lukaotgud
- ol posta blong promosen we oli save putumap insaed ol toelet.

Olsem wanem blong yusum risos ia

Risos ia hemi disaen blong stap olsem wan gaedlaen. Blong bildimap ol wanwan toelet bae i dipen long sam samting we i inkludum ol risos we igat, weaples blong bild long hem mo fasin blong save bild. Ol material we oli rikomendem blong ol wanwan toelet oli bes long ol faswan toelet

we oli bin bildimap long ol komiuniti blong Pasifik mo oli stap olsem ol eksampol nomo. Man i save yusum ol risos we hemi save kasem long ples we hemi stap blong riplesem ol material. Eksampol, yu save yusum bambu blong riplesem ol PVC paep, o strakja blong wol blong toelet hemi save bi sam mat we oli wivim be ino brikis.

Lanwis - toktok toelet

Taem yu yusum manual ia long wan komiuniti, jusum ol toktok we olgeta we oli tekpat oli agri long hem mo we oli riflektem lokal lanwis. Yu save tokbaot ol toktok ia fastaem blong meksua se evriwan i oraet wetem mining blong olgeta toktok olsem.

Klosary mining

Klosary mining blong ol toktok istap long pej 89. Klosary mining hemi eksplenem ol ki toktok insaed long risos ia.

Moa risos

Igat moa risos we yu save faenem se oli sapotem wok blong yu long komiuniti. Wan list blong ol risos ia yu save faenem long pej 2 blong hanbuk ia. Yu save faenem olgeta tu long websaet blong Live & Learn Environmental Education www.livelearn.org.

Ol toelet mo sanitesen

Koneksen wetem haejin mo helt

Haejin, sanitesen mo fasin blong kipimgud ol samting oli save afektem hel blong ol pipol. Weswota i save karem ol patojen mo ol oganisim we oli kosem sik, we ol pipol i save kasem sik from.

Yumi save daonem ol bebet ia we yumi no save luk blong spreadaot taem yumi tekem sam isi step:

- yusum ol toelet
- wasem yumi wanwan, (pesenal haejin)
- meksua se yumi gat akses long klin wota
- drenem weswota long kraon we i wokgud.

Ol problem blong evridei blong helt we istap kamaot taem yumi no yusum ol toelet mo taem yumi no stap wasem ol han blong yumi oli:

- daerea
- ol sik blong skin
- ol parasitik infeksien (e.g. hukwom).

Daerea: kila we yumi no save luk

Oli faenemaot se igat 6.7 milion kes blong strong daerea evri yia long Pasifik (WHO 2008). Hemia i soemaot se klosap 3,000 ded we moa long olgeta oli pikinini we oli no kasem faev yia iet. Daerea hemi nambatu bigfala kila blong ol pikinini we oli no kasem faev yia iet long wol. Wasem han wetem sop hemi daonem ol problem blong daerea long klosap haf (Fewtrell et al 2009). Fasin blong bildim ol toelet mo ples blong wasem han i save givim gudfala helt moa long komiuniti.

Wan komiuniti we i stapgud moa long helt bambae hemi:

- daonem namba blong ol pikinini we oli stap mestem skul mo ol olfala we oli stap mestem wok from we oli sik
- stopem spread blong ol sik we igo long ol pipol wetem ol famili blong olgeta
- sevem mane long saed blong meresin.

Taem yu tingbaot ol kost blong impruvum haejin insaed komiuniti blong yu, hemi impoten blong konsiderem ol kost blong spread blong haejin we istap kontiniu.

Olsem wanem yumi stap kasem ol sik ia?

Risen 1: No wasem ol han

Spos evriwan istap wasem ol han blong olgeta wetem sop afta we oli go long toelet mo bifo we oli kakai, klosap 50% blong ol issiu blong helt bae oli kasem gud mark.

Risen 2: No yusum ol toelet

Raon long wol, fasin blong no yusum ol toelet i soemaot se hemia nao hemi faswan samting we i kosem daerea long ol pikinini we oli no kasem faev yia iet.

Taem yumi no yusum ol toelet (open defecation) mo yumi no stap berem ol toti (faeces) blong yumi, i save gat spread blong ol parasaet, ol bakteria mo ol vaeres. Ol jem ia oli save spread igo long ol kakai blong man mo ol insekt, win, anamol, o man i save karem igo kasem wota saplae.

Risen 3: Wota we i posen

Wota hemi impoten long evridei laef blong yumi from we yumi yusum long klosap evri aktiviti blong yumi. Hemi stap tu olsem wan impoten samting long saed blong envaeronmen from hemi sapotem laef blong ol animal mo ol plant, we i sapotem laef blong yumi tu.

Blong kipimgud ol wota soses blong yumi i klin mo sef oltaem hemi dipen plante long olsem wanem we yumi stap manajem ol toti blong yumi. Spos pipol igo bush long klia ples nomo, o spos ol toelet oli ol pua konstraksen, ol toti blong man i save dren igo kasem wota insaed long kraon, ol wel, ol reva mo solwora.



Olgeta sikis F: Olsem wanem ol sik i spred mo ol solusen blong haejin long sanitesen.

	F	Description	Example	Solutions
	Ol fluid	Wota blong dring we i toti	Wota blong dring blong yumi i save posen spos man i sitsit long open ples klosap long ol wota soses.	Ol wota soses imas stap at lis 30 mita longwe long ol toelet o ol ples blong sitsit. Boelemgud wota bifo dring.
	Ol fil	Kraon o ol kakai blong karen we oli bin kasem posen wetem toti blong man.	Ples blong sitsit long open area i hapen long ples we ol kakai blong karen oli stap gru long hem.	Wasem han blong yu oltaem afta yu go long toelet o bifo yu kakai.
	Ol fingka	Priperem kakai o putum kakai long maot wetem ol han we oli no wasem.	No wasem han wetem sop bifo priperem kakai.	Wasem han blong yu oltaem afta yu go long toelet o bifo yu kakai.
	Fut	Wokbaot drae lek tru ol fil we i posen i save spredem ol pis toti blong man.	Wokbaot drae lek tru ol fil go insaed ol haos blong yumi mo ol nara-fala haos.	Werem sus taem yumi stap aotsaed. Spos no, meksua se ol lek blong yu i klingud bifo wokbaot insaed long ol haos.
	Food/ Kakai	Kakai ol kakai we i posen.	Posen kakai from ol toti fingka, o kakai we ino klin gud, o oli wasem long wota we i posen.	Wasem ol frut mo lekim oltaem wetem wota we i klin bifo priperem.
	Ol flae	Spredem sik blong toti blong man long kakai mo wota o stret igo long ol pipol raonabaot we i problem we sitsit long open ples i kosem.	Ol flae we oli stap karem ol pis toti blong man igo insaed ol haos mo ol skul i save afektem kakai mo wota.	Ronemaot flae long ol ples blong kakai. Kavremap kakai mo ol kap blong stopem flae blong spredem sik.

(WHO 2005)

Ol risen from wanem ol toelet oli impoten:

Sefty: Ol fasiliti blong toelet long wan sef ples we i isi blong aksesem i daonem risk blong atak o ambak, speseli blong ol gel mo ol woman.

Helt: Ol toti blong man imas stap insaed long wan toelet. Hemia bambae hemi daonem risk we i save spred olbaot mo endap long ol kakai mo wota blong yumi.

Long taem blong ren, ol toti blong man i save wasdaon tu igo kasem ol lokal reva mo ol kraonwota mo oli save posenem ol wota saplae

blong dring. Ol anamol tu oli save spredemaot toti blong man.

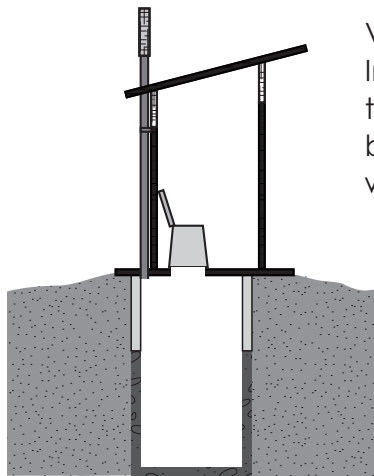
Stetes: Long plante ples, ol toelet oli simbol we oli gat stetes mo valiu insaed long wan komiuniti, mo samting ia i soemaot se ol haos mo ol pipol we oli liv insaed oli 'moden'.

Edukesen: Igat wan koneksen wetem tingting blong ol toelet mo standed blong edukesen (speseli blong ol gel). Taem ol gel oli stat blong luk sikmun, be spos i nogat ol toelet long skul, bambae i afektem atendens blong olgeta.

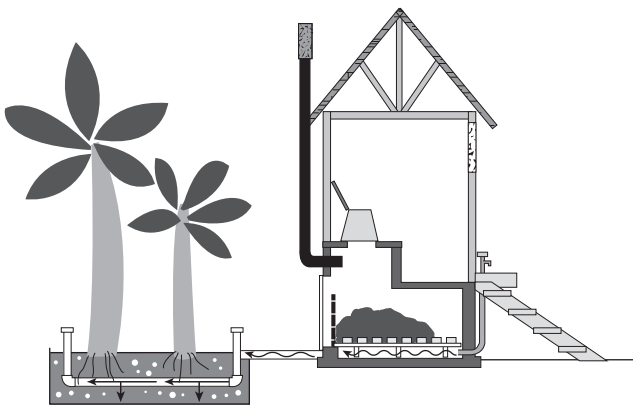
Ol opsen blong sanitesen

Ol opsen blong sanitesen we istap aninit i soemaot ol kaenkaen opsen blong toelet we i save gat long ol haos mo ol komiuniti. Hemi impoten blong jusum stret kaen toelet we i sutum nid blong ol pipol mo ol kondisen blong ples we oli stap long hem. Long lef saed hemi ol drae toelet we ino yusum wota blong wasemaot ol toti o blong klinim. Long raet saed hemi ol toelet we oli yusum wota.

Ol opsen blong drae toelet

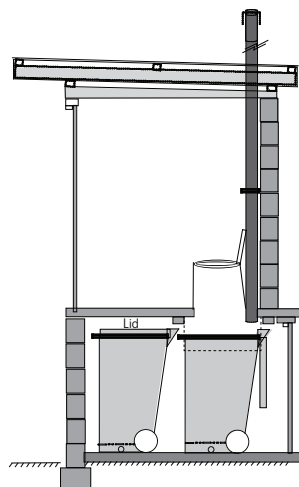


VIP: Ventilated Improved Pit
toelet wetem ples
blong sidaon mo
wan win paep



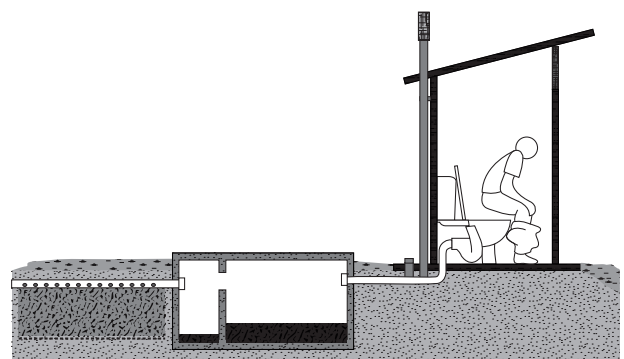
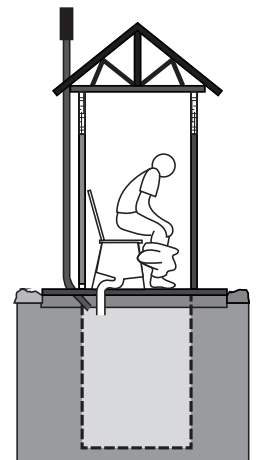
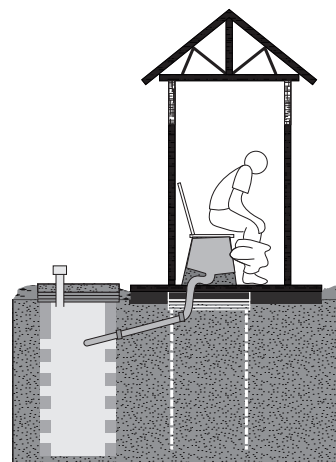
Kompost toelet: Dabel jemba

Kompost toelet:
Singkel jemba
wetem 2 wil pubel
pubel



Ol opsen blong ol toelet blong wota

Ol toelet we oli kapsaedem wota
long olgeta



Toelet wetem septic tank



Jusum toelet we i 'stret'

Sam samting blong tingbaot

Seksen ia bambae hemi helpem pipol blong disaedem wanem kaen toelet nao i sutum nid blong olgeta.

Ol komiuniti akros long Pasifik oli gat difdifren kaen nid blong sanitesen. Hanbuk ia hemi givim ol kaen opsen blong sutum level blong inkam mo nid blong plante long ol famli.

Ol komiuniti akros long Pasifik oli gat difdifren kaen nid blong sanitesen. Hanbuk ia hemi givim ol kaen opsen blong sutum level blong inkam mo nid blong plante famli.

Jusum wan toelet

Jusum 'stret' toelet i minim se yu stap selektem hemia we bae hemi fitim stret nid blong haos.

Hemi impoten blong faenemaot ol nid blong EVRI pipol insaed long famili we bae oli yusum toelet we istap long plan.

Meksua se yu tingbaot ol woman, ol man mo pikinini long ol diskasen blong yu. Maet yu save toktok long wanwan grup ia long wanwan taem.

Akses

Meksua se evriwan we i yusum toelet oli gat isi akses long hem, inkludum ol pikinini, mo oli save sidaon isi nomo long long toelet mo oli haremgud. Mo tu imas gat spesel tingting long ol spesel nid we igat long wanwan haos (ol olfala, ol woman we igat bel, o olgeta we oli handikap). Ol strakja blong ol toelet i save disaen blong sutum nid blong olgeta we oli gat spesel nid. Sam eksampol oli: ol hanrel

we i folem ol step olsem sapot; ol bar we man i save holem blong kasem balens mo sapot taem hemi sidaon mo gerap long toelet, o wan rod blong olgeta we oli yusum wiljea.

Praevesi

Meksua se ol toelet oli praevet, blong mekem se pipol we oli yusum olgeta oli filim gud. Long sam kalja maet hemi impoten se man ino mas luk olgeta we oli iven go insaed mo kam aotsaed long ol doa blong ol toelet. Hemi impoten blong kasem tingting blong evri man mo woman long taem blong jusum wan ples blong bildim toelet.

Sikmun blong ol woman

Taem blong sikmun long evri manis, ol woman oli nidim ol eria we oli sef mo klingud, mo gat akses long ol seves blong sanitesen olsem seperet ples blong wasem han o wan narafala rum. Blad mo ol koten klos i save go insaed long hol blong ol toelet mo ol kompost toelet stret olsem ol narafala samting. Be nating se i olsem, ol spesel saniteri pad mo ol aetem blong proteksen we oli gat plastik i no save go insaed long ol toelet. Ol samting ia i nid blong berem (longwe long ol soses blong wota) o bonem. Long ol skul, spos i nogat ol toelet blong ol gel we oli luk sikmun blong olgeta, bambae i save mekem se ol gel oli no fil sef blong go long skul.

Sefti mo sekyuriti

Meksua se ol toelet oli stap long ples we i sef mo igat gud sekyuriti long hem, klosap long haos. Hemia hemi speseli impoten blong ol gel mo ol woman.



Klin fasin

Ol pipol oli stap laekem moa blong yusum toelet spos hemi wan eksperiens we igud. Meksua se ples blong sidaon long toelet mo pan wetem ol eria klosap oli save klinimgud isi nomo.

Lokesen

Taem blong jusum lokesen blong bildimap ol toelet, igat sam isiu we yumi save tingbaot. Faswan samting, bambae toelet i yusum wota?

Meksua se lokesen hemi sef blong ol woman mo pikinini blong yusum long naet. Hemi shud stap tu long wan ples we i isi blong evriwan blong save go long hem, inkludum olgeta we oli no save wokbaot longwe mo ol olfala.

Tebel we istap aninit ia hemi soemaot ol distens we ol toelet i save stap longwe long haos o soses blong wota.

Ol toelet we i yusum wota hemi no mas stap long 30 mita klosap moa long wota sos olsem wan wel, reva, solwota o wota blong kraon, from se toti i save kasem wota mo posenem. Ol drae toelet, olsem kompost toelet, oli save stap klosap moa long ol reva mo ol wel from oli no save afektem saplae blong kraonwota.

Akses long wota mo sop

Fasin blong gat akses long wota hemi save helpem komiuniti blong jusum ol kaen toelet. Ol kompost toelet oli no nidim wota, mo ol toelet blong kapsaedem wota oli nidim plante lita blong yusum. Bambae i nidim sam moa wota blong klinim toelet mo toelet rum. I nidim wota mo sop blong wasem han, be spos wota saplae hemi no bigwan, i mas gat inkris long saplae ia mo fasin blong karem wota blong ren i save help. Spos sop i nogat, luk fasin blong mekem sop long pej 80.

Kaen toelet	Tingting blong distens longwe long haos	Tingting blong distens longwe long wota soses, olsem wel o reva
VIP toelet	10–15 mita	30 mita
Kompost toelet	i save stap insaed long haos	hemi no afektem wota soses
Kapsaedem wota	i save stap insaed long haos	30 mita

Fasin blong mekemaot ol nid blong haos

Ol pipol we oli wantem wan toelet oli save yusum gaedlaen we istap aninit ia. Oli save yusum blong faenemaot wanem kaen toelet we i sutum gud ol nid blong olgeta.

Famli

- ☐ Long saes blong famli, hamas man bae oli yusum toelet? Toelet i stret level blong yus ia?
- ☐ Evri memba blong famli i save yusum semfala toelet? Yu nidim blong seperetem ol toelet blong man mo woman?
- ☐ Igat sam memba blong famli we oli gat spesel nid? Olsem olfala o hemia we ino save klaem long ol step o hemi sik, o we i nidim wan rel blong holem, o we i nidim akses blong wiljea.

Envaeronmen

- ☐ Kraon - igat naf kraon blong bildimap toelet wetem ol drenej blong hem, o we igat septik tank?
- ☐ Long saed blong lokesen, igat sam ples we i sef blong putum toelet we ol woman/pikinini oli save faenem sef taem oli yusum long naet? Lokesen hemi stap at lis mita longwe long ol wel o ol ples we oli stap kasem wota long hem blong dring o kuk wetem?
- ☐ Long taem blong flad, eria ia flad i save hapen long hem? Spos i olsemia, bambae i nid blong mekem toelet rum mo jemba/pit we i hae.
- ☐ Kraon ia hemi gat ston, san, klei? Bae weswota i save dren igo insaed long kraon kwiktaem inaf? Spos no, maet bae i nidim wan drae toelet. Kraon hemi stapgud taem oli digimap hol long hem? Spos no, bae i nid blong putum smen long ol pit blong toelet.

Wota

- ☐ Spos toelet hemi yusum wota, igat inaf wota blong yusum, iven long drae taem?
- ☐ Igat akses long wota blong wasem han, klinim mo lukaotgud long toelet?
- ☐ Wanem stael blong wasem han nao i sutum ol kondisen blong yu? Luk eksampol long pej 77.
- ☐ Igat sop?

Ol kost

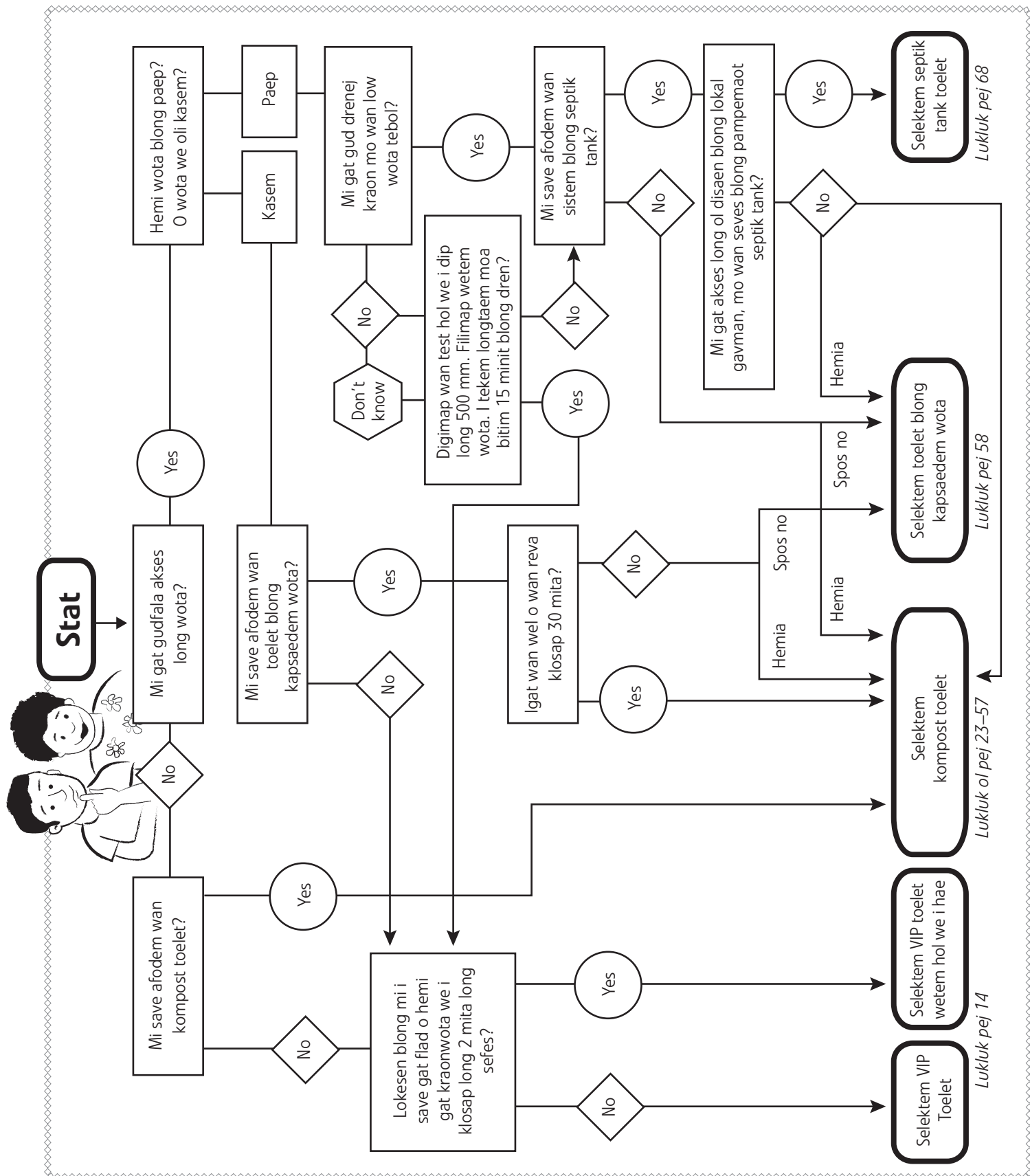
- ☐ Mane: wanem nao yu save afodem inkludum ol kost blong evridei olsem ol bil blong wota mo ol ripea. Wanem nao ol pipol bae oli naf blong pem?
- ☐ Hemi posibol blong sam famli oli mekem mane kleksen blong save bildimap wan toelet?
- ☐ Plan blong sevem mane, hemi posibol blong plan blong sevem mane long komiuniti?
- ☐ Igat maekro faenans long eria blong yu?

Hemia i wan gud wei blong save ol nid blong ol famli we oli stap tingting blong bildimap wan toelet. Taem we infomesen ia i kasem evriwan, tokbaot ol poen we oli kamaot long hem wetem famli. Olsem eksampol, wan komiuniti we igat smol o nogat wota nating maet oli no save bildimap wan toelet we i yusum wota.



Wanem opsen blong toalet i gud moa blong haos blong mi?

Yusum jat ia blong helpem ol kastoma blong yu blong wokemaot wanem kaen toalet nao hemi sutum hom blong olgeta moa. Faenem "STAT" mo tokbaot rod blong hem we i lidim yu igo long beswan kaen toalet we i sutum olgeta.



Ol opsen mo konstraksen blong toelet

Seksen ia hemi presentem plante opsen blong ol toelet, we i ditelem ol adventej mo disadventej long wanwan disaen mo tu olsem wanem blong bildimap wanwan model. Ol disaen blong ol toelet ia oli gaedlaen nomo. Bifo yu bildimap wanwan toelet, mifala i sakjestem se yu mas jekemap ol lokal otoriti blong yu blong kasem apruval blong ol plan.

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1. Ventilated Improved Pit (VIP) toalet

VIP toalet hemi wanem?

Ventilated Improved Pit (VIP) toalet hemi normal toalet we igat hol we oli ademap wan win paep long hem blong daonem smel mo ol flae.

Olsem wanem hemi wok?

Win paep hemi stat long insaed long hol mo hemi go antap kasem ruf blong toalet. Win we i pass krosem antap blong paep hemi pulum ea i folem paep igo antap. Hemia i tekemaot ol smel blong ol mo hemi stopem olgeta smel ia blong go kamaot long ples blong sidaon long toalet, o hol blong toalet. I mas gat wan spes, we oltaem hemi antap long doa blong toalet, blong mekem ea i kam insaed long rum blong toalet. Flo blong ea bae hemi kam bigwan moa spos doa hemi fesem nomal daareksen blong win.

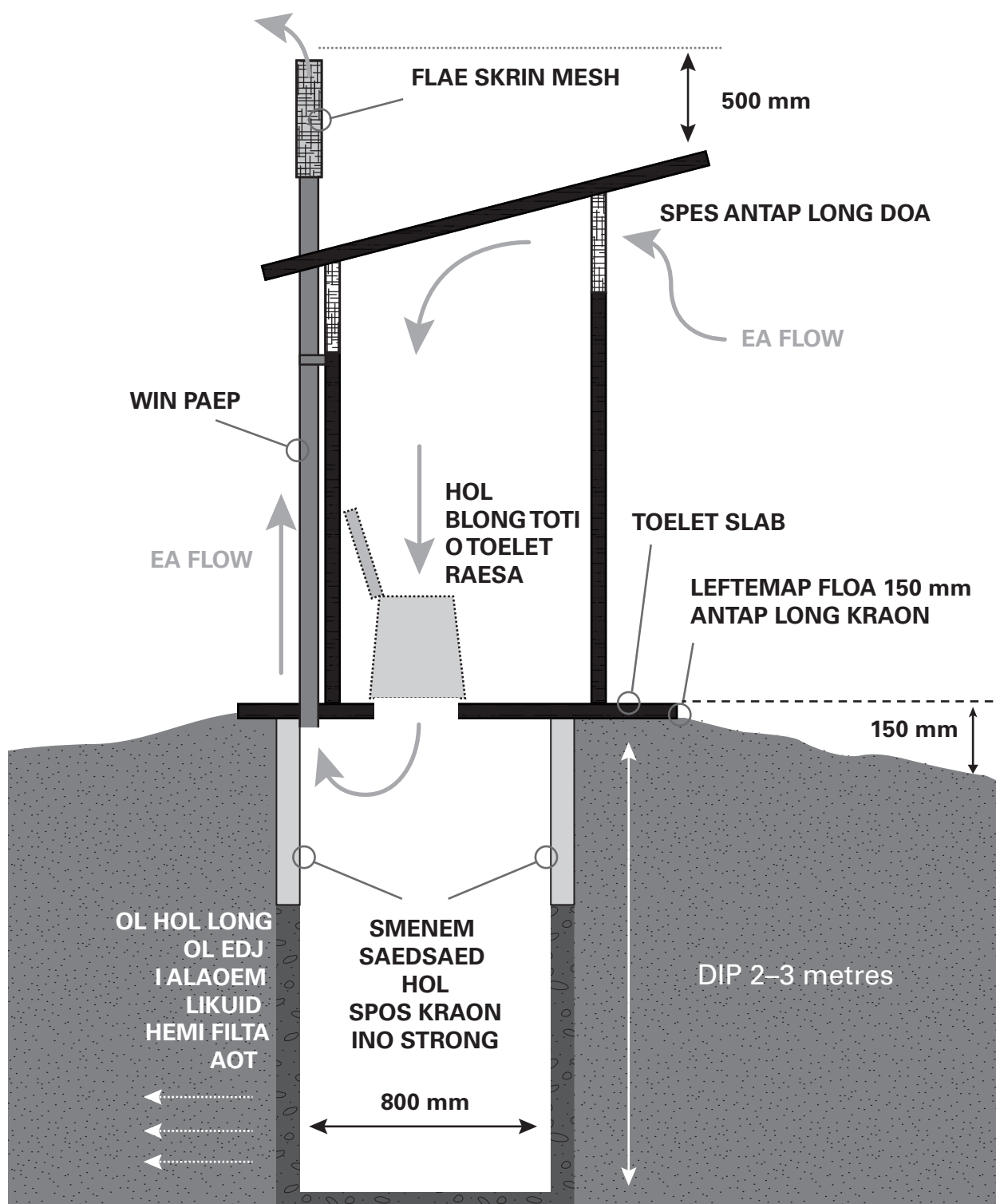
Win paep hemi gat skrin blong flae we i stopem ol flae blong kam insaed long hem o blong ol flae igo aotsaed long paep. Spos rum blong toalet hemi dak inaf, eni flae we ikam insaed long dak hol tru long paep o ples blong sidaon bae i laekem blong folem delaet we istap antap long paep blong win. Hemi impoten se yumi no mas kavremap toalet sit o hol blong toalet long deitaem from bae hemi save blokem flow blong ea.

Spos toalet igat doa, doa ia hemi mas stap sat oltaem blong kipim insaed long toalet rum istap long tudak.

Bambae i nid blong muvum toalet taem we klosap hol i fulap (500 mm blong kasem top). Hemia i hapen oltaem afta tu o tri yia.

Ol adventej mo disadventej blong wan VIP toalet

Ol adventej	Ol disadventej
Hemi no sas	Hemi no save kontrolem ol moskito insaed long hol
Man blong haos nomo i save bildimap (ino nidim spesel skil)	Nidim moa kost blong putum wan win paep
No nidim wota blong operet	Nid blong kipim insaed long rum blong toalet i dak istap
Isi blong kasem save long hem	Ol smel blong hol i save goap kasem rum blong toalet spos i nogat win i blo aotsaed
Kontrol blong ol flae mo smel i godaon long rum blong toalet, difren long wan toalet we igat hol be i nogat win paep	Maet ino save sutum tingting blong olgeta we oli yusum taem ol toalet we i 'moa advens' oli setap long eria (e.g. ol wota sil o flash toalet)
Oli save yusum ol material olsem pepa blong toalet o ol lif be oli no save blokem toalet	
Save jusum weta blong instolem wan hol blong yusum o sit raesa	
Slab blong toalet i save raon blong mekem i isi blong leftemap o rolem igo long nyu hol taem we toalet i fulap	



Olsem wanem blong bildimap wan VIP toelet

Ol material we i nid

- 1 x 40 kg bag smen
- 3m PVC paep blong 100 mm o semak saes bambu we hol i pastru long medel
- 2 kg blong 1.6 mm waea blong fasem o 1200 mm x 1200 mm F72 aean mesh o 1.6 mm waea blong fasem wetem ol nel
- Klin sanbij mo ol ston blong save miksimap wetem smen
- blak pent
- Flae skrin mesh 400 mm x 400 mm; opsenal plastik en blong win paep
- 4 x 50 mm x 50 mm x 1.4 m timba
- Ol stret material blong haos mo doa.

Ol tul we i nid

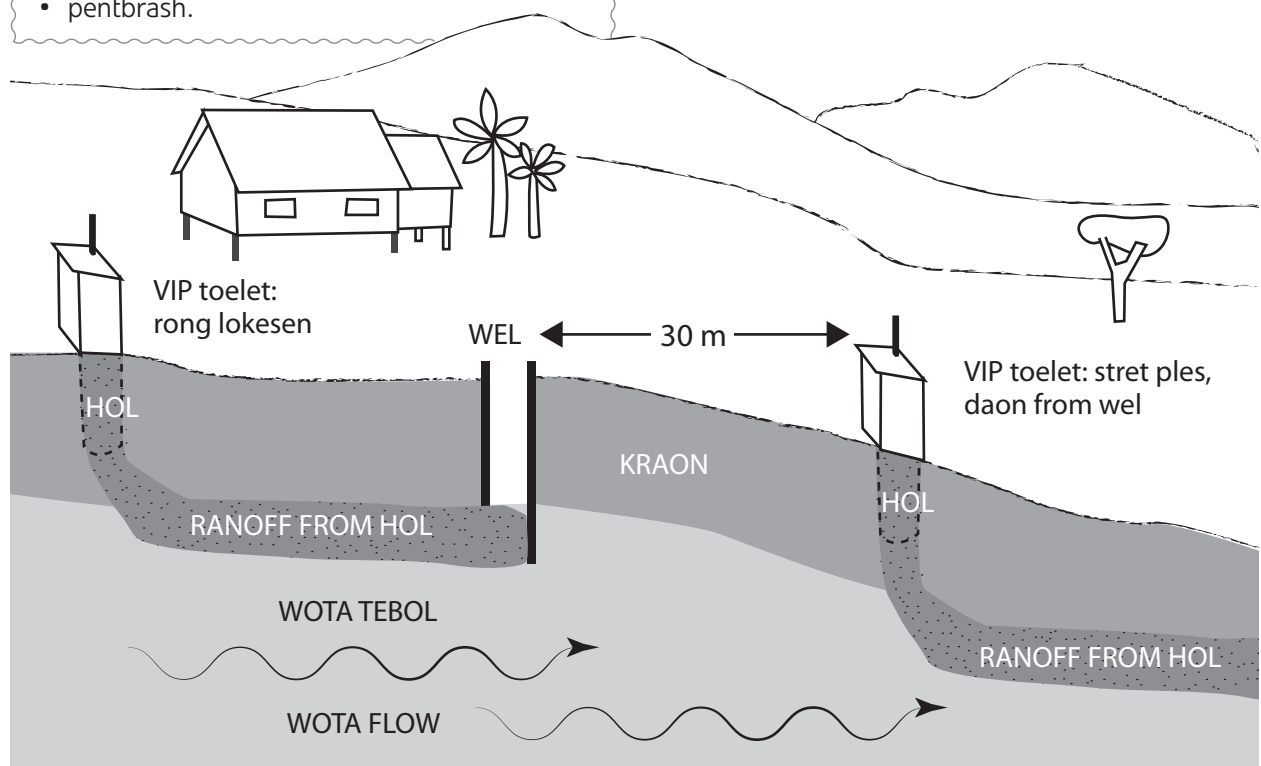
- baket
- hama
- traoel
- sped
- pensis
- spirit level blong bilda
- pentbrash.

Igat 4 ki stej blong bildimap wan VIP toelet:

1. Selekttem beswan lokesen
2. Digimaot pit
3. Bildim toelet slab
4. Bildim toelet haos

1. Selekttem beswan lokesen

- Ples we i stretgud (we evriwan i save aksesem).
- Kraon we wota i save go insaed mo we level blong kraonwota hemi dip moa long 2 mita (spos no maet i nid blong resemapi pit o hol).
- At lis 30 mita longwe long eni wota sos olsem wel o springwora we oli yusum blong dring mo kuk wetem.
- Spos i posibol, doa hemi shud fesem daareksen blong win mo win paep hemi shud fesem san.



2. Digimap pit

Hol/pit hemi nid blong hemi at lis 2-3 mita dip, moa hae bitim hed blong wan man we i stanap insaed. Hol ia hemi save raon o skwea mo hemi save bigwan kasem 800 mm. Katem wan stik we i longfala kasem 800 mm mo yusum olsem rula blong meksua se bigwan blong hol hemi stret long evri saed. Botom blong hol hemi save bigwan moa i bitim 800 mm, blong mekem se kapasiti blong hem hemi bigwan moa. Yusum sam long ol kraon we yu digimaot blong stakemap kasem 150 mm raon long hol. Hemia i stopem wota blong ren blong flow insaed long hol mo mekem ol edj i folfoldaon. Spos kraon ino strong, yusum timba, ol ston, ol brikis o sam olfala dram blong 200 lita (wetem tufala end i open) blong sapotem ol wol. Yu save ademap smol smen fandesen antap long edj blong hol blong sapotem toelet slab.

3. Buildim toelet slab

Slab blong toelet hemi mas bi strong smen we igat waea insaed blong mekem se i sef mo save stap longtaem. Wan simpol slab blong 1.2 m x 1.2 m we hemi strong smen wetem waea hemi stretgud.

Meksua se slab hemi at lis 400 mm bigwan moa bitim hol so bae i nogat denja se hol bae i brokbrok. Slab imas gat 2 hol blong win paep mo hol blong toti (o sit raesa). Meksua se hol blong toti hemi smol tumas blong wan yang pikinini i foldaon tru long hem. Wan brik hemi nambawan gaed blong kasem stret saes. Spos yu ademap wan sit raesa, mekem wan fomwok we i semak saes wetem botom blong sit raesa ia.

Bildimap fomwok blong slab long wan ples we i smut, flat mo level. Slab i nid blong hemi 1200 mm x 1200 mm mo 50 mm dip long ol saed blong hem. Hemi save dip moa klosap long medel. Wan olfala tin oel we oli pentem isaed long fomwok bae hemi helpem blong seperetem hem wetem smen taem we smen i draegud.

Yusum F72 stil mesh o yusum tae waea blong mekem mesh. Twistim 22 set blong 3 pat blong tae waea oli taetgud tugeta we i longfala abaot 1600 mm (oli stap skwis mo kam smol taem oli taetem olgeta). Putum ol nel folem edj blong fomwok wetem ol spes blong 100 mm. Pulumtaet ol waea



Building the formwork for the toilet slab.

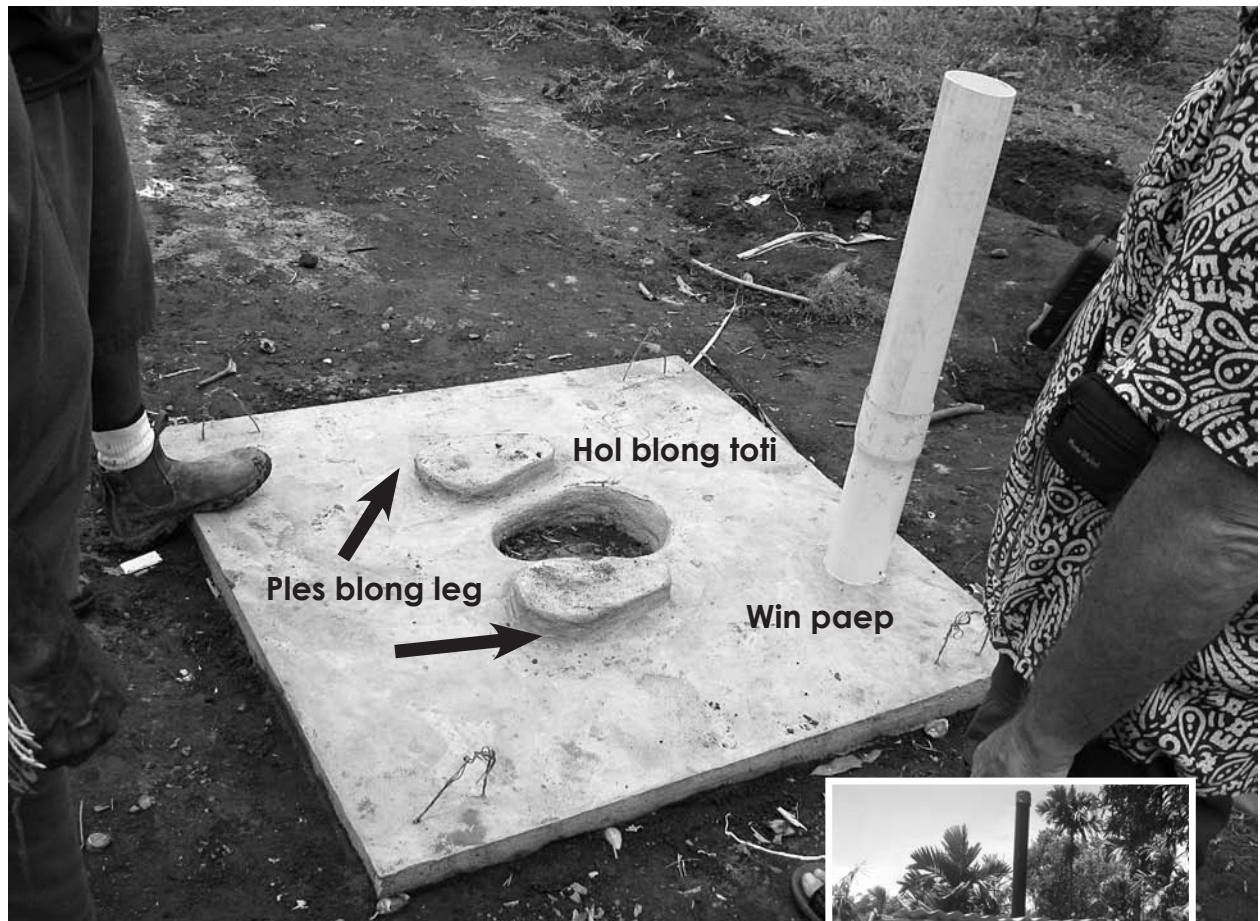


we yu taetem krosem ol nel mo wivim olgeta ikam mesh. Fasemgud ol waea i taetgud tugeta long ol ples we oli krosem olgeta long hem. Katemaot ol waea we yu twistim olgeta aot long ol nel jes insaed long fomwok blong komplitimgud mesh. Hemia i mekem wan strong mesh we ilok insaed long smen mo i mekem i strongud moa. Katemaot ol seksen we bambae win paep istap long hem. Plesem wan sot PVC paep blong 100 mm long wan bend blong win paep mo 250 mm daemeta fomwok blong hol blong toti o ples we i stanap redi blong sidaon (o yu save katemaot long wan traodel afta nomo).

Smen

Miksimap smen wetem sanbij mo ol ston olsemia: 1 pat blong smen, 2 pat blong sanbij, 2 pat blong ol ston. Ademap smol wota nomo mo miksimap gud. Divaedem long 2 pat mo adem smol wota moa wetem smen long ol hip we i sofsof moa long ol narafala hip blong mekem ikam wetwet gud.

Steremap gud insaed long wan baket. Kapsaedem wetwet smen igo long fomwok kasem 20 mm dip



mo kilkilim fomwok sloslo wetem wan pis wud blo rilisim ol babol. (Spos yu no mekem olsemia bambae ol smolsmol hol i kamaot antap long slab). Putum mesh bifo yu ademap strong smen we i kavremap gud. Kilkilim smen wetem wan pis wud gogo kasem we wota blong smen ikam antap long smen. Smen i save kasem abaot 12 mm dip moa long medel, blong mekem slab i strong gud mo i helpem flow blong wota long taem blong klinim. Yusum wan traoel blong mekem ples blong purumbut spos yu wantem yusum hol blong toti nomo. Kavremap slab wetem ol lif banana o plastik blong 3-4 dei. Woterem smolsmol wetem wota evri dei blong sloem daon proses blong kam strong, mo hemia hemi mekem se taem hemi finis, hemi strong gud. Smutum antap long slab taem we hemi stap drae, blong mekem i isi blong klinim. Taem hemi drae, leftemap slab sloslo igo stap long faenol posisen blong hem ova long hol.

Rimemba, no yusum tumas wota long taem we yu miksimap smen from bambae hemi mekem se taem hemi finis bambae ino strong. Moa we mix blong yu i drae, moa taem smen we i finis bae hemi strong gud.



4. Bildim toelet haos

Yu save disaenem haos we i sutum lokal nid mo we oli save yusum ol lokal bush material o timba mo kapa. Ea flow long win paep bae hemi gud moa spos paep hemi ekspas long san. Ea insaed long paep bae hemi kam hot mo hemi go antap. Blong mekem olsemia, bildim ol wol blong toelet long wei we paep bae istap aotsaed long toelet. Pentem paep i blak blong helpem hem blong pikimap moa hot blong san. Win paep i mas kamaot antap long ruf blong haos 500 mm mo yu mas kavremap wetem flae skrin. Taem yu instolem wan win paep hemi no rili nid blong kavremap hol blong slab o toelet sit be taem yu mekem olsemia yu daonem ol smel, speseli long ol taem we i kolkol olsem eli moning, o taem we i nogat win i blo.

Olsem wanem blong bildim wan sit raesa

VIP wetem wan sit raesa hemi gat sem disaen mo fasin blong mentenens blong wan VIP toelet, be wan sit (o sit raesa) hemi provaedem wan stael blong sidaon.

Ol adventej mo disadventej blong wan VIP toelet wetem sit raesa

Ol adventej	Ol disadventej
Hemi no sas	Hemi no save kontrol ol moskito insaed long pit
Man blong haos nomo i save bildimap (smol save be inaf)	Igat moa kost blong provaedem wan sit raesa
Ino nidim wota blong operet	I nidim blong kipim insaed istap tudak
Hemi isi blong kasem save long hem	Hemi nidim moa klinap insaed long sit raesa
Igat kontrol long ol flae mo hemi daonem smel insaed long toelet rum	Smel we i kamaot long hol i save kasem toelet rum i nogat win i blo aotsaed
Hemi sutum sam tingting blong ol yusa we oli wantem disaen we i nyu long maket	Maet bae i no sutum tingting blong ol yusa taem we ol narafala moa advens toelet oli setap long eria (e.g. ol toelet blong kapsaedem wota ol flash toelet)
Eni material blong klinap (olsem pepa blong toelet) i no save blokem toelet	



VIP toelet wetem sit raesa long vilij blong Minda, PNG. Win paep bihaen long wol blong bak blong haos hemi pulum moa san mo hot ea blong givhan long ventilesen.

Bildimap wan sit raesa

Ol material we i nid:

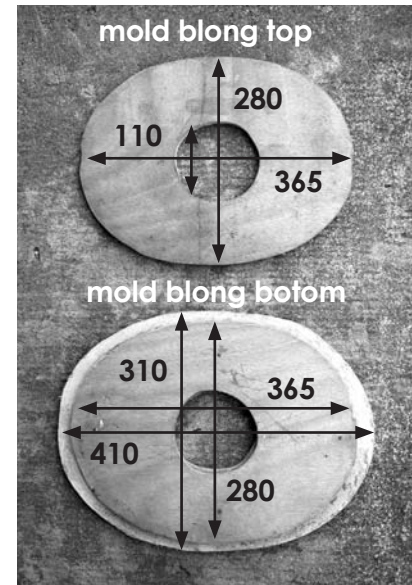
- mold blong plaewud
- (12 mm) x 3
- flat aean 1120 mm
- x 450 mm
- waea blong faol (10 mm)
- 1120 mm x 475 mm
- tae waea (1 mm) 8 mita
- smen 1/3 blong bag blong 40 kg
- stik (10 mm daemeta) x 2
- sanbij, smol, we oli pasem
- toelet sit mo lid blong hem. sticks (10 mm diameter)

Ol tu we i nid:

- pensis
- flat traoel
- kata blong waea.



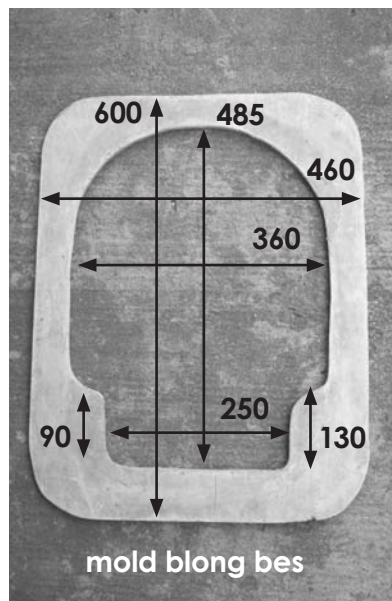
Mekem 3 paewud mold.



Joenem 2 pis blong 12 mm plaewud blong mekem tufala mold blong aninit mo antap. (rul blong meserem hemi long mm)



Lukluk klosap, we i soemaot tufala pis plaewud i joen tugeta



Plaewud mold blong toelet bes. (rul blong meserem hemi mm).



Katem waea blong faol i longfala olsem flat aean, be hemi bigwan moa long 25 mm.



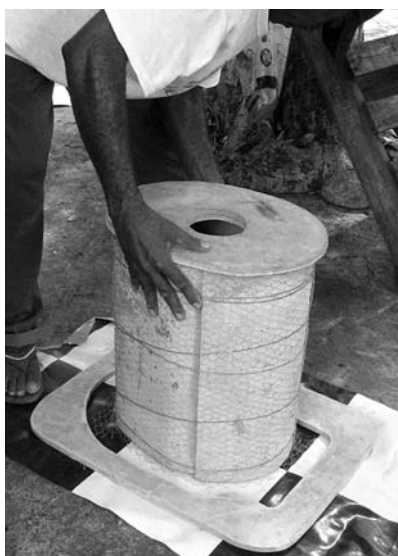
Benem flat aean raon folem insaed long mold blong aninit.



Putum mold blong antap insaed long top blong flat aean we yu benem mo taetem gud wetem tae waea.



Rapemap mo fasemgud waea blong faol. Hemi shud bitim top blong flat aean long 25 mm.



Tanem raon sit raesa, plesem insaed long mold blong bes, long wan ples we i smut. Fasemgud waea blong faol raon long bes.



Miksimap 1 pat blong smen, 3 pat blong sanbij mo wota blong mekem strong smen mix.



Traoelem 10 mm blong smen igo long waea. Letem i drae blong 1 haoa, adem nara 5 mm smen.



Prestem ol stik tru long bes long ples we toilet sit bae hemi ataj long hem. Livim i drae long 1 dei.



Rimuvum ol mold mo flat aean. Spos yu bildim wan drae toilet: Ademap 5 mm blong smen insaed long raesa. Smutum.



Fitim toilet sit mo lid blong hem. Yusum smen blong smutum i joengud wetem smen floa blong toilet. Raesa i redi blong yusum.

Yusum mo mentenem wan VIP toelet

Olsem wanem blong yusum toelet:

- Kipim rum i tudak blong mekem se ol flae ino save go insaed.
- No kavremap toelet sit o hol blong toti long deitaem (taem yu kavremap bae yu daonem ea we i flow igo daon long hol mo go insaed long win paep).
- Kavremap long wan sot taem nomo spos ol smel istap kamaot long hol blong toelet from we i nogat win o long kol weta.
- Kipim eria raon long toelet i klin blong mekem se hemi wan sef mo naes ples blong stap long hem.
- Enkarejem komiuniti blong yusum toelet mo sherem ol aede blong yusum.
- Mekem ol plan blong klinimap toelet mo mekem i wokgud.

Ol komon problem wetem ol solusen

Problem	Solusen
Wota hemi wasemaot kraon we i raonem slab mekem se igat opening long hol.	Riperem wetem kraon o smen blong mekem se ol flae no ol rat ino save go insaed
Bambu we yu yusum olsem win paep hemi brok o hemi roten.	Riplem
Mold i blokem flae skrin	Flae mesh hemi mas klia oltaem. Mekem sam opening long saed blong top blong paep blong mekem se mold ino save gru long hem.

Lukaotemgud toelet

Taem we hol i fulap long 3/4 (abaot 500 mm blong kasem antap), rimuvum slab mo filimap hol wetem kraon. Digimap wan nyu hol, jekemap smen floa spos i gat sam ples i brokbrok mo yusum bakegen spos hemi oraet istap. Bildimap bakegen haos raon long hem.

No fogetem ...

Evri toelet i nidim blong gat wan ples blong wasem han wetem wota mo sop.

Ol isi eksampol olsem yu save mekem kwiktaem oli stap long pej 77.



2. Ol kompost toelet

Wanem ia kompost toelet?

Wan kompost toelet hemi wan drae toelet we ino yusum wota. Olgeta toti i foldaon igo long wan jemba we i sidaon antap long level blong kraon. Ol kompost toelet oli beswan opsen long ples we igat risk blong polutum kraonwota o envaeronmen.

Olsem wanem hemi wok

Long plante hanred yia fulap kantri oli bin stap mekem ol toti blong man ikam kompost. Oli miksimap toti blong man wetem ol oganik samting blong krietem kraon we i fetael. Ol kompost toelet oli mekem sem samting. Wan kompost toelet we oli mentenem gud hemi klin gud mo hemi no karem gem mo hemi no smel. Long wan kompost toelet, toelet sit hemi sidaon stret antap long wan jemba we i drae. Evritaem we oli yusum, oli adem sam oganik samting, mo insaed long 12 manis, mix ia i prodium wan kompost kondisena blong kraon (rifea long seksen blong yusum ol kakai blong karen). Hemi no yusum wota, hemi nidim smol amaon blong wota nomo blong mekem ol klinap blong toelet raesa. Ol nogud gem (o ol patogen) oli ded from hot blong kompost mix mo period blong taem we kompost istap bifo oli rimuvum aot long jemba. Long en, kompost hemi rimuv mo oli save yusum olsem wan kondisena blong kraon (fetelaesa).

Mos komon disaen blong kompost toelet long Pasifik hemi 'batch system'. Sistem ia hemi yusum 2 o moa jemba blong kapjerem toti blong man. Ol toelet blong batch system oli gat 2 jemba blong kompost toelet mo ol wil pubel blong kompost. Faswan jemba hemi yus kasem taem hemi fulap, afta oli saremgud mo livim istap mekem kompost taem we seken jemba i yus bakegen. Taem seken jemba hemi fulap, oli saremgud mo oli emtimaot kompost we istap long faswan jemba blong save yusum jemba ia bakegen. Spos igat sam wota we i drenaot long bes blong jemba, hemi go long wan smol sokawe we ino dip tumas.

Nomali, saes blong ol jemba i stret blong fulap long wan period blong 12 manis, wetem adisenal 12 manis blong alaoem kompost blong bildap we

inogat distebens long hem bifo we oli emtimaot. Long sistem we igat 2 jemba, oli stap muvumaot toelet sit long wan jemba igo long narawan. Long sistem blong wil pubel, toelet sit istap nomo be wil pubel we i fulap nao oli rimuvum mo storem long wan ples blong mekem kompost i bildap. Wan wil pubel hemi riplesem hemia we i fulap.

Ol jemba oli sidaon antap long kraon mo oli blokem gud raon long olgeta. Hemia i stopem kontaminesen blong kraonwota, polusen blong kraon mo problem blong helt we oli komon long ol wet mo drae toelet sistem. Ol yusa, haoeva, oli mas kam we oli haremgud wetem handling blong toti blong man we ikam kompost we istap hapen wanwan taem (evri 9 kasem 18 manis).

Appropriate use

Kompost toelet hemi wan solusen we i wokgud long ples we igat fulap kraonwota o we oli save kasem polusen isi. Be tu, oli save yusum olsem wan toelet we ino yusum wota long plante narafala ples. Oli save bildim klosap long ol haos, o stret long saed blong wan haos we i hae.

Kompost toelet oltaem hemi sutum nid blong wan singkel famli. Oli save bildim olgeta tu wetem plante rum long ol institusen olsem ol skul be oli mas manejem gud blong meksua se oli klingud oltaem mo we oli no ovayusum, we i minim se oli save fulap kwiktaem nomo, mekem se i no save gat gud taem blong kompost i bildap.

Stret yus long kakai blong karen

Wol Helt Oganaesesen (WHO) hemi rikonaesem se kompost blong toti blong man hemi stret blong yusum olsem fetelaesa long ol kakai blong karen. Hemi kontenem ol mineral we i impoten mo ol nutrien, olsem ol narafala fetelaesa we ol komiuniti oli stap yusum. WHO hemi rikomendem se oli save yusum kompost ia long ol kakai blong karen long fasin we i sef gud spos sitsit blong man hemi drae mo hemi nogat smel, mo i bin stap long tudak, we oli kavremap mo livim i bildap long 2 yia o moa. Blong moa infomesen, plis rifea long WHO Composting latrines.

Seleksen blong beswan lokesen

Taem oli bildimap mo lukaotemgud kompost toelet, hemi no givim eni smel we i nogud mo hemi save stap long eni ples nomo. Ol win paep oli wokgud moa taem we igat win i blo ova long top blong olgeta (luk seksen blong VIP Toelet) so imas gat tingting long saed ia taem oli selektem lokesen.

Doa we istap alaoem rimuval blong kompost hemi mas isi blong yusum. Wan impoten adventej blong ol kompost toelet hemi lokesen blong olgeta ino dipen long lokesen blong eni sos blong wota, from oli no nidim kraon we i level o kraon we i dring gud wota. Oli save setemap nomo long wan smol spes klosap long haos.

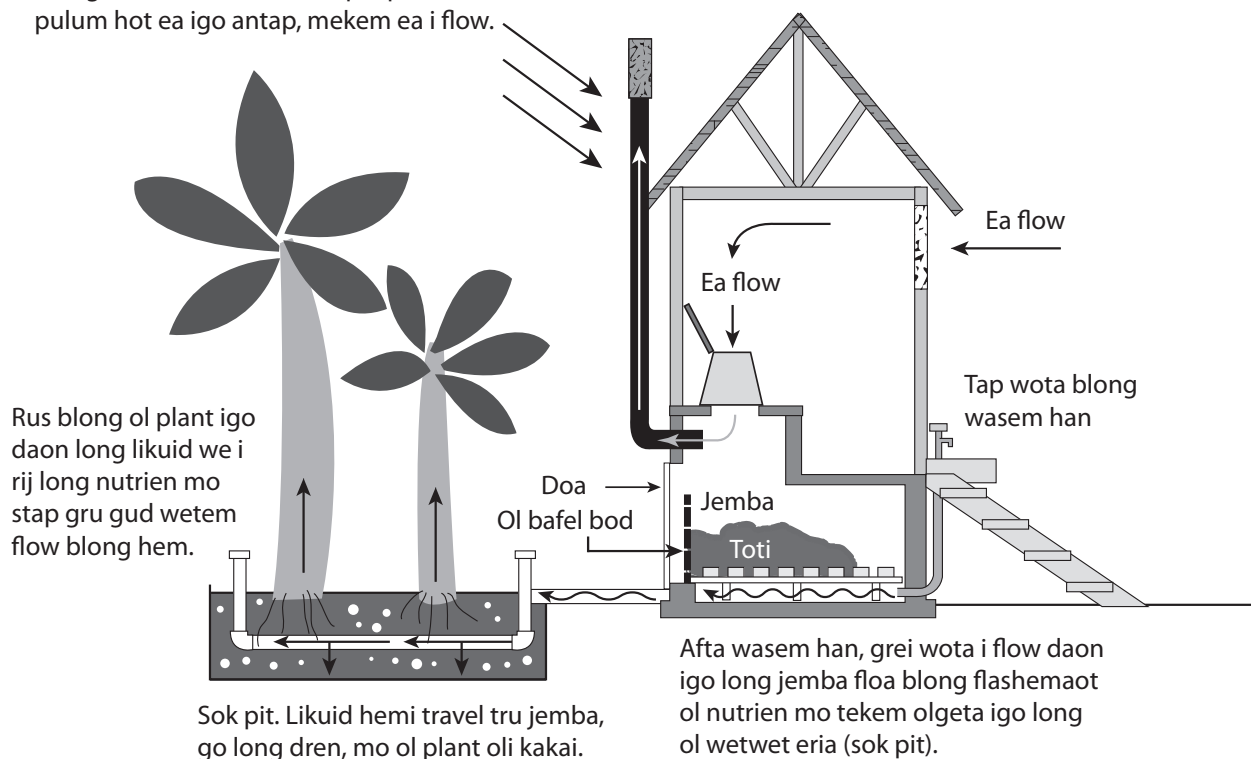
Ol adventej mo disadventej blong wan kompost toelet

Ol adventej	Ol disadventej
Klosap bae ino nidim wota (jes wan smol amaon 1-3 lita long wan dei - blong klinap)	Mas kolektem mo storem ol pis kakai blong karen (o ases faea) oltaem blong yusum long toelet
Nogat smel insaed long toelet rum taem oli mentenem gud	Ol yusa imas kasem save mo kontrolem fasin blong ademap ol pis kakai blong karen blong meksua se kompost hemi stret
I sutum stret ol famli. (2 rum: 10 pipol) (Wil pubel: 6 pipol)	Kost blong bildimap wan kompost toelet hemi semak long kost blong bildimap wan sistem blong septik tank
Hemi no save polutum envaeronmen o kraonwota	Ol yusa i mas save get yus long fasin blong emtimaot ol toti blong kompost toelet aot long ol rum, evri 9-18 manis
I save stap long eni ples nomo, from we ol rum blong hem oli sidaon nomo antap long kraon. I no nidim blong digimap hol.	Toelet rum istap antap moa long kraon, so maet i had blong ol olfala o olgeta we i handikap i aksesem
Oli save yusum kompost we i prodius olsem kondisena blong kraon	
Stakja hemi no nid blong bildimap bakegen o muvum taem hemi fulap	
Hemi save yusum ol baeodigredebol material blong klinap (olsem pepa blong toelet mo ol lif etc)	
Hemi klin mo nogat gem	

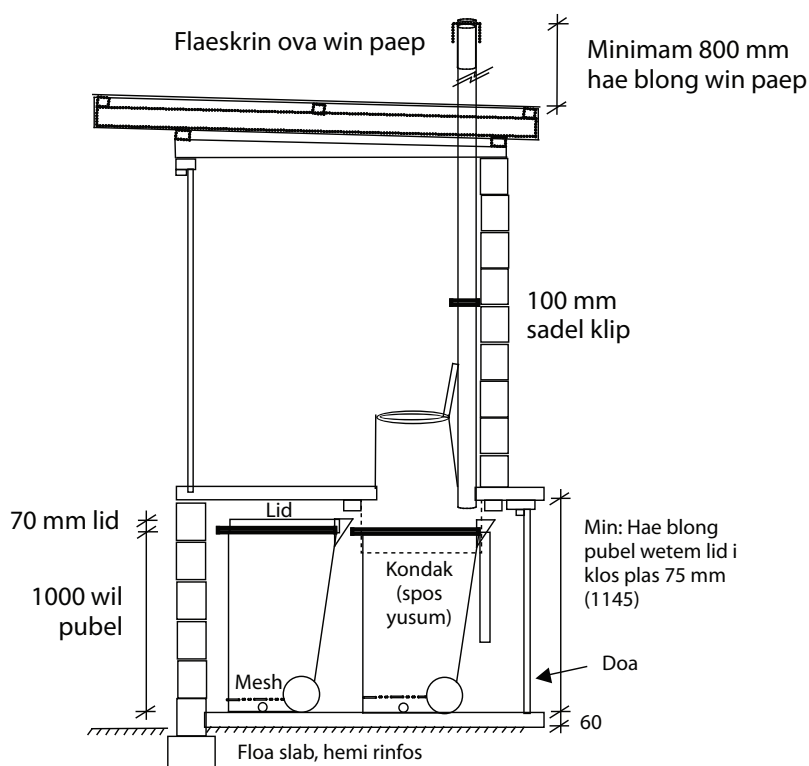
Seksen ia hemi givimaot infomesen long 2 kaen disaen blong kompost toelet:

1. Kompost toelet - 2 jemba

Pentem win paep i blak blong kipim hot blong san. Fasin ia i mekem paep i hot mo i pulum hot ea igo antap, mekem ea i flow.



2. Kompost toelet - 1 jemba, 2 wil pubel



Olsem wanem blong bildimap wan kompost toelet wetem 2 jemba

Hemi impoten blong notem se nating se hemi isi nomo blong bildim, bambae yu still nidim ol spesel skil mo ol tul blong wok mo sapotem proses blong konstraksen.

Igat ten ki stej blong bildimap wan kompost toelet wetem 2 jemba:

1. Selekttem mo priperem saet
2. Konstraktem futing mo slab blong bes
3. Konstraktem ol jemba wol
4. Priperem insaed blong jemba
5. Kastem ruf blong jemba (we hemi floa blong toelet)
6. Priperem flot floa blong jemba
7. Priperem bak doa mo ol bafel bod
8. Konstraktem sokawe - ol bed blong evapotranspiration (ET)
9. Konstraktem sit raesa
10. Konstraktem ol wol blong toelet haos mo ruf

MATERIAL LIST - 2 JEMBA KOMPOSTING TOELET

Qty	Deskripsen blong material Strakja bes (ol bush material blong haos)	Yusum long
60	8" ful standed strong smen brikis	Ol jemba wol
9	8" haf standed strong smen brikis	Ol jemba wol
8	10 mm rebar x 1 m	Jemba
2	F71 Arc Mesh 2.5 m x 1.5 m	Fandesen mo floa
1	Tae waea 1 kg x 1.5 mm	Wok blong aean
6	Smen 40 kg bag	Kongkrit wok
3 pkt	50 mm Ol kalvanaes flat hed nel	Fols floa
1 pkt	75 mm ol nel blong smen	Jemba frem
2 pkt	65 mm ol braet nel	Fomwok
18	Carriage bolts 140 mm x m10+nut+flat washer	Kava blong bak doa
8	Bolt 80 mm x m10+nut+flat washer	Toelet pan
1	'Tuffa' poly toelet pan mo sit	Toelet sit
1	12 mm (or 18) marine plae 2.4 x 1.2 shiit	Floa blong fomwok & bak doa
2	150 x 25 mm raf plang 3.9 m	Fomwok
3	35 x 25 mm raf plang 3.9 m	Fomwok mo ol stik
15	150 x 25 mm saes hadwud 3.9 m	Ol wud blong fols floa & bafel blong bak
3	100 x 50 mm saes hadwud 3.9 m	Ol jemba doa frem
1	Super flex plang smut 3660 x 230 x 7.5 mm	Bafel blong bak
2	100 mm DWV pipe PVC x 6 m	Win paep mo drenej
4	100 mm PVC 45 digri	Ol drenej
2	100 mm PVC 90 digri	Ol drenej
2	100 mm PVC end kap	Ol drenej
1	Ol ston 50 mm-200 mm 1 m cube	Sok pit
3	Sandbij mo ol ston blong kongkrit 1 m cube	Kongkrit
	PVC glue	
	Black pent	
Ol opsenal material blong haos strakja		
5	Kalvanaes kapa 6 ft	Ruf
2	Pkt nel blong kapa	Ruf
38	50 x 50 raf plang 3.9 m	Freming
3	50 x 25 saes 3.9 m	Doa
2	75 x 25 saes 3.9 m	Doa
2	100 x 50 saes 3.9 m	Doa frem
2	150 x 50 saes 3.9 m	Ol Step
4	100 mm pkt nel	Freming
1	Strap blong bres (roll)	Frem bresing
2 pkt	50 mm galv clouts	Cladding
6	Primaflex 2.4 x 1.2 x 6 mm (or 'whipped cream' wall iron)	Cladding
2	Ezybond glu blong konstraksen	Freming
2	Tee hinjes laet diuty 100 mm	Doa
1	Pad bolt slug eye 100 mm x 38	Doa
1	Hasp & Staple Ridgid ZP 100 mm	Doa
1	12 mm marine plae 2.4 x 1.2 m shiit	Doa



Jusum wan stret ples blong toalet.

Ol step blong konstraksen

Note: Fasin blong bild mo ol material oli gaed nomo mo oli save jenis blong sutum ol lokal material mo ol teknik blong konstraksen. Bes blong ol daemensen oli stret long ol smen blok blong 400 mm x 200 mm x 200 mm. Jenisim ol daemensen blong sutum ol material we yu gat o we yu jusum. Ol jemba i nidim saes klosap long 1 kiubik meta (1 m x 1 m x 1 m) blong provaedem wan saes we i sutum wan famli we i kasem 10 pipol.

1. Jusum mo priperem ples

Jusum wan ples we i stret we famli bae oli haremgud taem oli yusum toalet. I nidim wan spes blong 1 mita long bak o ol saed blong bildim ol bed blong hol we i letem ol pispis/wota i dren. Kraon we i level i oraet, be kraon we ino level hemi moa gud from we hemi isi blong jemba i go insaed long hil we level blong hem i aksesem floa blong antap, we i mekem se ino nidim ol step. Kompost toalet hemi save fas nomo long haos, mo we win paep hemi bitim ruf blong toalet haos long 500 mm.

Rimuvum ol gras mo kraon. Spos kraon hemi no level, digimap wan spes we i level blong bildim rum.

2. Konstraktem ol futing mo bes slab

Yusum ol stik mo string laen blong mekem leaot mo levelem bes blong ples blong bild.

Yusum 150 x 25 raf timba blong bildim fomwok blong slab blong bes. Fomwok hemi shud stap long saes we i matjem saes blong rum. Long kes ia, yusum ol smen blok blong mekem ol wol, so bes blong smen hemi nidim blong hemi dip long 2560 mm x 1540 mm x 150 mm.

Digim wan futing we i 200 mm dip aninit long posisen blong wanwan blok blong wol. Skwerem mo levelem fomwok. Posisenem ol elbow blong 100 mm PVC igo insaed long floa blong laenemap olgeta wetem ol dren blong sokawe. Dren hemi save stap long saed o bak blong toalet, mo i dipen long spes mo ol kondisen blong ples blong bild.

Yusum F71 rinfosing meshwaea long floa mo stanemap ol 10mm rinfosing bar long stret spesing blong simen blok wol. Priperem kongkrit, kapsaedem mo traoelem bes slab mo smutum ol futing.



Oli yusum ol stik mo string laen blong priperem bes blong saet.



Mekem wan frem wetem wud blong holemtaet smen blong bes blong slab.



Konstraksen blong jemba.

3. Konstraktem ol jemba wol

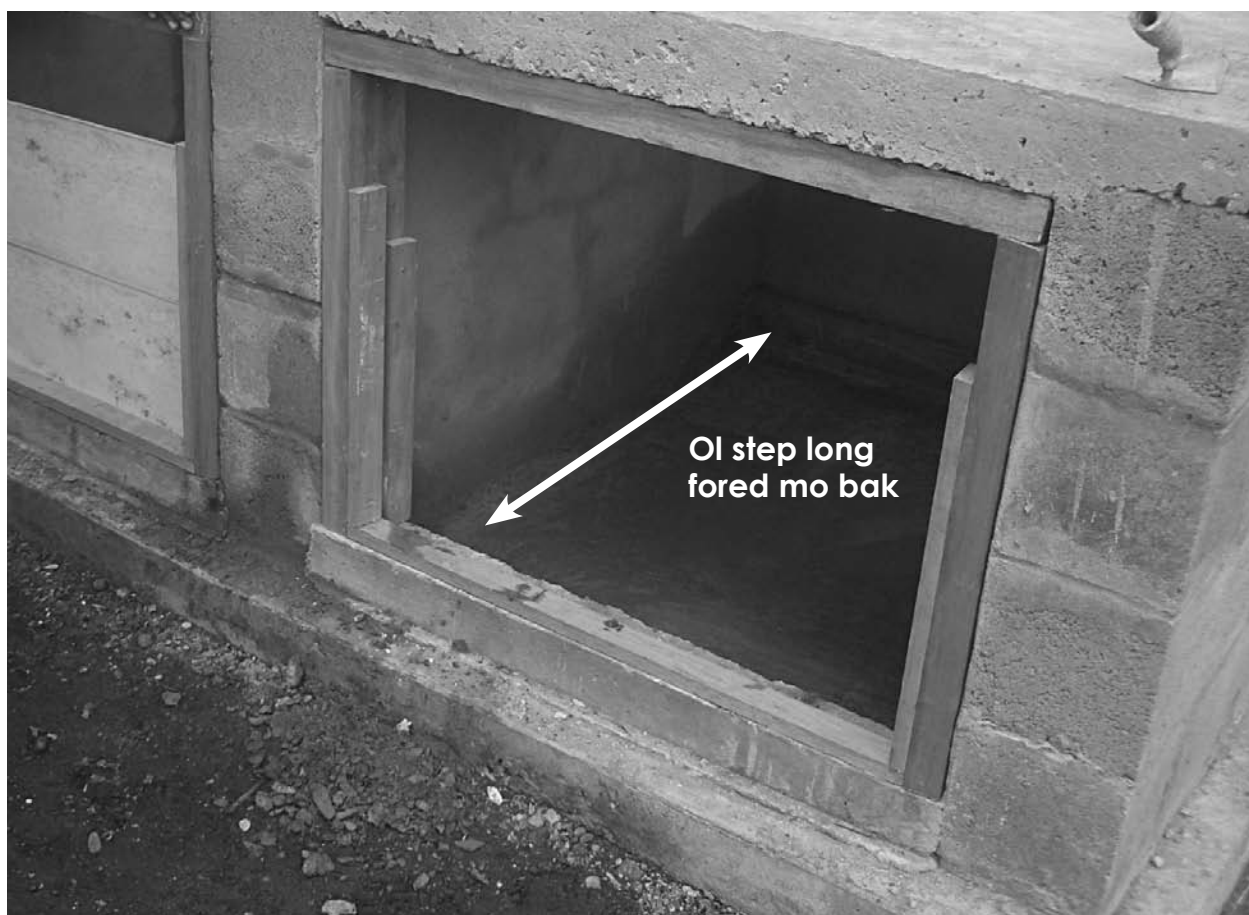
Leim fo (4) laen blong brikis (o faev blong mekem jemba we i bigwan moa) antap long bes blong slab blong fomem 2 jemba blong kompost. Filimap ol hol blong brikis wetem smen. (Long nara wei, hemi fero smen konstraksen we eksampol hemi semak blong bildimap wan smen wota tank. Yu save yusum waea blong fenis blong pig mo fenis blong faol blong mekem smen i strong gud.)

4. Priperem insaed jemba

Kastem wan kongkrit step we hemi 100 mm hae x 100 mm waed folem floa agensem bak wol mo mekem wan waed step blong 50 mm hae x 150 mm waed krosem fored blong floa. Yusum smen blong plasta mo blokem gud insaed blong ol wol mo floa. Kastem wan slop we hemi abaot 10 digri go kasem dren blong meksua se floa i save dren gud.



Eksampol blong Solomon Island ia hemi soemaot strong smen jemba.



Insaed long jemba.



Plasterem ol insaed wol blong jemba.



Priperesen blong fomwok blong mekem smen floa. Yu save kastem kongkrit floa ia long ples we istap long hem nomo, be yu save kastem long nara ples tu mo leftemap igo long posisen blong hem.

5. Kastem ruf blong jemba (we hemi floa blong rum blong toelet tu)

Yusum plywood o ol lokal material, priperem fomwok blong kastem top floa we hemi dip long 75 mm. Yusum plastik o ol lif blong mekem se kongkrit ino glu long fomwok. Mekem raon fomwok blong opening we i stret long pedestal blong toelet. Plesem ol spes blong 100 mm PVC blong ol win paep long bak blong edj blong floa ova wanwan jemba. (Wan sentral win paep hemi wan opsen spos igat spes long sentral wol long top edj.) Yusum F71 rinfosman stil long floa mo benem long 10 mm ribar we i kamaot long wol.

Spos se bae yu ademap ples blong toelet sit, pusum ol bolt insaed long floa bifo we smen i drae mo atajem sit raesa mo wol bes plet.



Kongkrit floa we oli kastem hemi finis.



6. Priperem fols jemba floa

Mekem wan floa blong hadwud blong 50 mm x 50 mm mo yusum ol kalvanaes nil. Floa ia bambae hemi sidaon insaed long jemba blong holemtaet ol strong toti mo letem pispis i flodaon. Yusum bambu spos ino hadwud. Olsemia bae i daonem kost be bae i nid blong riplesem bambu evritaem we oli karemaot toti long jemba. Mekem floa ia i 2 pis blong mekem i isi blong instolem.





Ol bafel bod long bak wetem gaed blong bafel bod.

7. Priperem bak doa mo ol bafel bod

Fiksimap 100 mm x 50 mm hadwud o paen we oli tritim raon long opening blong doa wetem smen nil blong sapotem kava blong bakdoa mo ol bafel bod (ol bafel doa oli stopem kompost blong bildap agensem doa blong aotsaed). Fiksimap 50 mm x 25 mm hadwud blong mekem wan gaed blong ol super flex plank bafel bod. Katem marine plae blong matjem opening blong doa, plesem agensem frem mo drilim 4 hol blong ol bolt blong bak doa. Instolem ol bolt from insaed mekem se bae yu save stap aotsaed mo fiksimap marine plae.



Left bak doa hemi rimuv mo wan bafel bod hemi rimuv.



8. Konstraktem ol sok pit - ol bed blong evapotranspiration (ET)

Priperem ol sok pit we i abaot 1 mita long, 400 mm waed mo 600 mm dip blong alaoem dren blong wanwan jemba. Spos kraon hemi no save dring wota tumas mo hemi no stret long ol pit, bildimap ol evaporesen pit we i save ekstraktem moisja. Evri paep blong dren blong jemba i save bi 100 mm o 50 mm PVC mo oli konekt tugeta long wan pit. Drilim ol hol o sowemaot ol hol aninit long paep blong alaoem dren igo long sok pit. Filimap pit wetem ol ston we oli 20 mm kasem paep blong dren, kaverem paep wetem sanbij mo kaverem sanbij wetem kraon. Hemia hemi mekem se moisja i kamaot mo hemi evaporet (evapotranspiration). Yusum ol inspeksen kap long ol kona mo end blong paep hemi isi blong kliaremap samtaem afta.



Insaed long toalet rum: PVC sit raesa mo pubel blong ol oganik material wetem baket blong ases faea.

9. Konstraktem sit raesa

You save yusum wan sit raesa we hemi faebaglas o PVC olsem eksampol long foto ia, o yu save konstraktem sit raesa yu wan wetem smen olsem we yu save faenem long VIP toalet long pej 20. Insaed long haos blong toalet yu nid blong provaedem wan ples blong storem ol baeodigredebol material (drae lif o sodast blong wud mo ases faea etc) we yu ademap evritaem yu yusum toalet.



Mekem sit raesa wetem smen.



10. Konstraktem haos blong toalet, ol wol mo ruf

Blong mekem haos yu save yusum smen brikis, timba frem, wol we i kapa o narafala lokal material. Yu save mekem spaot wetem PVC paep o lokal bambu. Yu save faenem ditel blong gaedlaen blong bildim ol wol long seksen blong kompost toalet wetem wil pubel long pej 45. Yu save jusum blong instolem wan smol tank blong kasem wota blong ren spos i nogat wota saplae blong wasem han.



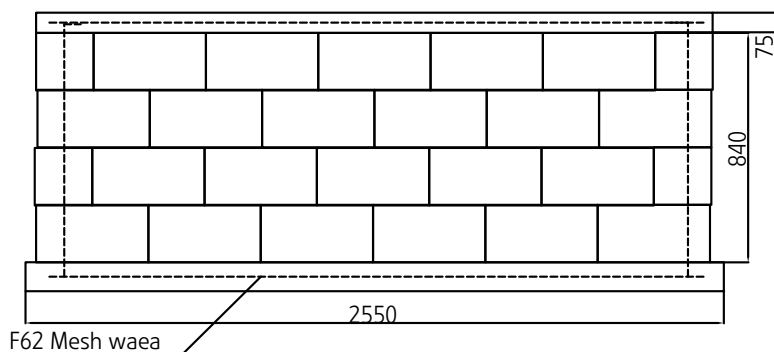
No fogetem ...

Evri toalet i nid blong gat ol fasiliti blong wasem han wetem sop.

Ol eksampol we i isi blong folem oli stap long pej 77.

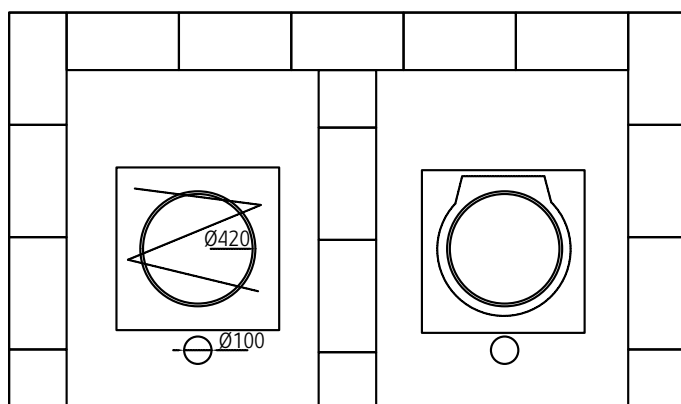


Teknikol dro - kompost toalet wetem 2 jemba

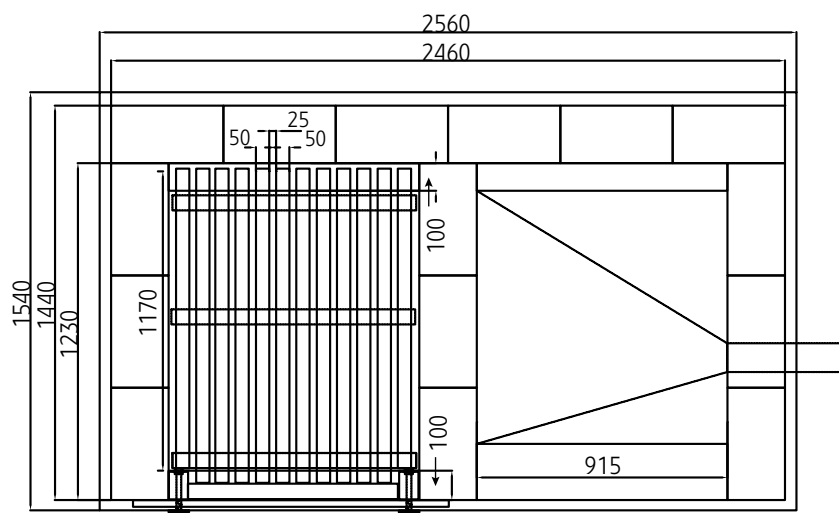


FRANT

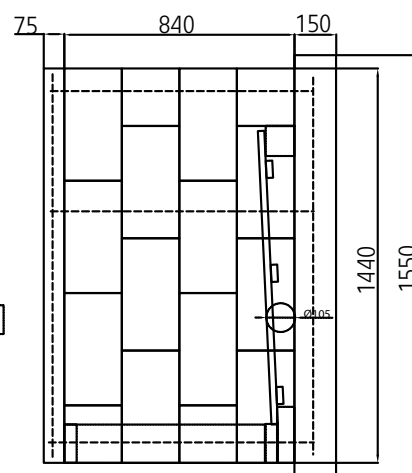
Note: Yu save adem wan ekstra laen blong brikis blong leftemap kapasiti blong wan famli we i bigwan moa.



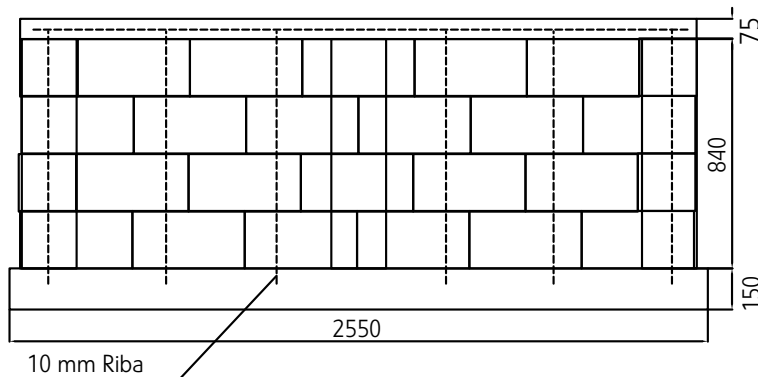
SEKEN BLOK
LEIA & SLAB
LEAOT



PLAN



END



BACK

Olsem wanem blong bildimap wan kompost toalet wetem 1 jemba mo 2 wil pubel

Ol material:

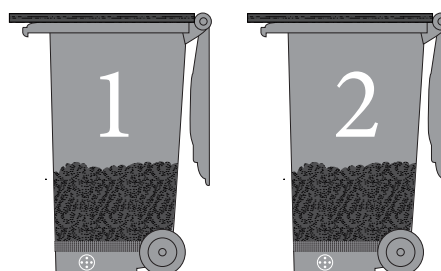
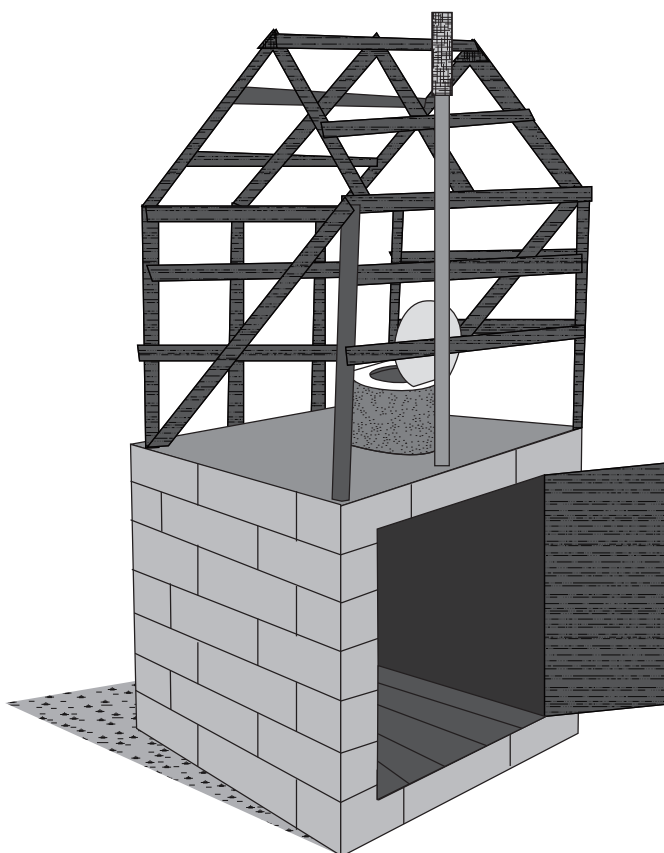
- Luk list long ol pej 40-41

Ol tul we i nid

- savel x 2
- kruba
- hama
- hanso
- hackso & ol bled
- pensis
- traoel - shap
- traoel - flat lis
- spirit level
- stringlaen
- tep mesa
- kol jisel
- wud jisel
- ol kata blong bolt
- sis blong kapa
- wota baket
- skwea
- ol skrudraeve - flat mo star
- wilbaro
- naef
- drill & ol drill bit (opsenal)
- silicon gun & cartridge
- smen miksa (spes igat)

Ol mix blong kongkrit, morta mo smen blong filimap ol brikis

- Kongkrit: Miksimap 4 savel blong mix. 3 savel sanbij, 1 savel smen. Ademap wota kasem taem hemi no wetwet tumas.
- Morta: Miksimap 3 savel sanbij, 1 savel smen. Ademap wota kasem taem hemi stif.
- Smen blong filimap ol brikis: Miksimap 3 savel sanbij, 1 savel smen. Ademap wota kasem taem hemi wetwet gud, blong kapsaedem isi insaed hol blong brikis.



Material list hemi gaedlaen nom, yu save modifaem blong sutum ol lokal material we yu gat.

List blong ol material - Wil Pubel			
JEMBA & OL STEP		QTY	YUSUM LONG
Smen brikis - 6" standed fulwan 395 x 190 x 145		57	Ol jemba wol
Smen brikis - 6" standed haf 195 x 190 x 145		6	Ol jemba wol
Smen brikis - 6" standed kona brikis		12	Ol jemba wol
Simen - 50 kg bag		9	Fandesen/ol wol/antap
Sandbij - '1/2 bag'		4	Morta - ol wol
Sandbij/Korel premix - '1/2 load'		40	Fandesen/ol wol/antap
Rinfosing (deform) bar - 12 mm x 6 m rod	54 m	9	Ol jemba wol
Rinfosing (black weldem) mesh waea - 6 m x 2.4 m x 668	0.5 sheet	1	Floa/Slab
Builders plastik 20 micron - 1840 mm x 60 m roll	10 m	1	Fandesen/Jemba floa/ET bed
Builders plastik tep - 50 mm x 20 m	1 roll	1	Fandesen/Jemba floa/ET bed
Mesh tae waea - 1.5mm (1.6mm) 1kg roll		1	Floa/ol wol/slab
Timba 4" x 2" raf paen - we oli tritim	3.5 m	1	Jemba doa frem
Timba 2" x 1" raf paen - we oli tritim	3.5 m	1	Jemba doa frem
Melthoid - 100 mm x 20m roll	1 roll	1	Jemba doa frem
Ol kongkrit nel - 100 mm 10 pack	15 nails	2	Jemba doa frem
Ol kalvanaes nel - timba 75 mm 1 kg pack		2	Jemba doa frem
Timba 4" x 1" paen laening tongue & groove 10 @ 1.2 m	12	1	Jemba doa
Timba 6" x 1" raf paen - we oli tritim	4.0 m	1	Jemba doa bres
Hinjes tee light duty zinc plated 200 mm twin pack		1	Jemba doa
Padbolt 3/8" zinc plated 100 mm		2	Jemba doa
Smen brikis - 6" standed fulwan 395 x 190 x 145		16	Ol step
Smen brikis - 6" standed haf 195 x 190 x 145		8	Ol step
Step - smen 50 kg bag		2	Ol step
Step - sandbij/korel premix - '1/2 bag'		8	Ol step
Step - fomwok - yu save faenem fri nomo lokaly		1	Ol step
Timba 4" x 2" raf paen - we oli tritim	4.5 m	1	Rel blong ol step
Angle brakel - 125 mm x 100 mm		1	Rel blong ol step
Toelet pan (kasem mold from Ministry blong Helth)		1	Toelet
Toelet sit & lid		1	Toelet
PVC stomwota paep - 100 mm dia x 6 m lengt	3 m	1	Win paep
PVC stomwota paep sadel klip - 100 mm dia		1	Win paep
PVC stomwota paep vent cowl - 100 mm dia		1	Win paep
Flae skrin mesh-STAINLESS STEEL O ALUMINIUM 1 m x 1 m		1	Win paep
Blak pent - 400 mL can		1	Win paep
Silicon tube		1	Win paep
Wil pubel - 240 L		2	Wil pubel
Mesh - kalvanaes gothic 2.4 m x 1.2 m x 2.7 mm	500 x 500 mm	1	Wil pubel fols floa
Plata blong wil blong trak - yusum finis		1	Wil pubel kola
PVC 50 mm stomwota paep - 6m lengt	6 m	2	Ekses likuid/ET
PVC 50 mm stomwota paep - valve socket		4	Ekses likuid/ET
PVC 50 mm stomwota paep - faucet socket		4	Ekses likuid/ET
PVC 50 mm stomwota paep - 90 degree elbow		7	Ekses likuid/ET
PVC 50 mm stomwota paep - tee		2	Ekses likuid/ET
PVC glue 500 grm		1	Ekses likuid/ET
50mm push on cap		1	Ekses likuid/ET
2m ² blong filta klos			Ekses likuid/ET

SHELTA OVA JEMBA - OPSEN 1 - OL SMEN BRIKIS WOL			
Smen brikis - 6" stande fulwan 395 x 190 x 145		86	Ol wol
Smen brikis - 6" stande haf 195 x 190 x 145		10	Ol wol
Smen brikis - 6" stande kona brikis		22	Ol jemba wol
Smen - 50 kg bag		7	Wol blockfill & morta
Sandbij - '1/2 bag'		8	Wol morta
Sanbij/Korel premix - '1/2 bag'		24	Wol blockfill
Rinfosing bar - 12 mm x 6 m rod	Incl above		Wol blockfill
Timba 4" x 2" raf paen - we oli tritim. 3 x 2.4 m	7.2 m	1	Ruf plet
Timba 3" x 2" raf paen - we oli tritim. 3 x 1525mm	4.58 m	1	Ruf noggin
Timba 6" x 1" raf paen - we oli tritim	8.0 m	1	Ruf fisabod
Rufing aean - zinalume - 2.44 m x 0.8m x 26 g		2	Ruf cladding
Timba 4" x 1" paen laening tongue & groove @ 2.0 m	18.0 m	1	Toelet doa
Timba 4" x 2" raf paen - we oli tritim	5.0 m	1	Toelet doa frem
Timba 2" x 1" raf paen - we oli tritim	5.0 m	1	Toelet doa frem
Timba 6" x 1" raf paen - we oli tritim	4.0 m	1	Toelet doa bres
Hinjes tee zinc plated 200 mm	1 pair	1	Toelet doa
Padbolt - 200 mm twin set		1	Toelet doa
Ol rufing nel - 65 x 3.75 mm kalvanaes plen r/p		1	Ruf & ol wol
Neoprene raba washa blong ol rufing nel 100/packet		1	Ol rufing nel
Ol kongrit nel. 100 mm 1 kg pack		2	Toelet doa frem
Ol nel, bollet hed. 50 mm kalvanaes 1 kg pack		2	Toelet doa
Pent - Exteria timba braon 4 L		1	Toelet doa & fisabod
Pent - Exteria timba praema 4 L		1	Toelet doa & fisabod
Pentbrush - 4"		2	Toelet doa & fisabod

SHELTA OVA JEMBA - OPSEN 2 - KAPA			
Timba 4" x 2" raf paen - we oli tritim.	6.1 m	6.1	Floa plet
Timba 4" x 2" raf paen - we oli tritim 7 @ 2.4 m	16.8 m	16.8	Wol frem
Timba 3" x 2" raf paen - we oli tritim	10.6 m	10.6	Wol frem
Bresing strap - roll		1	Wol frem
Rufing aean - zinalume - 2.4 m x 0.8 m x 26 g		7	Wol cladding
Timba 4" x 2" raf paen - we oli tritim.	6.1 m	6.1	Ruf plet
Timba 4" x 2" raf paen - we oli tritim. 3 x 2.4 m	7.2 m	7.2	Ruf frem
Timba 3" x 2" raf paen - we oli tritim. 3 x 1525 mm	4.6	4.6	Ruf noggin
Timba 6" x 1" raf paen - we oli tritim	8.0 m	8	Ruf fisabod
Rufing aean - zinalume - 2.44 m x 0.8 m x 26 g		2	Ruf cladding
Timba 4" x 1" paen laening tongue & groove @ 2.0 m	18.0 m	18	Toelet doa
Timba 4" x 2" raf paen - we oli tritim	5.0 m	5	Toelet doa frem
Timba 2" x 1" raf paen - we oli tritim	5.0 m	5	Toelet doa frem
Timba 6" x 1" raf paen - we oli tritim	4.0 m	4	Toelet doa bres
Hinjes tee zinc plated 200 mm	1 pair	1	Toelet doa
Padbolt - 200 mm		2	Toelet doa
Ol rufing nel - 65 x 3.75 mm kalvanaes plen r/p		1	Ruf & ol wol
Neoprene raba washa blong ol rufing nel 100/packet		1	Ol ufing nel
Ol nel, bollet hed. 100 mm kalvanaes		1	Wol frem
Ol nel, bollet hed. 75 mm kalvanaes		1	Wol frem
Ol nel, bollet hed. 50 mm kalvanaes		2	Toelet doa
Pent - Exteria metal off waet 4 L		1	Ruf & ol wol
Pent - Exteria timba braon 4 L		1	Toelet doa & fisabod
Pent - Exteria timba praema 4 L		1	Toelet doa & fisabod
Pentbrush - 4"		2	Toelet doa & fisabod

Fiji Smen Brikis

Long Fiji, ol smen brikis oli 400 mm long x 200 mm hae x 150 mm waed. I gat ol 'kona brikis' tu, wetem wan end we hemi 200 mm waed, blong ol kona. Hemi tipikal blong leim ol brikis wetem 10 mm morta bitwin ol leia, mo i nogat spes long saedsaed blong ol brikis.

Ol step blong bildimap wan kompost toelet

Igat 18 ki stej blong bildim wan kompost toelet blong wil pubel:

1. Selekttem mo priperem sait
2. Konstraktem ol futing
3. Konstraktem ol jemba wol
4. Konstraktem jemba ruf (we hemi floa blong toelet rum)
5. Konstraktem toelet sit raesa
6. Priperem timba blong ruf mo doa
7. Konstraktem jemba floa
8. Konstraktem ol blong toelet rum
9. Konstraktem toelet ruf
10. Instolemm toelet raesa mo win paep
11. Konstraktem toelet rum doa
12. Priperem ol wil pubel
13. Konstraktem kondakt bitwin toelet hol mo wil pubell
14. Instolemm trench sokej blong ekses likuid
15. Instolemm ekses likuid paep
16. Konstraktem ol step
17. Fitim wil pubel, provaedem oganik mata, putumap ol posta



Standed Fiji kona brikis.



Priperesen blong ol futing.

1. Selektem mo priperem sait

Selektem wan sait we hemi at lis 3 mita from ol wol blong haos mo 5 mita from ol wel. Livim inaf rum blong 1 mita trench blong sokej long wan saed blong jemba. Meksua se ol pipol long haos oli haremgud wetem lokesen mo praevesi blong sait.

Long eksampol ia, sait hemi stap long 5 mita from haos, long wan slop, mo hemi klosap long pit toelet we i exist istap.

Kliarem mo levelem kraon wea bae toelet i bildap. Spos kraon hemi slop, digim slop blong ridiusum namba blong ol step we igo antap kasem toelet rum.

2. Konstraktem ol futing

Makem lokesen long ol futing we oli shep blong U long 2070 mm x 1315 mm. Plesem 5 brikis folem ol longfala wol mo 3 folem sotfala wol blong jekem se yu kasem raet lengt. Futing hemi mas bigwan moa long 500 mm long ol brikis long evri saed. Livim stret spes bitwin ol brikis spos yu wantem yusum morta bitwin olgeta. Meksua se ol kona blong ol futing oli mas skwea gud, spos no bae ol wol ino skwea tu.



Ol futing i redi.



Mixim mo plesem kongkrit long faswan laen blong ol brikis.

Digim ol futing we oli 250 mm waed x 200 mm dip. Katem mo leim rinfosing mesh insaed long ol futing, oli silip antap long ol ston 30 mm antap long bes. Katem 10 lengt blong rinfosing bar 1600 mm long mo benem wanwan long olgeta igo long shep blong 'L' wetem end we oli 100 mm.

NO instolem ol L-bar iet.

Kapsaedem kongkrit igo long ol trench, kasem level blong kraon.

Taem we kongkrit i wetwet iet, leim faswan laen blong ol brikis. Insertem ol L-bar daon long hol 1, 4, 7 mo 10 blong ol brikis long ol longfala wol, mo daon long midel hol blong sotfala wol.

Pusum wanwan L-bar 100 mm insaed futing we i wetwet. Filimap kongkrit long ol hol blong ol brikis, iksept wan. Insertem pepa we yu benbenem (o pepa blong smen we i yus) igo insaed long hol 3 o 5 blong ol brikis blong wol wea eksek likuid paep bae igo tru kasem trench blong sokej. Alaoem kongkrit blong set ovanaet.



Faswan laen blong ol brikis i redi finis.

3. Konstraktem ol jemba wol

Jemba blong wil pubel hemi hae long 6 brikis, blong matjem hae blong wan 'standed' 240 L wil pubel. Taem ol leia ol komplit, filimap ol hol blong brikis wetem sopsop morta evri 1 o 2 leia. Tampem morta igo daon wetem wan spea rinfosing bar.

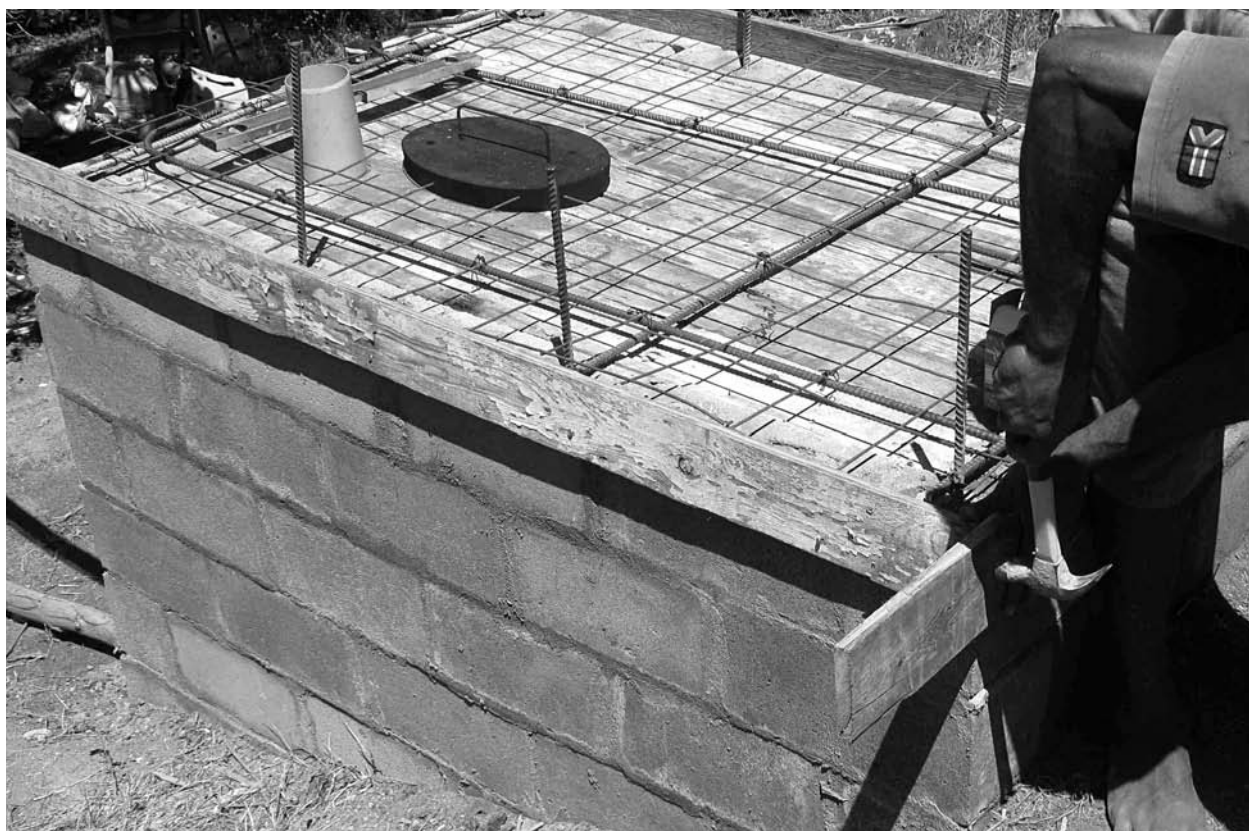


4. Konstraktem jemba ruf (we hemi floa blong toalet rum)

Long eksampol ia, jemba ruf hemi kongkrit. Wan nara wei hemi 20 mm marine plae. Taem yu yusum ol lokal material, konstraktem strong fomwok bes, levelem wetem top blong ol brikis. Nelem ol bod blong aotsaed wol (yusum kongkrit nel) blong mekem wan fomwok we i hae long 60 mm blong jemba ruf. Top blong ruf hemi mas lei 1:200 towod doa blong toalet rum, blong helpem drenej long taem blong klinap. Katem mo leim rinfosing mesh insaed long fomwok, mekem i silip antap long ol ston 20 mm antap long bes. Long end blong jemba doa, fasem rinfosing bar bitwin ol L-bar, 20 mm antap long bes blong fomwok. Hemia i givim strengt long floting kongkrit bim. Blong opsenal extra strengt, adem wan rinfosing bar akros medel blong slab tu.



Oltaem ruf hemi smen we oli kapsaedem long ples blong hem be yu save mekem long nara ples mo leftemap igo long ples blong hem.



Mesh i redi blong kapsaedem kongkrit long hem.

Katem 1 x 1200 mm rinfosing bar mo benem wan 100 mm L long wan end. Yusum hemia blong rinfosem bak wol blong toalet rum. Notem, bak wol hemi kam insaed long saes blong haf brikis from edj blong jemba ruf (olsem we istap long teknikal droing). Posisenem rinfosing bar wea hol blong medel brikis bae igo. Fasem rinfosing bar stret igo antap long mesh blong jemba ruf.

Konstraktem wan wud plang blong hol blong toalet raesa long 70 mm hae. Long narafala wei, yusum wan strip blong bambu/aeon we i flexibel, bentem long sem shep long hol blong toalet raesa. Katem rinfosing mesh long wea hol bae istap long hem.

Plesem wan 300 mm lengt blong 100 mm PVC paep long lokesen blong win paep. (Lukim ol note aninit.) Kapsaedem mo smutum kongkrit.

Notem, toalet raesa hemi ofset igo long wan saed blong floa blong toalet rum. Hemia hemi from we bae wil pubel hemi save ofset aninit long hem, blong alaoem rum blong rimuvum ekseks likuid paep taem blong jenisim wil pubel. Hol hemi ofset igo long oposit saed from trench blong sokej.

Blong posisenem win paep, makem lokesen insaed long bak wol blong toalet rum (350 mm insaed from edj blong slab). Win paep hemi 25 mm insaed from wol ia. Bae win paep hemi 330 mm from saed blong slab we i klosap moa. Spas wil pubel hemi 580 mm waed long wan saed we i bigwan moa, edj blong hol blong toalet i nidim blong stap long 415 mm from saed blong slab we i klosap moa, mo 480 mm from bak blong slab.

Blong dabel jekem lokesen plesem tufala wil pubel insaed jemba we i haf finis, 50 mm from saed wol blong jemba long oposit saed from trench blong sokej. Front edj blong hol blong floa hemi shud stap insaed long frant edj blong wil pubel long 50 mm. Bae saed edj blong hol hemi 50 mm insaed long saed edj blong pubel long saed blong trench blong sokej. Pubel we ino aktiv hemi shud gat inaf rum blong sidaon we ino gat obstraksen.

Hemi impoten se win paep hemi stap stret ova opening blong wil pubel, so spas eni flae igo insaed long wil pubel, bae hemi laekem blong folem delaet antap long win paep we igat flae skrin mesh mo bae hemi ded long plesia. Win paep hemi mas ofset folem daegonal from hole blong raesa, so bae lid blong toalet sit raesa ino hitim win paep taem oli openem igo antap.



Yusum wan aean mold blong kapsaedem kongkrit mixja mo konstraktem wan sit raesa blong toelet.



5. Konstraktem toelet sit raesa

Ministry blong Helt blong Fiji hemi stap lendem ol mold blong toelet sit raesa we oli mekem long aean. Kapsaedem haf wetwet, haf sopsop kongkrit mix insaed long mold, mo kilkilim ol saed sloslo blong mekem kongkrit i setel, mo livim ovanaet. Taem hemi set, tekem kea blong rimuvum mold mo meksua se insaet long raesa hemi smut, blong bae i isi blong klinimap taem oli yusum.

Long nara wei, yu save yusum waea blong faol blong mekem ol sit raesa, lukim ol pej 20-21.

6. Priperem timba blong ruf mo doa

Pentem ol timba wetem praema blong timba. Livim i drae.

7. Konstraktem jemba floa

Afta we jemba ruf i set, rimuvum fomwok. Diteminem gud se bae yu nidim blong instolem jemba floa long wanem haet. Meserem total haet blong wil pubel taem we lid blong hem i sat (Maet pat we i hae moa hemi ol handel, spos olsem besem meseman long olgeta. Adem 75 mm long haet ia. Makem distens is igo daon fron aninit blong jemba ruf. Hemia i makemap top blong jemba floa. Filimap o rimuvum inaf kraon blong save fitim wan 60 mm floa slab we yu save kapsaedem aninit long mak. Fitim fomwok long frant blong jemba, wea ino gat eni wal long hem. Katem mo leim rinfosing mesh insaed long ol jemba wol, mo hemi silip antap long ol ston 20 mm antap long bes blong floa. Kapsaedem mo smutum kongkrit, mo meksua se floa hemi lei 1:200 towod jemba doa blong drenej long taem blong klinim.



8. Konstraktem ol wol blong toelet rum

Ol wol blong toelet rum oli hae long 9 brikis. Wan rimaenda - bak wol hemi bilt long haf brikis insaed from edj blong floa blong toelet rum. Frant wol hemi $\frac{3}{4}$ waed nomo blong wan brikis, blong krietem wan spes we i fitim doa frem. Katem mo stretem ol end blong wanwan $\frac{3}{4}$ lengt blong brikis.

Katem 8 x 1200 mm rinfosing bar mo atajem hemia wetem tae waea long ol rinfosing bar we oli stap finis mo oli kamaot long floa. Adem wan seken 1200 mm rinfosing bar taem we wol hemi 4 brikis hae, blong mekem se rinfosing bar hemi projektem 200 mm antap long top blong ol brikis taem hemi komplit. Filimap ol hol blong brikis wetem sopsop morta evri 1 o 2 leia mo ramem daon wetem wan spea bar. Spos yu wantem, yu renderem mo pentem ol brikis wol insaed toelet rum mo aotsaed. Hemia i no nid insaed long jemba blong wil pubel.

Konstraktem wan nek raon long top blong ol wol, inkludim wan rinfos bim akros long spes blong doa. Top blong nek hemi shud slop long 50 mm from end blong doa igo long end blong bak wol, blong mekem drenej blong ruf.

Blong bim ova long doa, instolem fomwok akros spes wetem ol lokal material we yu gat. Blong nek, nelem ol bod insaed mo aotsaed long ol edj blong krietem wan 100 mm hae fomwok long end blong toelet doa, we hemi slop long 50 mm hae long end blong bak wol. Jekem se fol hemi naf wetem wan spirit level.

Benem ol rinfosing bar we oli kamaot long wol, mo katem mo fasem rinfosing mesh long olgeta insaed long fomwol. Adem wan adisenal rinfosing bar blong bim ova long spes blong toelet rum. Kapsaedem kongkrit mo letem hemi set.





Konstraksen blong timba frem blong toelet ruf.

9. Konstraktem toelet ruf

Meserem distens bitwin aotsaed blong ol toelet wol. Katem ol 2 x 100 mm x 50 mm pis blong timba blong fitim lengt ia. Nelem olgeta long top blong wol bim wetem ol 100 mm kongkrit nel long ij end. Katem ol 2 x 150 mm x 50 mm pis timba. Lengt hemi shud bi 100 mm less long ol ruf shiit. Nelem olgeta ia aotsaed edj blong ol faswan pis blong timba, oli stanap stret, bitim 450 mm long end blong doa mo 200 mm long end blong bak wol. Katem ol 3 x 75 mm x 50 mm pis timba, 1475 mm long (50 mm less long waed blong 2 ruf shiit we i ovalap). Nelem olgeta ia long 150 mm timba aninit, flashem stret wetem ij end mo long medel.

Nelem 2 x ruf shiit long timba frem. Instolem 150 mm timba sket raon aninit long ruf kapa blong komplitim ruf. Katem ol 4 x 150 mm x 25 mm pis timba we istret long saes mo nelem olgeta long ol edj blong timba frem, we i fasgud long ruf shiit antap. Pentem ol timba wetem faenal kala taem hemi redi.

10. Instolem toelet raesa mo win paep

Plesem toelet raesa ova hol blong floa blong toelet rum. Spos hol long floa hemi less long insaed daemeta blong raesa, jipimaot kongkrit floa sloslo gogo kasem we tufala i semak daemeta nomo. Klinim dast mo toti from floa mo raesa, mo yusum morta blong sekyurim raesa i stapgud long floa. Meksua se joen insaed hemi smut gud



blong mekem klinap hemi isi taem oli yusum. No distebem kasem we morta i set. Spos se bambae yu yusum wan plastik toelet wetem lid blong hem afta, sekyurim tufala ia long raesa. Fitimap wan holda blong toelet pepa long wol spos yu laekem.

Blong win paep, katem wan 2700 mm lengt blong 100 mm PVC paep (blong mekem se 3 mita we i rimen long original 6 mita lengt, i save yus long nekis toelet). Pentem top blong paep, antap long ruf laen, wetem dak pent. Makem ruf kapa wea win paep bae igo tru, mo katem wan 100 mm hol.

Joenem 2700 mm paep ia long 300 mm lengt we i kamaot long floa (spos i nogat spesel ples blong joenem long end blong paep, hitimap paep kasem we hemi flexibol mo pusum igo ova long sot paep). Katem 300 mm x 300 mm flae skrin, foldem ova top blong win paep mo fasem raon wetem plante raon blong tae waea. Yusum silikon blong silim gud hol long ruf kapa raon long win paep.

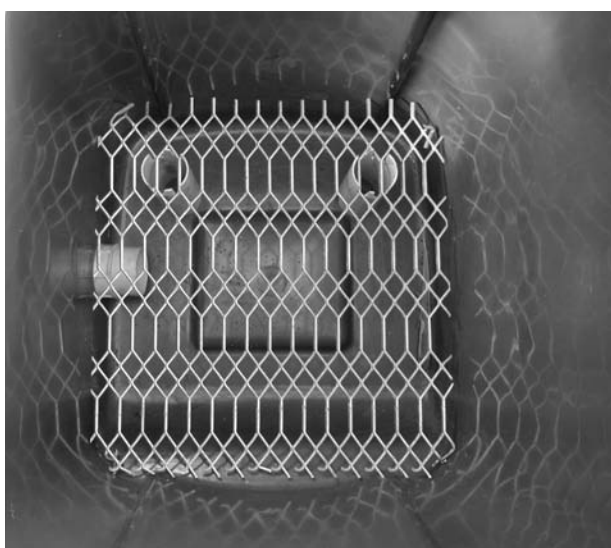
11. Konstraktem toalet rum doa

Meserem waed blong doa opening blong toalet long saed we i smol moa (spes ol wol oli no skwea). Long eksampol ia, waed hemi 740 mm. Konstraktem wan doa frem blong sutum, wetem 100 mm x 500 mm timba long top mo tufala saed, mo nating long bes. Sekyurim frem long ol wol wetem ol kongkrit nel, mo meksua se frem hemi stret mo skwea. Spos ol wol oli no skwea, filimap spes bitwin wol mo doa frem wetem morta.

Blong konstraktem doa (long eksampol ia, 640 mm waed), katem ol 7 mm x 100 mm x 25 mm pis blong 'tongue and groove' (T&G) timba igo long lengt, mo alaoem 2 mm spes long top mo botom. Blong bres blong bak blong doa, katem ol 5 x 150 mm x 25 mm pis blong timba - 3 bres we oli orisental, 2 daegnal blong fomem 2 Z shep aninit long tufala tugeta. Nelem T&G long bres, mo katem laswan pis blong T&G timba igo long stret waed.

Fitim doa long frem wetem 2 x doa hinjes wetem ol timba nel. Klosem doa we hemi flash gud wetem aotsaed blong ol wol mo makem ples wea 35 mm x 20 mm timba ia hemi slip (slama rel) i nid blong stap long hem. Nelem ol rimening blong frem. Fitim ol padbolt insaed mo aotsaed long doa frem. Pentem doa mo frem wetem faenal kala taem hemi redi.





*Pikja ia hemi soem fols floa insaed long wil pubel.
Long lef saed igat paep blong trench blong sok.
Oli yusum 2 PVC paep blong leftemap fols floa.*

12. Priperem ol win pubel

Yusum wan 50 mm foset mo valv soket blong makem wan hol long medel blong bes blong wol blong wil pubel we i fesem sokej trench. Katem (o bonem) hol we yu makem mo skruim soket, mo yusum silicon blong silimgud soket long bin, mo livim i drae. Mekem hemi blong tufala pubel evriwan. Blong nambatu bin, katem wan 100 mm lengt blong 50 mm PVC paep, gluim mo pusum kap long end, mo pusum hemia igo long soket olsem wan plag (no gluim long soket).

Blong fols floa blong pubel, meserem daemensen insaed long bes blong bin, mo katem kalvanaes mesh blong sutum. Saspendem mesh 75 mm antap long floa blong pubel wetem 2 x 100 mm lengt blong 50 mm PVC paep we yu katem. Katem ol slot we oli 25 mm hae x 10 mm waed long top blong paep we i stanap stret, so mesh bae i silip long olgeta, mo ol 2 x 15 mm x 10 mm slot long bes blong paep blong likuid flow. Putum mesh long olgeta ia mo long edj blong bes blong bin. Mekem hemia long tufala bin.

Plesem filta klos o ol skin faeba blong kokonas long bes blong aktiv wil pubel, antap long fols floa, blong stopem ol faswan sitsit blong foldaon tru long mesh blong fols floa.

13. Konstraktem kondakt bitwin toelet hol mo wil pubel

Kasem wan/sam olfala plata blong wil blong trak mo katem i longfala long 2520 mm x 350 mm hae. Katem ol 4 x 75 mm x 5mm pis timba long sem lengt olsem aotsaed lip blong top blong wil pubel (2 x 660 mm mo 2 x 585 mm long eksampol ia). Nelem olgeta aninit long jemba ruf wetem ol kongkrit nel, stret antap wea bae aktiv wil pubel i sidaon (raonabaot long toelet hol mo hol blong win paep). Bifo yu nelem, plesem top blong 100 mm plata bitwin timba mo ruf, blong taem we hemi komplit, bae pis plata hemi hang long ruf long shep blong top blong wil pubel. Somap ol end blong plata tugeta wetem string blong fishing blong fomem wan pis we i kontiniu. Taem wil pubel i sidaon, yusum tae waea blong sekyurim pis plata aninit long long lip blong wil pubel, we hemi silim gud pubel. Meksua se ples we yu twistim waea hemi isi blong kasem taem we yu mas jenisim pubel.



Pis kondakt ia oli mekem wetem wan pis blong plastik blong konektem top blong pubel wetem aninit blong jemba ruf.

14. Instolem trench sokej blong eksek likuid

Meksua se trench hemi at lis 1 mita from ol toelet wol. Meksua se kraon level hemi semak o stap daon moa long jemba floa. Digim wan sokej trench 1200 mm long x 400 mm waed x 500 mm dip. Digim wan trench blong paep 200 mm dip from jemba trench, wetem ol bend long ol stret ples.

Filimap botom 250 mm blong sokej trench wetem ol ston blong sem saes**. Meserem distens from far end blong trench kasem poen wea 50 mm PVC paep hemi bend faswan long wei blong hem igo long wil pubel (leaot blong paep mo ol namba blong ol bend bae i difdifren long wanwan toelet mo i dipen long trench mo lokesen blong jemba). Katem paep long lengt ia mo drilim (o bonem) ol 10 mm hol long haf botom blong faswan 100 mm blong paep. Rimuvum ol ston long far end blong trench. Gluim 50 mm T-soket long end we igat hol, wetem soket hemi fesem antap mo daon, mo ol hol blong paep oli fesem daon. Gluim wan 250 mm lengt blong paep long soket blong botom mo livim hemi open long end we istap long botom blong paep. Afta, yu gluim wan 250 mm lengt blong paep long top soket, mo fitim push-on kap antap.



Sokej trench blong eksek likuid.

Plesem paep antap long ol ston long trench, blong smol taem rimuvum ol rok long end blong trench blong fitim T seksen. Push igo antap towods kap hemi shud bi 50 mm antap long kraon level, blong mekem se nekis taem i posibol blong rimuvum kap blong dip blong likuid long trench. Filimap trench wetem ol extra ston kasem we yu kavremap paep. Plesem filta klos (o material we ino save roten blong meksua se kraon ino folfoldaon insaed bitwin ol ston) ova evri ston## mo raonem paep wea hemi go insaed long trench, afta yu putum kraon antap long hemia. Mekem se level blong kraon we yu putum hemi 100 mm antap moa long level blong kraon blong alaoem seting mo priventem wota blong fulap long taem blong ren.

** Wok blong ol ston (o ol brikis we i brokbrok) hemi blong krietem ol spes bitwin ol ston long trench blong bambae likuid hemi filimap ol spes bifo hemi sok igo long ol kraon raonabaot. No miksim ol ston blong difdifren saes, from we ol smol ston bae oli save filimap ol spes bitwin ol bigfala ston, mo hemi ridiusum spes blong likuid. Stret saes blong ol ston hemi no kritikal, oli save bi saes olsem bitwin 10 mm mo 100 mm.



Spos kraon igat sanbij long hem, bae yu plesem filta klos daon evri saed mo ol end blong trench tu olsem ova long top, blong stopem kraon blong was daon igo long trench ova longtaem. No putum filta klos long bes blong trench.





Dren paep i redi long ples blong hem.



Filta klos i kavremap paep mo ol ston mo i redi blong bakfilim.

15. Instolem ekses likuid paep

Blong ranem 50 mm dren paep tru jemba wol, brekem wan 50 mm hol tru namba 3 o 5 hol blong brikis we yu bin putum pepa insaed, long sem level blong jemba floa. No instolem paep iet.

Katem mo leim rimenda blong 50 mm paep mo ol joen blong konektem trench long soket blong wil pubel. No gluim ol joen iet. Meksua se igat wan minimam blong 1:60 i fol along ol paep mo ol bend.

Blong mekem i isi blong rimuvum ol wil pubel, fitim 2 x 90 digri elbo insaed long jemba, blong save twistim paep igo antap taem yu rimuvum soket blong wil pubel. Taem ol paep oli stap long stret lengt, gluim ol joen wetem glu blong paep, iksept 1 x 90 digri elbo long jemba (blong alaoem paep blong twist igo antap blong jenisim ol pubel) mo wea paep i fit igo long soket blong wil pubel. Filim spes blong penetresen blong wol wetem morta. Bakfilim kraon ova ol 50 mm paep.



Konstraktem jemba doa

Konstraktem 1 x jemba doa mo frem olsem doa blong toalet rum. Meksua se doa hemi fit stret, blong daonem laet insaed long jemba, mo stopem ol bebet blong go insaed long jemba.

16. Konstraktem ol step

Long eksampol ia, oli yusum ol kongkrit step. Yu save bildim ol step long wud tu. 3 step nomo i nid long plesia from we toalet istap long wan slop. Dlgim 2 x 150 mm dip trench blong futing, 2 brikis longfala (800 mm) mo wan brikis waed long ij saed blong lokesen blong step. Leim rinfosing mesh insaed long ol trench mo filimap wetem kongkrit. Taem kongkrit i wetwet iet, instolem 2 x brikis long ij futing olsem aotsaed edj blong ol step, mo wan brikis long ij saed blong seken step. Plesem mo kompaktem fill bitwin ol brikis, kasem 70 mm from top blong ol brikis. Fitim fomwok long fored blong ij step, mo kapsaedem kongkrit insaed long fom, mo long ol brikis.



17. Fitim ol wil pubel, provaedem oganik mata, putum ol posta

Plesem tufala wil pubel insaed long jemba. Konektem dren paep long aktiv bin. Sekyurim plata kondakt insaed long lip blong wil pubel. Plesem wan baket blong oganik mata (e.g. ol lif) insaed long toalet rum. Plesem ol posta long toalet rum blong soem 'Olsem wanem blong yusum toalet wetem wil pubel' mo 'Olsem wanem toalet blong wil pubel i wok'. Plesem ol posta insaed long jemba doa blong pubel blong soem 'Fiksimap ol smel long toalet blong wil pubel' mo 'Olsem wanem blong jenisim ol wil pubel'.

Stat yusum.



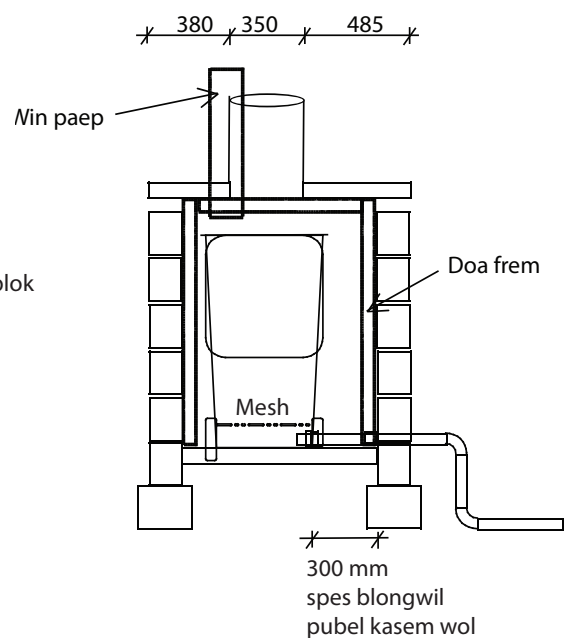
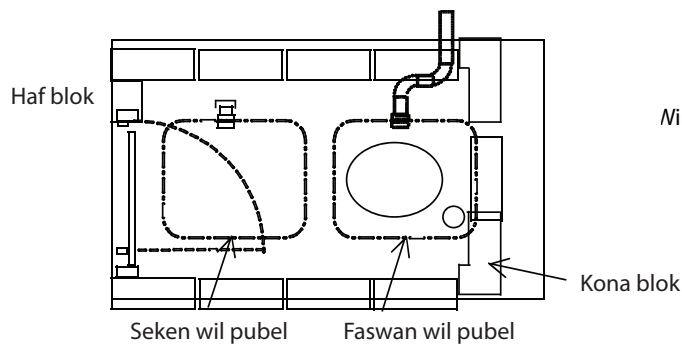
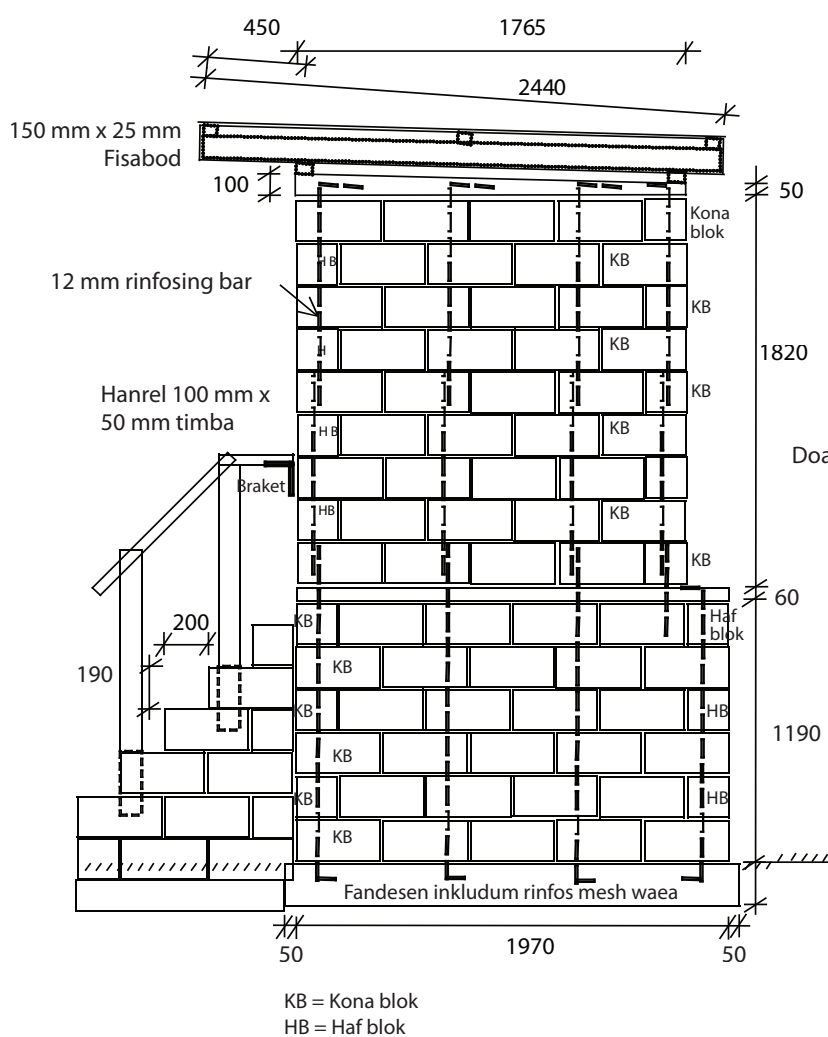
No fogetem ...

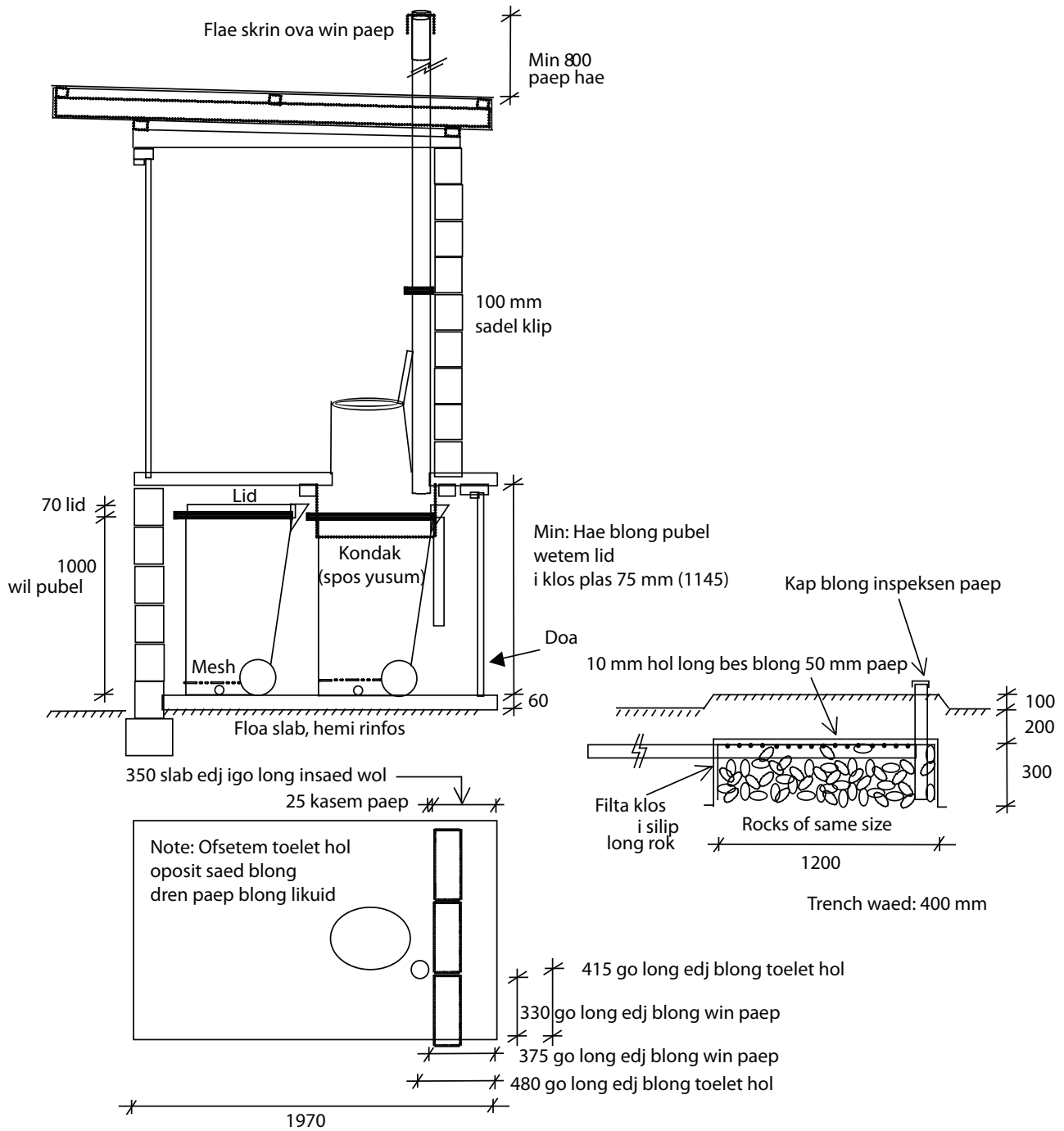
Evri toalet i nidim blong gat wan ples blong wasem han wetem wota mo sop.

Ol isi eksampol olsem yu save mekem kwiktaem oli stap long pej 77.



Ol teknikal droing - kompost toilet wetem wan jemba mo 2 wil pubel





3. Toelet blong kapsaedem wota

Toelet blong kapsaedem wota hemi wanem?

Wan toelet blong kapsaedem wota hemi olsem wan normal flash toelet be insted blong wota ikam from wan besin antap long hem, yusa hemi yusum wan baket blong kapsaedem wota long hem.

Hemi wok olsem wanem?

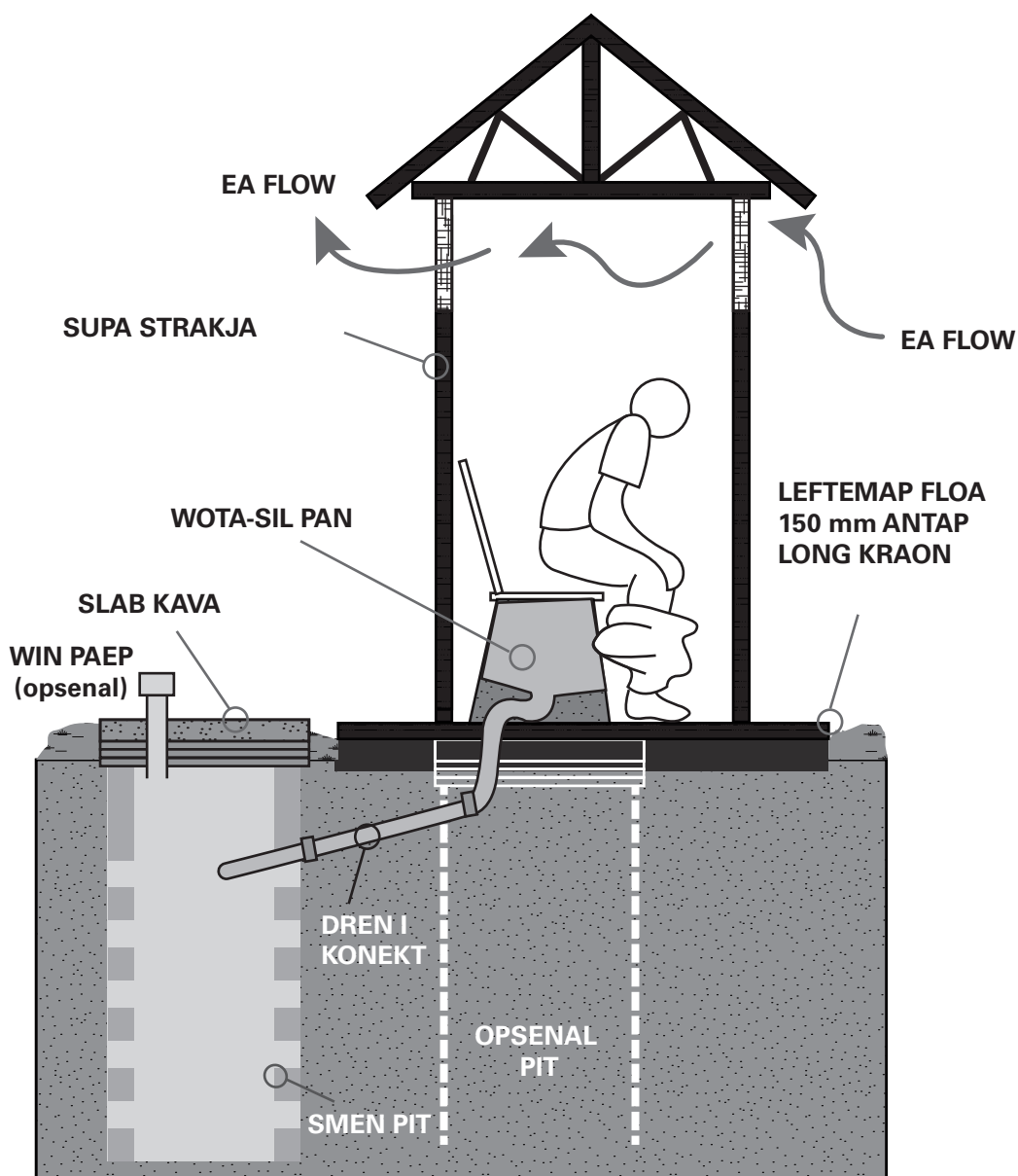
Afta yusum toelet, yusa hemi kapsaedem (o gud moa, throwem) sam lita blong wota long toelet pan. Amaon blong wota we i yus bae hemi 1 o 4 lita mo i dipen plante long disaen mo pan blong toelet.

Ol pan we i nidim wan smol amaon blong wota blong kapsaedem oli gat adventej blong ridiusum risk blong polusen blong kraonwota. Wota we oli kapsaedem ino nid blong klin hemi save bi wota we oli wasem klos long hem mo we oli swim long hem raon long haos.

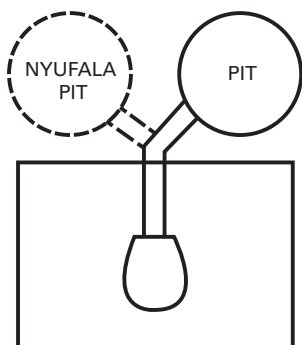
Wota mo sitsit istap go insaed long 2 kasem 3 mita dip sokej pit long kraon, maet stret aninit long toelet o ofset igo long saed mo konekt wetem wan paep. Likuid hemi flow igo long kraon raonabaot, mo sitsit sloslo hemi filimap hol ova 2 yia olsem. Taem klosap hemi fulap, oli digimap nyufala pit mo oli berem olfala pit wetem kraon.

Ol adventej mo disadventej blong wan toelet blong kapsaedem wota

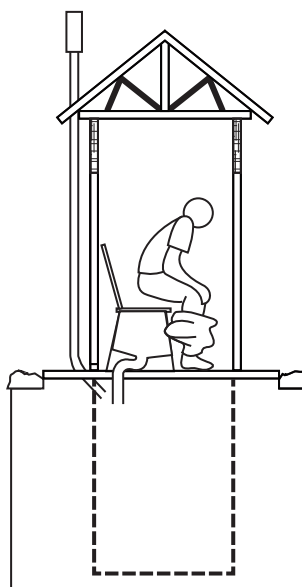
Ol adventej	Ol disadventej
Hemi no sas	Wan rilaebol (iven spos i smol o we i yus finis) wota saplae i mas availabol
Hemi kontrolem ol flae mo moskito	I no suitebol taem oli yusum ol strong material (olsem ol ston o lif) blong klinap
I nogat smel long toelet rum	Potensel polusen blong kraonwota spos sisenal wota tebol i klosap long sefes blong kraon
Man ino save luk hol blong toti	Sit ova pit: Mas muvum toelet rum evri taem oli digimap nyufala pit
Ofset kaen: I givim ol yusa gudfala janis blong gat flash toelet	
Ofset kaen: Toelet rum i save stap insaed long haos mo ol pit istap aotsaed. I no nid blong muvum toelet rum evri taem we pit i fulap	
Ofset kaen: Kraon hemi sapotem toelet sit/raesa	
I save apgred wetem wan koneksen igo long dren sistem spos siwerej hemi kam availabol	
I save inkludum wan ples blong wash insaed long toelet rum	



OFSET OPSEN HEMI ALAOEM
YUS BLONG SEKEN PIT BE
TOELET HAOS ISTAP NOMO
LONG SEM PLES



KAENTOELET WETEM PIT ANINIT



Olsem wanem blong bildim wan toelet blong kapsaedem wota

Ol tul we i nid:

- sped
- kruba
- hama
- hakso
- kata blong bolt
- hanson
- pensis
- kapa sisis
- tep mesa
- level
- kol jisel
- pentbrash
- wilbaro
- baket
- shap traoel
- lis traoel

Ol material we i nid:

Floa slab:

- plaewud bes (12 mm) - 1 m x 1 m
- bes frem timba - 40 mm x 40 mm x 6 m
- fomwok timba - 40 mm x 40 mm x 1240 mm x 4 or flat aean - 1120 mm x 40 mm mo tae waea
- ol nel 75 mm
- riba steel mesh waea
- ol plaewud plang
- ol lif blong banana, plastik o oel.

Toelet raesa:

- flat aean - 1120 mm x 450 mm
- waea blong faol (10 mm) - 1120 mm x 475 mm
- tae waea (1 m) - 10 mita
- ol plaewud plang (12 mm) x 3
- ol stik (10 mm daemeta) x 2
- sanbij - faen saes, siftim
- plastik sil (blong kapsaedem wota)
- toelet sit mo lid.

Pit:

- 44-gallon dram x 2
- PVC paep 50 mm x 3 m
- PVC 50 mm 90° elbow x 1
- flaeskrin mesh - 200 mm x 200 mm
- fomwok timba - 150 mm x 25 cm x 1700 mm x 4
- ol rok – ol sem saes rok abaot 100–200 mm akros
- PVC win pipe 50 mm x 3 m

Congkrit:

- smen - 2 x 40 kg bag
- sandbij - siftim i faengud x 2 bag
- korel mo sanbij - miksim 4 bag.



Eksampol blong komplet toelet blong kapsaedem wota.



1. Digim wan skwea pit 1.5 m x 1.5 waed x 1.6 m dip.



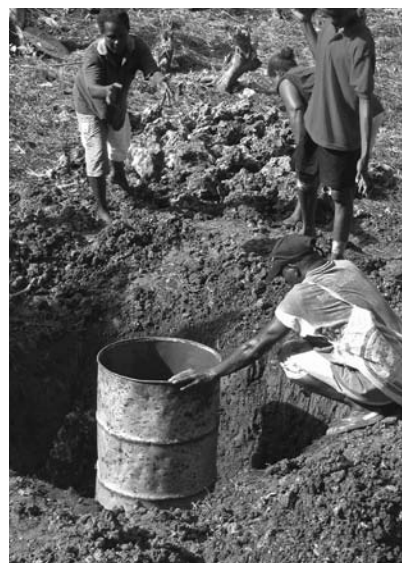
2. Rimuvum top mo botom blong tufala 44 galon dram.



3. Mekem plante hol long evri saed blong dram blong botom



4. Hamerem tufala dram tugeta i fas



5. Plesem tufala dram long medel blong hol. Top blong dram hemi shud bi 100 mm antap long kraon.



6. Filim hol wetem ol rok kasem level blong dram blong botom.



7. Putum plastik ova ol rok.



8. Filimap hol wetem kraon mo ramem daon.



9. Floa slab: Konstraktem wan bes long plaewud mo frem blong floa slab



10. Kavremap bes wetem ol lif banana (o plastik o oel).



11. Fitim fomwok antap (krosem ol timba we i lokgud).



12. Mekem ol plaewud plang blong toelet hol: 2 bigwan mo 2 smolwan. Nelem ol smol wan tugeta. Plesem riba mesh waea we hemi rinfosem o yusum tae waea we yu twistim long 4.5 mm (3x1.5 mm) mo fasem long 100 mm spesing.



13. Long narafala wei: Yusum flat aean mo tae waea hup blong toelet hol.



14. Instolem ol plang mo mesh. Katem mesh raon long ol plang.



15. Filimap wetem kongkrit. Mix hemi: 1 pat smen, 3 pat sanbij, 4 pat korel, o 1 pat smen wetem 5 pat sanbij.



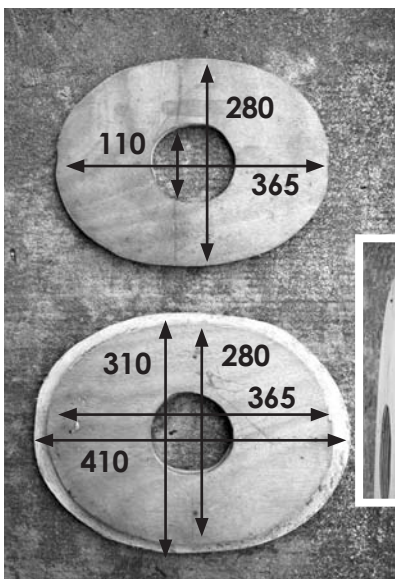
16. Smutum antap. Kilkilim ol saed wetem hama



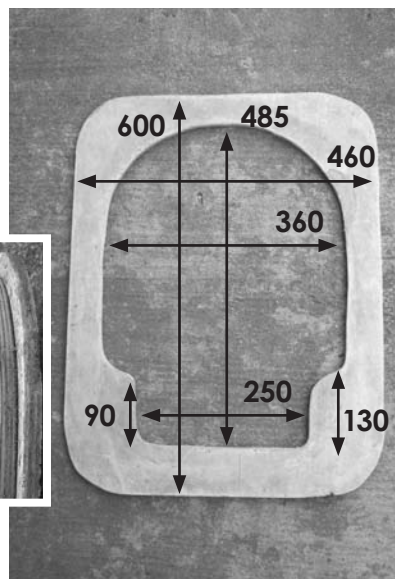
17. Afta 1 haoa, rimuvum ol smol plang. Livim istap blong wan dei.



18. **Toelet raesa:** Mekem 3 plaewud mold.*



19. Joenem 2 leia blong 12 mm plaewud blong botom blong mold. (ol mesemen long mm)



20. Katem waea blong faol long sem lengt long flat aean, be hemi hae moa long 25 cm.



21. Benem flat aean raon long insaed tip long 2 leia mold.



22. Putum 1 leia mold insaed long top, rapem flat aean long hem, fasemtaet wetem tae waea.

* Ministri blong Helt blong Fiji hemi stap lendem ol mold blong toelet raesa we oli mekem long aean. Jekem wetem Helt provaeda blong lokal gavman blong you.



23. Raonem mo fasemtaet waea blong faol, ekstendem 25 cm antap long flat aean.



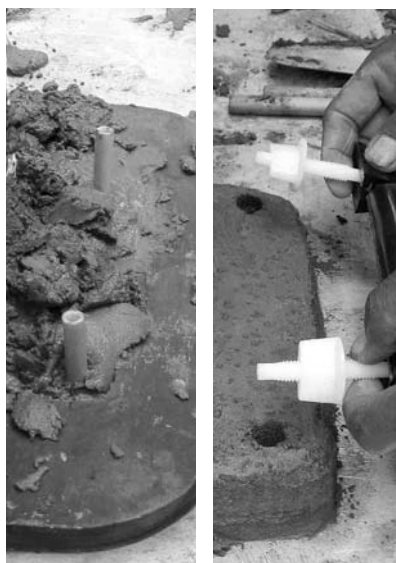
24. Tanem raesa ova, plesem insaed long mold long wan smut sefes. Benemaot waea blong faol.



25. Siftim faen sanbij. Meksem 1 smen, 3 sanbij mo wota blong mekem strong mix.



26. Traoelem gud smen long waea. 10 mm dip. Draem long 1 haoa



27. Meksua se yu pusum 2 stik wea ol skru blong toelet sit bae i attaj long hem.



28. Applae seken 5 mm smen leia. Raonem long top mo botom blong hemi level wetem ol edj blong mold.



29. Afta 30 minit, rimuvum mold blong botom mo smutum ol edj. Livim 1 dei afta rimuvum mold blong antap.



Blong instolem wota sil



30. Lowerem plastik sil igo insaed long top blong raesa.



31. Tanem apsaed daon. Smenem raon long top blong raesa. Livim 1 haoa blong hemi set.



32. **Floa slab:** Rimuvum fomwok from floa slab. Kilkilim plang blong hol sloslo.



33. Karem slab igo long pit. Plesem apsaed daon antap long ol dram.



34. Katem wan hol long top dram mo pusum win paep igo insaed.



35. Plesem oz se slab hemi level.



36. Instolem fomwok long sem haet wetem floa slab - livim wan spes blong 250 mm long ij saed blong slab.



37. Plesem ol rok along ol saed 150 mm from fomwok.



38. Kapsaedem kongkrit insaed long bes. Adem moa rok raon long slab, be bae oli no tajem timba.



39. Smutum antap. Kilkilim ol saed wetem wan hama.



40. Plesem raesa insaed long lip blong hol.



41. Adem mix blong smen/wota raon long top, mekem oli sem level mo smutum.



42. Yusum wan pentbrash blong smutum smen. Waepem klin wetem wan raf klos



43. Smenem raon bes blong raesa, 75 mm hae. Smutum wetem wan traos



44. Smenem ova eni raf sefes blong floa slab. Smutum wetem wan pentbrash



45. Instolem toalet sit mo lid. Livim i drae.



46. Bildim toalet rum wetem ol lokol material. Ekstendem win paep 500 mm ova long ruf.



47. Adem wota saplae, baket mo sop.

Operetem mo mentenem wan toalet blong kapsaedem wota

Ol infomesen we i folow bae oli helpem pipol blong yusum gud toalet blong kapsaedem wota blong olgeta. Long longfala taem, hemi minim se bae ino gat fulap problem mo toalet bae hemi nidim smol mentenens mo ripea nomo.

Fasin blong tijim ol yusa blong yusum nyu toalet blong olgeta bae i sevem taem, mane mo moa impoten, bae i mekem oli ol hapi kastoma. Wan kastoma bae i talemaot long ol fren blong hem, mo hemia bae i krietem moa bisnes, mo bae i lidim pipol blong kasem gud helt moa.

Igat sam taem we maet yu mas ripea o asist long gud operesen blong toalet.

Spos sam samting igo rong

From we ino gat ol mekanikal pat, ol toalet blong kapsaedem wota ino nidim tumas ripea. Nating i olsem, bae igat ol taem we bae i nid blong yu ripea o asist wetem operesen blong toalet. Hemia wan list blong ol komon problem mo solusen:

Problem	Solusen
Wota sil hemi blok	Kliarem mo klinim wota sil
Oli plesem sam bigfala samting insaed long pan mo oli blokem toalet	Tijim ol yusa se wanem nao i mas go insaed long toalet

No fogetem ...

Evri toalet i nidim blong gat wan ples blong wasem han wetem wota mo sop.

Ol isi eksampol olsem yu save mekem kwiktaem oli stap long pej 77.



4. Flash toelet wetem septic tank

Wanem ia flash toelet (septic tank)?

Hemia hemi wan toelet wea oli flashem ol toti igo insaed long wan septic tank we hemi sil gud mo hemi stap long yad blong haos. Septik tank hemi wan anda kraon setling jemba we i silgud.

Hemi wok olsem wanem?

Insaed long septic tank, ol strong toti we oli flash from toelet oli setel o flot blong fomem wan leia blong wan mix olsem mad. Likuid hemi pas tru long tank mo hemi go aot long ol sokej trench mo hemi go insaed long kraon. Wan septic tank hemi disaen blong mas fulap long likuid (siwej), so taem nyu weswota hemi go insaed, semak volium we istap hemi go aot long ol sokej trench.

Sistem hemi wok gud taem we i) igat wota oltaem blong flashem; ii) oli pampemaot ol strong toti long tank samfala yia oltaem bifo oli fulap tumas; iii) kraon hemi dring gud wota mo hemi nogat klei mo; iv) ol kraon oli no save kasem flad o wota i no bildap long olgeta. Ol problem oli kamaot oltaem taem ol trench oli sotfala tumas mo ino gat inaf rum blong likuid hemi ronaot kwik inaf.

Ol septic tank oli no suitebol blong evri kaen lokesen mo kraon. Oli nidim ol spesel mobael pam kontrakta blong pampemaot strong toti spos no bae oli mas aotem ol toti wetem han, we ino gat gud haejin long hem. Blong kasem ol disaen we oli stret mo oli save apruvum, oli mas konsaltem ol ofis blong lokal gavman.

Ol adventej mo disadventej blong ol flash toelet (septic tank)

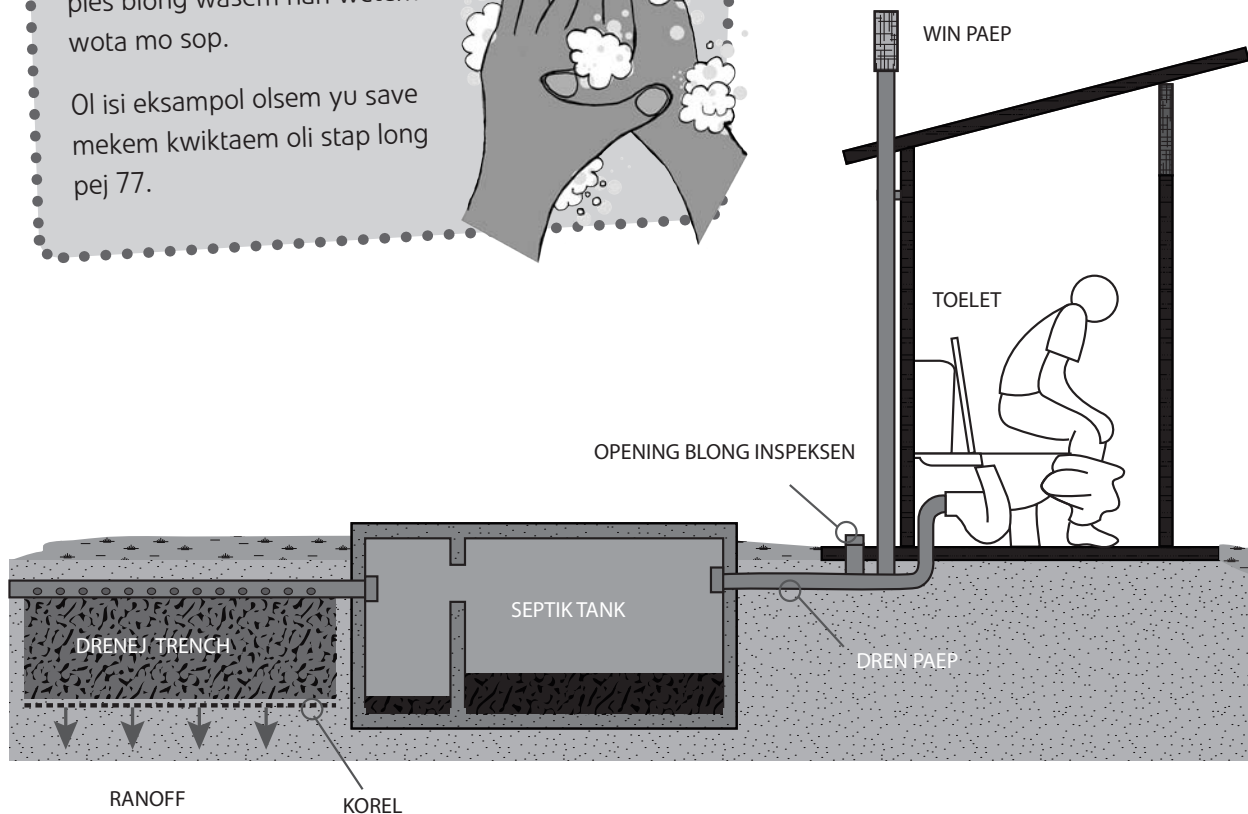
Ol adventej	Ol disadventej
Konviniens mo stetes blong flash toelet	I sas blong instolem
I nogat smel o ol insekt long toelet rum	I nidim rilaebol mo gudfala wota saplae (long paep)
I save stap insaed long haos	Hemi no suitebol spos yad hemi smol nomo blong ol trench
Hemi isi blong klinim	I save polutum kraonwota spos kraonwota hemi hae o spos oli no disaenem mo instolem gud ol trench
	Hemi nidim hae kost blong mekem trak blong pam i pampemaot ol strong toti long ol okesonal taem.
	Oli no save yusum ol toti olsem fetelaesa
	Hae kost blong lukaotemgud. Plante hae seves aetem.
	Ol sokej trench i nidim kraon we i save dring gud wota

Flash toilet (septic tank)

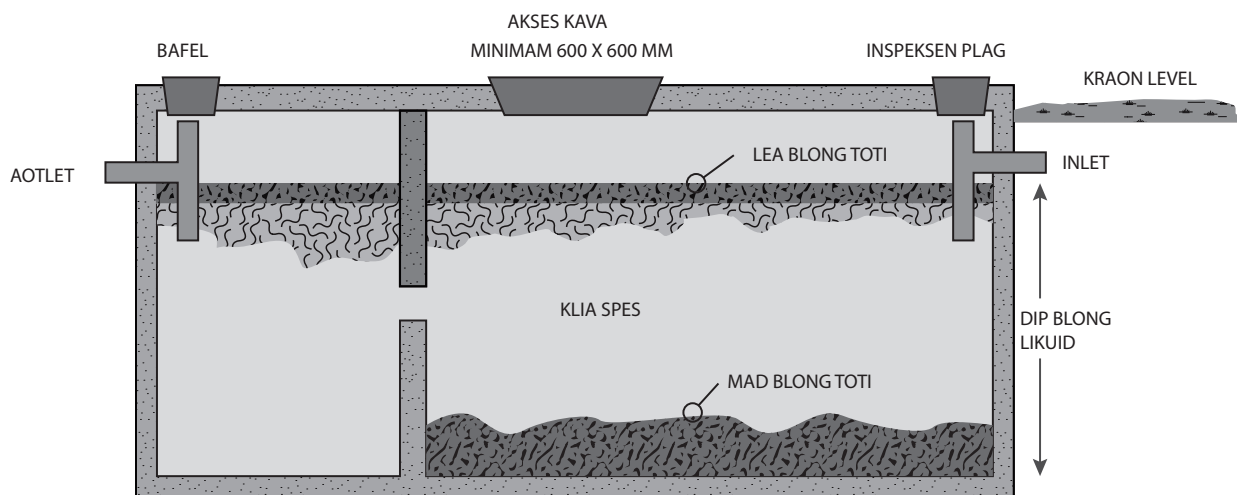
No fogetem ...

Evri toilet i nidim blong gat wan ples blong wasem han wan wetem wota mo sop.

Oi isi eksampol olsem yu save mekem kwiktaem oli stap long pej 77.



SEPTIK TANK



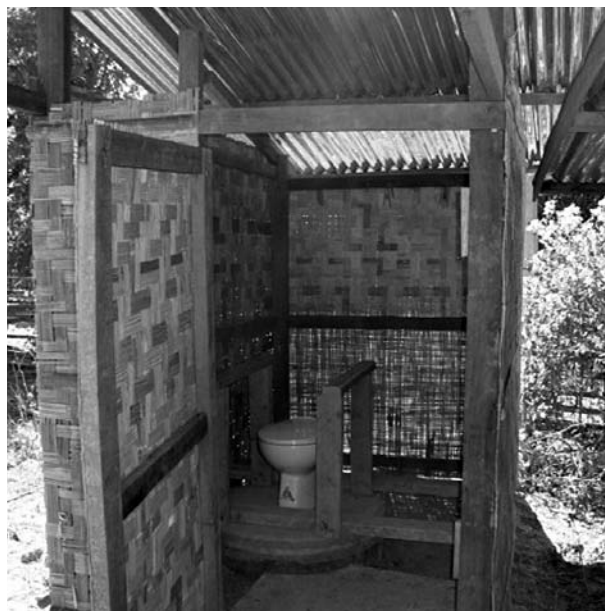
5. Ol toelet blong spesel nid

Fulap pipol long komiuniti (olsem ol woman we oli gat bel, ol olfala, ol yang pikinini mo ol handikap wetem olgeta we oli sik) maet oli gat ol spesel nid we i minim se ol toelet blong olgeta maet i nid blong mekem i stret blong olgeta i save aksesem mo oli faenem i isi blong yusum. Taem yumi disaenem 'stret' kaen toelet, yumi nidim blong meksua se yumi mitim nid blong evri pipol. Hemia i save posibol wetem yus blong ol hanrel, rod blong wiljea, o ol mobael toelet.

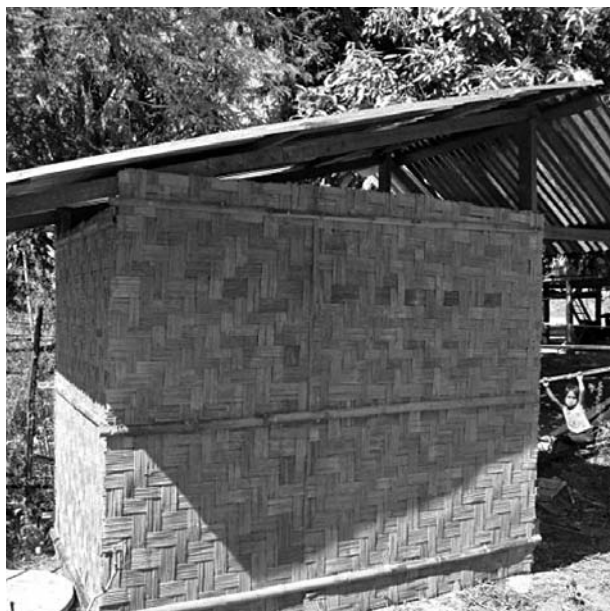
Ol pipol we oli sik, handikap, olfala, o ol woman we oli gat bel maet oli no save wokbaot longwe blong go long toelet. Maet oli faenem i had blong klaem ol step o maet oli no save leftemap olgeta wan igo antap mo daon long toelet sit. Blong mitim ol spesel nid ia, yumi save bildim ol hanrel blong sapot. Maet i save stap aotsaed long bilding mo tu klosap long toelet sit (lukim pikja aninit). I save gat wan rod blong ol wiljea tu long toelet.

Wan bigfala konsen long fulap komiuniti blong Pasifik hemi helt mo sefti blong ol woman mo pikinini we oli nidim blong yusum toelet taem oli wokbaot kasem ol narafala vilij o ol maket longwe long own vilij blong olgeta. Fulap long olgeta ia, plante taem oli wet kasem ivining blong go long toelet from we oli filim 'shem' se bae pipol i luk

olgeta taem oli yusum toelet. Mo tu long naet plante pipol ino save yusum toelet we istap long 20 - 30 mita longwe long haos. From fraet se man i save atakem olgeta mo fraet long devel, oli stap holem taet kasem eli moning. Hemia i save kosem sam helt kondisen olsem 'urinary tract infections'. Ol mobael toelet i save stap insaed long haos, so ol woman mo pikinini ino nid blong go aotsaed long naet.



Ol hanrel long eni saed blong toelet sit i mekem i isi blong klaem antap mo godaon long toelet.



Bilding ia hemi gat wan hanrel aotsaed long strakja blong provaedem sapot blong olgeta we maet oli no save wokbaot gud. Bilding hemi isi blong aksesem from hemi nogat ol step.

Ol spesel disaen

Seksen we i folow hemi kontenem 2 disaen blong mobael toelet:

1. Kompost baket toelet
2. 'Kamfot Sit'

Kompost baket toelet

Wanem ia kompost baket toelet?

Kompost baket toelet hemi wan mobael toelet we oli save konstraktem wetem wan baket mo wan toelet sit.

Olsem wanem blong bildim wan kompost baket toelet

Yusum wan 20 lita plastik baket (o klin plastik 10 lita pent baket) fitim wan toelet sit long lid wetem wan kataot. Spos yu nogat wan toelet sit yu save katemaot wan hol long lid, be bae yu nidim wan spea lid blong kaverem taem yu no yusum.

Yu save bildim wan frem raon long toelet taem yu katemaot wan hol long wan olfala jea o mekem wan strakja wetem ol brikis o wud.

Olsem wanem blong yusum kompost baket toelet

- Plesem 20-30 mm oganik material olsem sodast o ol drae lif insaed toelet bifo yusum.
- Evritaem yu yusum toelet, plesem moa oganik material o ases faea insaed long toelet, yusum inaf blong kavremap pispis mo sitsit.
- Jekem toelet oltaem. Spos hemi stat blong smel o hemi wota-log (tumas likuid long hem), adem moa oganik material o ases faea long hem.
- Taem toelet hemi fulap, emtimaot baket long wan hol mo kavremap weem kraon.

Disaen ia hemi from David Lee, Wellington, NZ



20 litre plastic bucket.



Fit toilet seat to bucket, or cut a hole in the lid.



'Kamfot Sit'

Wanem ia Kamfot Sit'?

'Kamfot Sit' hemi wan toalet wetem saes blong wan mobael jea. Hemi disaen blong yusum insaed mo oli save kipim klosap long yusa blong mekem i isi. Toalet ia hemi disaen blong sapotem pipol we oli gat spesel nid, mo ol gel mo woman we oli save kasem tret blong hambak mo atak taem oli wantem yusum toalet aotsaed long naet.

From wanem i nidim 'Kamfot Sit'?

Plante long ol toalet long rural PNG oli stap 10-30 mita longwe long ol home blong olgeta. I save gat denja blong wokbaot igo long ol toalet long naet. Pipol oli fraet blong go longwe long ol haos blong olgeta from oli fraet long devel mo nakaimas. Ol woman oli fraet tu se bae oli kasem tret blong atak spos oli go longwe long ol haos blong olgeta long naet.

Wan sevey i bin kariaot wetem Live & Learn PNG mo Rural, Water, Supply mo Sanitation Program (RWSSP) long Kavui komiuniti, West New Britain, PNG, blong lanem moa abaot ol sanitesen praktis mo nid long tedei. Risalt hemi soemaot se from we ol toalet oli stap longwe tumas, 40% long pipol oli wet kasem moning blong go long toalet, 30% oli go klosap long haos nomo, 20% oli go wanwan, mo 10% we narawan i kampani wetem olgeta igo. Sevey hemi haelaetem se 95% long ol pipol wetem spesel nid long rural area long Kimbe oli rilae long ol riletiv long saed blong praevesi pepes. 'Kamfot Sit' hemi minim se ol pipol wetem spesel nid oli save go abaot praevesi bisnis blong olgeta long own hom blong olgeta witaot eni help. Sevey hemi soemaot tu se ol woman oli fesem risk long saed blong hambak o ol atak evri naet. 'Kamfot Sit' hemi provaedem wan sef wei blong ol gel mo ol woman blong rilivim olgeta long naet witaot tret blong hambak o atak.

Ol adventej mo disadventej blong 'Kamfot Sit'

Ol adventej	Ol disadventej
Hemi sapotem ol pipol wetem spesel nid (inkludum sikman, olfala, mo ol woman we igat bel)	Mas emtimaot evridei
Hemi provaedem digniti mo praevesi	Hemi smel - spos livim istap blong moa long 48 haoa*
Hemi adrese ol isiu blong sefti mo sekyuriti blong go long toalet long naet taem (speseli blong ol gel mo ol woman)	Maet hemi promotem katekori abaot genda from maet bae hemi diuti blong ol woman nao blong emtimaot
Hemi promotem lokal onasip tru spesel disaen	
I naes blong yusum mo hemi spesel long sam grup (inkludum ol pikinini)	
Hemi disaen blong kipim smel	
Hemi gud haejin. 'Kamfot Sit' disaen hemi inkludum tu hanga blong ol hanklav mo spanj blong klinap	

* Nid blong testem moa

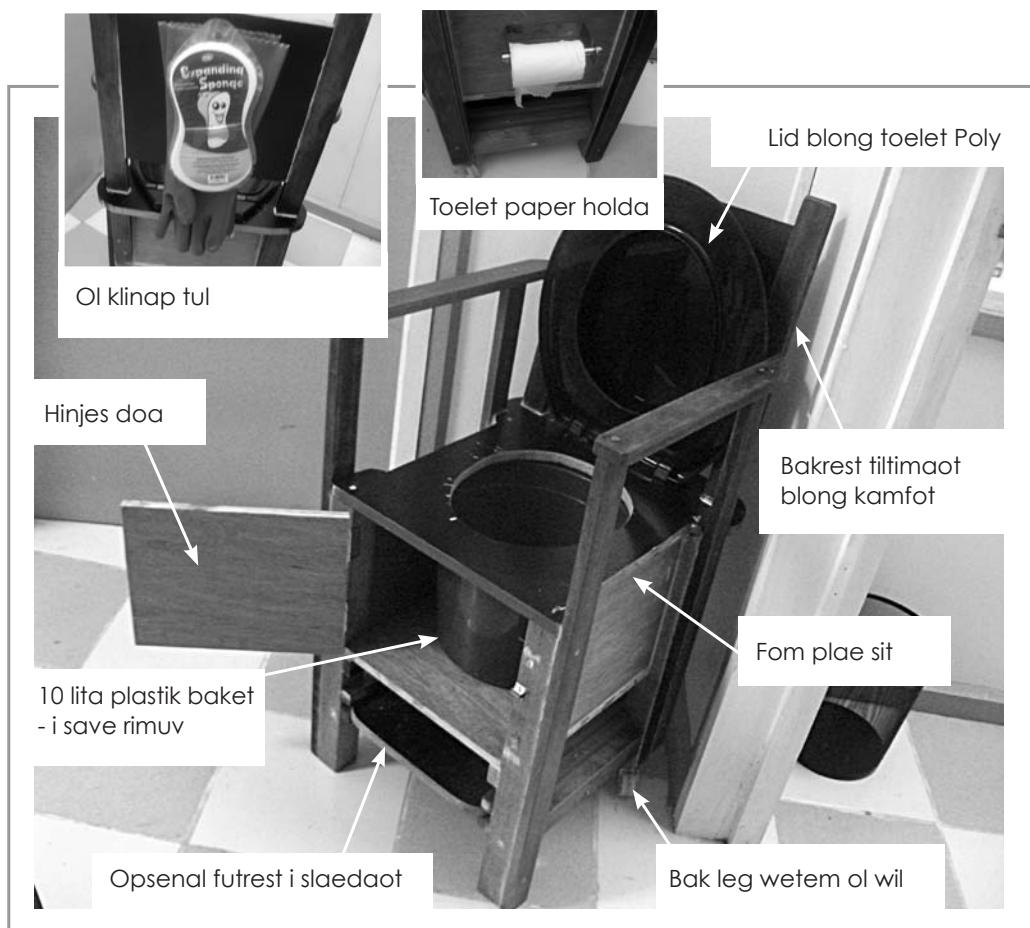
Live & Learn Environmental Education PNG hemi bin disaenem 'Kamfot Sit' blong mitim ol spesel nid blong ol taget komiuniti long Kimbe, West New Britain. Wetem konsaltesen we istap kontiniu, hemi stap go tru long ol test mo bae hemi develop moa.

Olsem wanem blong bildim 'Kamfot Sit'

List blong ol material

Material deskripsen	Qty	Yusum long
RS timba 50 mm x 50 mm x 3.6 m	1	Frant mo bak leg
RS timba 50 mm x 25 mm x 3.6 m	1	Han mo bak rest
DAR Timba 20 mm x 20 mm x 2.5 m	1	Sapot blong futrest mo baket kompatmen
Fom plae 17 mm x1 .2 m x 2.4 m**	1	Sit, fut mo bak rest
Komon plae 12 mm x 1.2 m x 2.4 m**	1	Baket kompatmen
1 ½ inj nel pkt*	100 gsm	Koneksen blong ol bres mo frem
Raba Kasta Wil 50 mm (pea)	1	Bak leg hemi tantanem
PRD Butt Hinjes 50 mm	1	Frant doa kava
10G x 40 mm jipbod skru pkt*	100 gsm	Evri joen
'Tuffa' poly toalet pan mo seat	1	Toalet sit
Sandpepa 0.5 mm (smuth)*	1	Smutum
1 lita klia vanish*	1	Faenal taj
Raba glav 400 mm (pea)***	1	Klining pepes
Expandebol glav***	1	Klining pepes
Pentbrash 50 mm	1	Aplaem vanish
Toalet tissue holda***	1	
10 lita plastik baket wetem lid	1	Toti klekta
No More Gaps waet 450 gm*	1	Patjing blong ol hol
Bolt Barrel CP50 mm CD1	1	Ol koneksen blong ol frem etc.

* Inaf blong mekem 4 Kamfot Sit **Wan ful shiit i save mekem 2 Kamfot Sit *** Opsenal



Ol step blong konstraksen (simplu wan) Ol daemensen i semak long stande jea mo blong matjem baket we yu jusun.

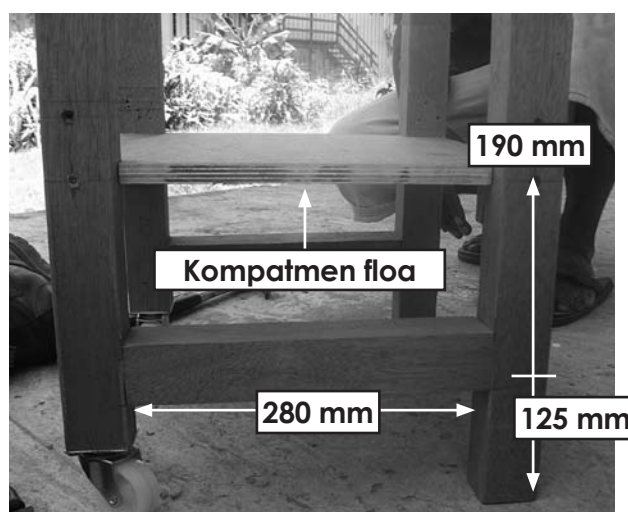
1. Katem plaewud blong ol saed wol blong kompamen, bakrest mo sit mo smutum ol edj wetem sanpepa. Ol daemensen i shud fitim baket we yu jusun mo saes jea we yu laekem. Yusum wan so, katem RS 50 mm x 50 mm timba long ol lengt ia:

- 510 mm (51cm) x 2 pis blong ol frant leg mo 450 mm blong ol bak leg (blong hae blong wil we hemi 60 mm)
- 280 mm (28 cm) x 2 pis blong ol bres

Afta stripim 12 mm komon plaewud igo long:

- 240 mm x 275 mm x 2 pis blong ol saed wol blong kompamen
- 305 mm x 240 mm x 3 pis blong bak wol mo frant wol (we bae hemi kompamen doa)
- 305 mm x 275 mm rektangula kat blong kompamen floa.

2. Shepem fom plaewud blong matjem hemia blong wan poly sit opening.
3. Afta we yu finis katem evri pat, statem putum tugeta. Joenem frem blong platfom blong rest blong baket.
4. Yu save adem ol raba pad blong fut long ol frant leg blong stop skratjem floa mo glis. Adem ol bres klosap long botom. Joenem jemba mo sit mo joenem jemba doa wetem ol hinjes mo bolt. (Jemba doa hemi mas stap long frant from we ol skru blong toilet sit bae hemi blokem opening spos hemi stap long bak. Bae hemi fit gud tu long olgeta saed.)
5. Adem amrest. Fitim bakrest long 95 digri, tiltimaot igo long bak. (2 pis blong 2 x 1 inj timba we yu katem long 720 mm blong bakrest.)



Alaem 255 mm from ol leg igo antap, blong save putum futrest.



6. Skruim ol wil long botom blong bak leg.
7. Fitim toalet sit long baket, o katem wan hol long lid blong baket.
8. Ol faenal stej: Sanpepa evri wud. Filimap ol spes. Aplaem 2 kot blong vanish. Skruim toalet pepa holda long raet wol blong jemba. Adem skru blong ol hanglav mo spanj (putum skru igo haf wei mekem i akt olsem wan huk). Putum baket insaed.
9. Satem jemba doa mo 'Kamfot Sit' hemi redi blong yusum!



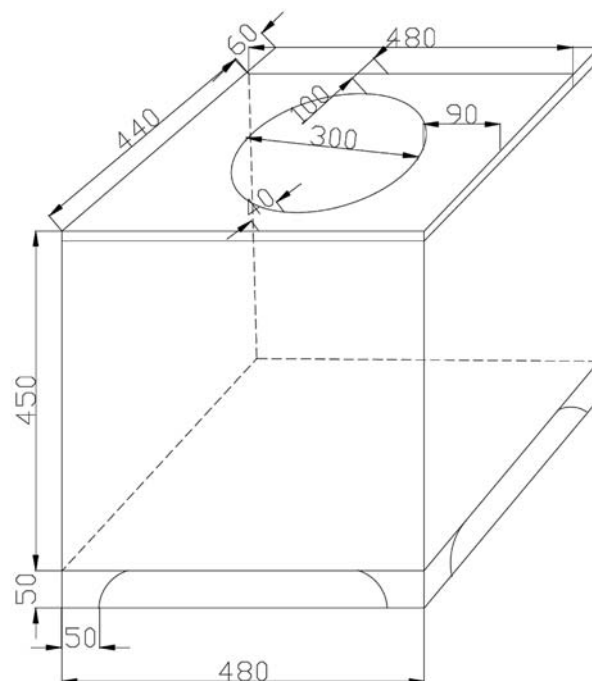
Ol narafala simpel disaen blong toalet

Toalet we i usum bokis

Emi wan toalet we i gat handel mo man i save karem i ko long eni ples, olgeta wetem spesel nid i save usum o blong usum long naet taem.

Lis blong ol materiel

- 1 pis 12 mm plaewud
- 1 plastic toalet seat
- 1 20 lita baket
- ol nel mo skru



Fasin blong wasem han

Ol han oli spredem wan estimet blong 80% blong ol komon disis we oli save pas olsem kol mo flu.

Oli konsiderem fasin blong wasem han wetem sop long ol kritikal taem olsem most efektif wei blong daonem disis blong daerea.

Yumi mas enkarejem fasin blong wasem han wetem sop long ol kritikal taem afta yusum toalet, o klinimap wan pikinini, mo bifo kakai. Fasin blong wasem han wetem sop hemi brekemdaon gris we i karem ol jem. Fasin blong yusum sop hemi leftemap amaon blong taem we yumi spendem blong wasem ol han.

Fasin blong wasem han hemi isi blong lanem, hemi jip mo efektif tumas blong stopem spred blong ol jem. Hemi estimet se wasem han wetem sop hemi save daonem trabol blong daerea long klosap haf. (Fewtrell 2005).

Hemi impoten tumas blong wasem ol han wetem sop afta yusum toalet mo bifo kakai.

Ol narafala taem we you shud wasem ol han oli inkludum: bifo priperem kakai, afta tajem ol anamol, afta sniz/kof, afta wok aotsaed, bifo fidim pikinini blong yu.

Nogat sop?

Sop hemi wan prodak we i impoten tumas blong pem blong haos. Hemi no help blong ronemaot ol disis nomo, be hemi help tu blong mekem yu mo famli blong yu i smel klin mo fresh oltaem.

Wan risipi blong mekem sop istap long pej 80. Bisnis, komiuniti, o ol skul grup oli save mekem sop blong jeneretem inkam.



Ol taem blong wasem ol han: afta toalet, bifo priperem kakai, bifo kakai, afta tajem ol anamol, afta sniz o kof, afta jenesem ol napi blong bebe, o afta wok long ol fil.

Ol fasiliti blong wasem han

Ol simpol opsen blong wasem han

Evri toalet mas gat ol fasiliti blong wasem han wetem wota mo sop. Ol pikja aninit oli soemaot ol simpol fasiliti blong wasem han we i save setap long ol hom, ol skul o ol komiunit senta. Oli no sas mo oli nidim smol wota nomo.



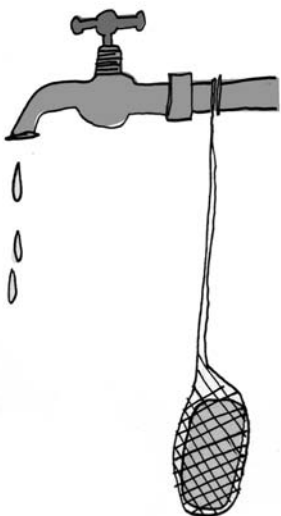
Ova wan besin



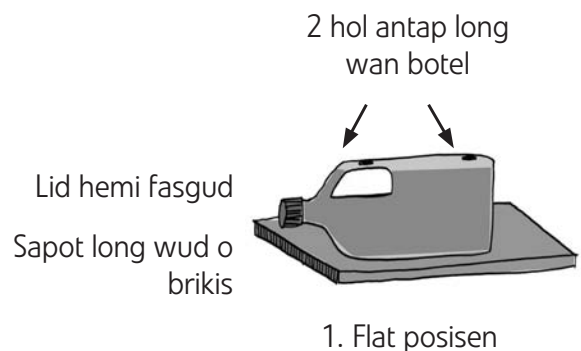
Dipa wetem wan hol mo sop



Risaekel kontena (Tippy-Tap)

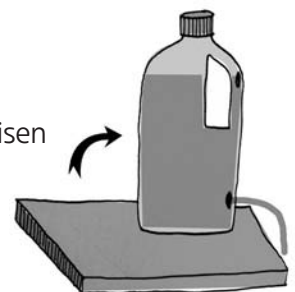


Sop long wan rop
Wan plastik o fabrik
net raon long sop
hemi no holem
nomo, be hemi wan
gud brash we i help
skrabem ol han gud
moa.



Lid hemi fasgud
Sapot long wud o
brikis

2. Stanap posisen



Plastik botel olsem wan fasiliti blong wasem han

Fasen blong mekem wan simpol ples blong wasem han

Lis blong ol materiel

1 plastic dis o basin blong 30 sentimeta o any saes we yu wantem

1 plug (pusong blong blokem wota long dis mo paep blong aotem doti wota long dis)

1 trap kombinisen paep mo Compresen joen we emi 40 milimita IPEX

1 40 milimita PCV paep (1 longfala pis blong 1.5 mita)

1 40 milimita PCV bend

Katem hol long medel blong dis o basin wetem naef o waea we i hot blong i save fit long plug (pusong blong blokem wota long dis mo paep blong aotem doti wota long dis. Putum paep blong aotem doti wota long dis i ko long ples blong hem.

Putum dis o basin i sitaon long wan gudfala stan exampol. Wan pis plaewud we i kat hol we dis o basin i save fit insaed long hem olsem long pikja.

Putum trap mo paep blong doti wota, mekem sua paep blong doti wota i ko insaed long hol blong basin. Fulumap hol wetem ston mo kavremap wetem plastic mo graon.

Klektem wota blong wasem han

Spos yu gat limit long akses long wota, yu save konsiderem fasin blong klektem wota long ruf blong ol haos taem yu setemap wan sistem blong kasem wota. Yu save yusum ol simpol material blong kasem wota mo klektem wota long ruf blong toelet o narafala haos.



Ol eksampol blong 2 kompost toelet jembra we igat fasin blong klektem wota blong wasem han.

Gaed blong wasem han

Wasem han hae-faev!

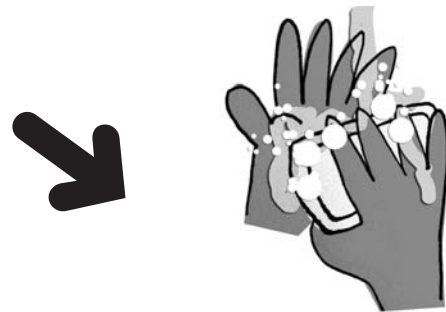
Wasem han wetem sop hemi simpol, mo hemi efektiv wei blong ronemaot ol jem we i save pas. Hemia ol 5 simpol step blong tekem blong kipim ol han blong yu i nogat ol jem.



→
STAT



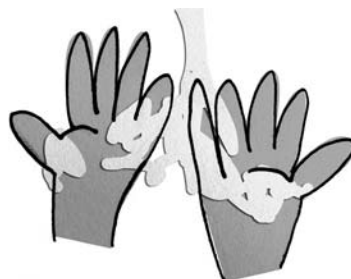
1. Mekem han i wetwet



2. Sop (15 seken)



5. DRAEM
han wetem
wan klin klos



4. Rins



3. Skrabem bak
blong han, ol joen,
bitwin ol fingka,
aninit fingka nel

Mekem sop

OLSEM WANEM BLONG MEKEM SOP

Risipi 1

Igat 2 men ingidien blong sop - wan fat mo wan alkali - we yu adem senta mo kala long hem oltaem.

Fat we i yus blong mekem sop hemi save bi fat blong anamol o blong ol lekim. Long besik sop alkali hemi ases faea we istap afta wud i bon finis. Mekem sop long wei ia:

- Wasem ases faea wetem wota mo drenem.
- Adem ases faea long fat mo boelem.
- Boelem sloslo blong evaporetem ekses likuid mo alaoem blong kolkol.

Olsem we yu save luk, proses hemi isi nomo. Be plis rimemba se sop hemi no antiseptik mo spos yu yusum tumas ases faea, we i mekem tumas alkali long sop, bae i mekem skin i drae, mo mekem i soa.

Risipi 2

Bae yu nidim:

- 1 kap kokonas oel
- 1/6 kap kostik soda (drae paoda, flek o pelet)
- 4 kap wota
- 1 bigfala klin tin o pot (wetem handel spos igat)
- kuka/stov
- samting blong sterem wetem, e.g. spun o stik
- wan bowl, dish o sel kokonas blong kapsaedem mixja blong sop insaed. Hemia hemi mold blong yu.

Wanem blong mekem

1. Kapsaedem wota mo kostik soda insaed long tin.
2. Sterem kasem we kostik soda hemi disolv.
3. Adem kokonas oel.
4. Mekem i hot kasem we mixja hemi boel.

Woning

Samtaem mixja hemi babol mo maet hemi ranaot ova long saed blong tin. Hemia ino save hapen spos yu:

- yusum wan bigfala tin
- steremap oltaem
- yusum low faea blong no mekem i hot tumas.

Spos mix blong yu hemi babol tumas, rimuvum stret awei long faea mo sterem gud.

5. Kontiniu blong boelem mo sterem blong 15–20 minit.
6. Ol waet lamp bae i kamaot long sefes. Stret afta, spos igat tumas hit, mixja i maet 'drae aot' mo fomem wam mass we klosap hemi strong mo hemi stiki. Spos hemia i hapen, adem wan narafala kap blong wota mo sterem blong kipim hemi likuid istap.
7. Steremap kasem taem we hemi bin boel blong ful haf haoa.
8. Letem mixja hemi kam kolkol blong sam minit mo kapsaedem igo long mold (wan bowl, besin o sel kokonas). Livim hemi kolkol. Taem hemi kolkol mo strong hemi isi blong rimuvum.
9. Taem hemi kolkol, traem wasem ol han blong yu wetem sam long ol prodak blong yu ia.

Yu save adem lemongras oel long sop mixja blong mekem i smel gud



Ol material blong komiunikesen

Seksen ia hemi konteinem ol eksampol blong ol posta mo ol saen blong wanwan kaen toelet. Yu save fotokopi long olgeta samting ia o mekem bakegen blong ol kastoma oli putum insaed ol toelet. Spos yu nogat akses long kompyuta, ol saen we oli raetem long han oli gudwan tu!

Olsem wanem blong yusum ol toelet

Ol pipol we oli liv long haos oli nidim blong save olsem wanem blong yusum toelet blong olgeta long stret fasin, blong kipim olgeta i klin. Yu save inkludum ol saen insaed long ol toelet blong tijim pipol olsem wanem blong operetem mo lukaotgud long ol toelet.

Ol posta mo saen we i folow oli eksampol we oli soemaot olsem wanem blong yusum ol toelet.

Olsem wanem blong yusum kompost toelet blong yu

Hemia hemi wan kompost toelet we hemi fren blong envaeronmen. I nogat eni polusen igo long envaeronmen!

- No sakem ol toti o ol kemikal insaed long toelet.
- No sakem wota, plastik o narafala toti we oli non-oganik igo daon long toelet.
- Klinim toelet mo floa oltaem. Smol wota long toelet blong klinap hemi oraet, be bigfala amaon blong wota i nogud!
- Ol saniteri napkin blong ol woman imas go long seperet bin.



1. Afta evri yus, putum toelet pepa we i yus mo sam lif long toelet. Laem o ases faea i save go tu blong daonem ol smel.



2. Klosem lid mo doa blong toelet



3. Wasem han wetem sop.

KOMPOST TOELET BLONG WIL PUBEL

- ✓ Hemia hemi wan kompost toelet - hemi no yusum wota.
 - ✓ Hemi sil gud raonabaot long hem mo bae hemi no polutum ol kraonwota wel o ol reva.
 - ✓ Hemi prodium wan kompost fetelaesa blong yusum long ol karen.
 - ✓ Klinim toelet mo floa oltaem.
 - ✓ Smol wota insaed long toelet i oraet, be yu no putum tumas wota igo daon long toelet.
- ✗ No putum ol kemikal o toti insaed long toelet.
 - ✗ No putum plastik o ol toti we ino oganik daon long toelet.
 - ✗ Ol saniteri napkin blong ol woman ino shud go insaed long toelet.



Olsem wanem hemi wok:

1. Ol toti blong toelet mo ol lif oli go insaed long wil pubel.
2. Hemia i stat blong kompost (hemi brekdaon, olsem long kraon long bush mo ol jem oli ded.
3. Taem faswan wil pubel i fulap, hemi rimuv, lid blong hem i klos mo hemi stap sef long wan ples blong at lis 6 manis (6-18 manis hemi gud). Ol toti insaed bae oli kontiniu blong kompost.
4. Wan seken pubel hemi riplesem faswan.
5. Afta 6-18 manis, toti we istap insaed long pubel hemi shud lusum smel finis mo hemi drae. Kompost ia oli save yusum long karen (ol plant we oli no kakai wetem ol frut tri). Hemi sef gud blong tajen mo yusum kompost we i finis - i no moa gat ol jem mo smel.
6. Faswan emti pubel hemi redi nao blong yusum bakegen taem we seken pubel hemi fulap.



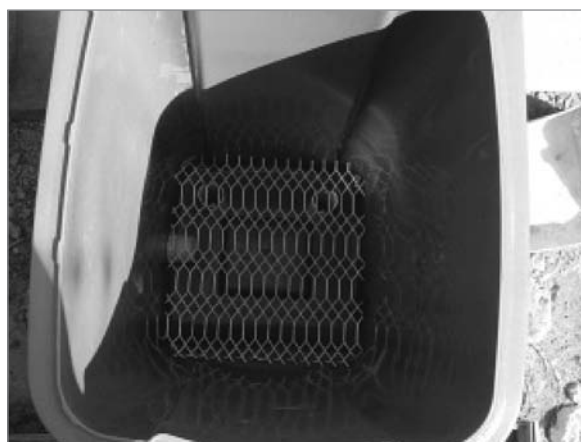
MENTENENS BLONG TOELET

Fiksimap ol smel long wil pubel toelet

Spos ol smel oli stap kamaot oltaem long toelet rum, ademap moa lif long wil pubel blong plante dei. Spos ino stretem problem ia, traem wanem we i folow:



Drenpaep



Fols floa insaed bottom blong bin



Drenpaep kasem ol sokej trench

1. Spos mass long pubel hemi wetwet mo smel, jekem se likuid hemi save ranaot oraet nomo.
2. Diskonektem dren paep mo jekem spos hemi blok. Yusum waea mo raf klos wetem hanglav blong kliarem eni samting we i blokem.
3. Jekem se botom blong pubel hemi no blok aninit long fols floa (yusum wan toj blong lukluk insaed hol blong paep long saed blong pubel).
4. Jekem se fols floa hem wan hemi no blok. Pusum wan stik daon long botom blong pubel mo spredem gud bes leia blong kompost mo skin faeba blong kokonas.
5. Jekem se sokej trench hemi no fulap. Spos hemi fulap, ekstendem lengt blong trench.
6. Spos ol samting ia i oraet, miksimap moa oganik mata igo long mass insaed long pubel.
7. Spos mass hemi drae tumas, ademap sam wota long hem.

MENTENENS BLONG TOELET

Jenisim pubel we i fulap

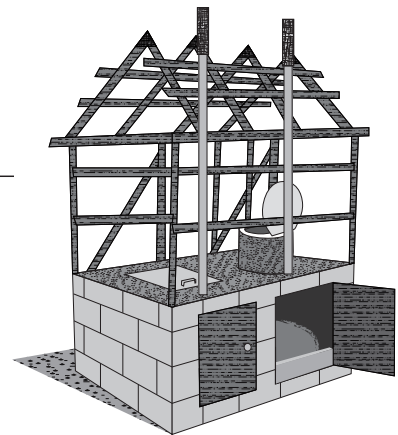
1. Taem wan long ol pubel hemi kam fulap, diskonektem likuid dren paep. Werem hanglav taem yu mekem wok ia.
2. Rimuvum pubel we i fulap, klosem lid blong hem mo kap blong hol blong dren paep.
3. Swapem pubel we i fulap wetem seken pubel.
4. Spos seken pubel i stil gat sam kompost blong bifo insaed, emtimaot kompost ia. Spos hemi bin stap blong at lis 6 manis hemi sef blong putum long karen (mifala i rikomen blong yusum long plant we oli no kakai mo ol frut tri). Spos hemi stap we ino kasem 6 manis, i nid blong storem samples. Spos hemi bin stap blong at lis 2 yia, oli save yusum long ol plant we oli kakai (WHO Composting latrines).
5. Meksua se fols floa blong seken pubel hemi stap stret long ples blong hem mo i nogat eni samting i blokem dren paep aninit.
6. Putum wan 10 cm leia blong skin faeba blong kokonas o wan pis filta klos antap long fols floa. Hemia bae i stopem ol toti blong fol tru.
7. Rolem seken pubel bak aninit long toelet mo konektem dren paep. Klosem doa blong rum blong pubel.

OLSEM WANEM BLONG YUSUM WAN KOMPOST TOELET

Hemia hemi wan kompost toelet we i fren blong envaeronmen. I nogat polusen we igo long envaeronmen mo i no nidim wota.

- Afta evri yus, putum toelet pepa we yu yusum mo sam lif o ases faea insaed long toelet.
- Kaveremap toelet - klosem lid o kavremap hol. Kipim toelet doa i klos.
- Wasem ol han blong yu wetem sop mo wota afta we yu yusum toelet.
- Ino mas gat eni kemikal o narafala toti insaed long toelet. Ol klos o pad blong sikmun ino mas go insaed long toelet.
- Klinim toelet mo floa oltaem. Smol wota long toelet hemi oraet blong klinap, be bigfala amaon hemi nogud!

TAEM TOELET I FULAP - JENISIM JEMBA



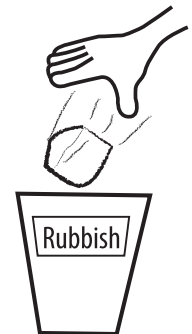
1. Bifo yu muvum toelet sit igo long narafala jemba, openem akses doa mo lukluk tru long ol bafel bod blong jekem kompost. Spos hemi kompost fulwan mo hemi no smel strong, yusum savel blong rimuvum kompost. Spos toti hemi smel strong, hemi no bin stap longtaem inaf. Toelet i shud klos mo no yusum blong wan minimam period blong 6 manis, bifo yu muvumaot toti.
2. Afta we yu rimuvum kompost, jekem aninit long fols floa blong luk spos eni kompost hemi foldaon tru long fols floa - hemia i save blokem pases blong drenej paep. Spos igat eni material, rimuvum fols floa, rimuvum material ia mo riplesem fols floa. Ripperem eni floa we i damej o timba blong doa.
3. Ademap wan dip leia (abaot 200 mm dip) blong drae braon liv long fols floa blong taedimap. Afta, putum ol bafel bod bak mo klosem akses doa.
4. Nao muvum toelet sit igo long hol ova jemba we yu taedimap. Bifo yu klosem off jemba we i fulap, filimap wetem ol drae lif kasem botom blong floa slab.

OLSEM WANEM BLONG YUSUM TOELET BLONG KAPSAEDEM WOTA

- ✓ Yusum 2 - 3 lita wota blong flashem toalet
- ✓ Kapsaedem from antap moa hemi help blong muvum toti.
- ✓ Afta yusum toalet, wasem ol han wetem sop.

Mentenens

- ✓ Toalet hemi shud stap klin oltaem blong stopem ol jem mo/o sten blong bildap.
- ✓ OL KEMIKAL INO SHUD GO INSAED LONG TOELET!
- ✓ Putum pepa mo ol narafala material blong klinap insaed long wan pubel be ino daon long toalet. Hemia bae i ridiusum amaon blong wota we i nid, mo hemi mekem ino blok.
- ✓ Spos i nogat tumas wota, klektem wota blong ren o yusum wota we oli risaeklem.



**WASEM HAN
WETEM SOP & WOTA**

Saen blong evri toalet

JENERAL KLINAP MO MENTENENS BLONG OL TOELET

Hemi impoten long klinim mo mentenem toelet blong yu oltaem blong meksua se yu mo famli blong yu i save yusum.



Ol rul blong kipim toelet istap klin:

- ✓ Provaedem pesenal material blong klinap, olsem toelet pepa.
- ✓ Meksua se igat fasiliti blong wasem han mo hemia we i impoten, SOP.
- ✓ Provaedem wan taoel blong waepem ol han mo meksua se oli wasem taoel at lis evri wik.
- ✓ Wanwan man i shud livim toelet i klin blong nekiswan yusa.
- ✓ Spos i posibol, wasem ful slab evri moning wetem wota (mo disinfektan).
- ✓ Klinim toelet at lis wan taem long wan wik, yusum ol klining material (olsem disinfektan o blij), blong klinim top mo aninit long pan, handel blong doa, ol wol mo floa. No putum ol kemikal ia insaed long toelet pan.
- ✓ No yusum ol klos blong klinim toelet blong narafala pepes (e.g. wasem ol plet mo kap).
- ✓ Meksua se ol pubel oli klin oltaem mo sakem toti long stret fasin.
- ✓ Meksua se floa ino wetwet, so bae hemi no mas glis.
- ✓ NO YUSUM tumas wota taem yu klinim insaed long kompost toelet. Yusum smol wota nomo i oraet.
- ✓ Traem blong blokem ol rat blong no kam insaed area blong toelet. Blokem eni smolsmol hol.
- ✓ Adem sam flawa insaed blong mekem toelet istap smel gud.



Klosary mining

Bakteria: ol smolsmol bebet we i laef, sam oli stap kosem sik mo disis.

Baeodigredebol: ol material mo kemikal etc we oli save roten, mo neja i save jenisim ikam sabstens we ino save spolem envaeronmen.

Komposting: proses blong konvetem/brekem daon ol wes blong plant mo anamol ikam aditiv blong kraon.

Kontaminesen: kakai, wota, kraon o ea etc we i kontak wetem wan sabstens we i nogud mo i posen.

Defecation/defecate: taem man i passem toti blong hem aot long body.

Daerea: taem bel blong man i ron o sitsit wota; hemi soemaot spos igat infeksen, posen kakai, o sik.

Evapotranspiration: proses we wota hemi transfea from kraon igo long ea taem hemi evaporet long kraon mo narafala sefes, mo taem ol plant oli swet.

Faecal/faeces: strong toti blong man we body hemi prodiusum.

Fetael: land o kraon we i fetael hemi save prodiusum ol gudfala kakai blong karen.

Genda: man o woman, ol rol mo responsibiliti blong ol man mo woman mo olsem wanem oli stap bihev. Ol rol blong genda oli save difdifren bitwin ol kalja.

Jem: wan smol bebet we i laef mo hemi save mekem man i sik.

Kraonwota: wota we yumi save faenem aninit long kraon.

Helt: jeneral kondisen blong body blong yu mo olsem wanem yu stap helty.

Haejin: ol praktis blong mentenem gud helt we i klin mo helty.

Infeksien: wan disis we i afektem wan pat blong body blong yu we bakteria o vaeres i kosem.

Sikmun: blad we woman istap lusum long evri manis taem hemi stap long ej we hemi save karem pikinini.

Non-oganik: samting we ino kamaot long ol mata we oli laef.

Nutrien: wan kemikal o kakai we i provaedem samting we ol plant o anamol oli nidim blong laef mo gru.

Open defecation: taem man i passem toti blong hem mo livim istap long open ples.



Oganik: hemi laef, o ol samting we oli laef oli prodiusum.

Organisim: wan anamol, plant, man, o eni narafala samting we i laef.

Parasaet: wan plant o anamol we i laef, mo we istap gru mo kasem kakai blong hem long ol narafala oganisim we oli laef.

Parasitik infeksien: infeksien we wan parasaet hemi kosem (lukim infeksien mo parasaet).

Partisipetri: wan wei blong oganaesem mo mekem samting, o mekem desisen etc we i involvem evriwan we bae desisen i afektem.

Patojen: wan disis we stap kosem oganisim olsem bakteria, vaeres o masrum blong skin.

Pesenal haejin: fasin blong kipim body i klin mo stret. Long jeneral mining, hemi stap rifea long fasin blong lukaotemgud body blong yu wan.

Saniteri pad: wan aetem we i holemtaet likuid we wan woman i werem taem hemi luk sikmun blong hem (luk sikmun).

Sanitesen: fasin blong klinimaot ol toti blong man, pispis mo narafala toti blong haos.

Sanitesen entapraes: smol bisnis blong impruvum sanitesen we man i nidim.

Sokej trench: wan trench we pispis mo likuid i ran igo insaed long hem.

Spirit level: wan instrumen blong ol bilda we i meksua se wanem we yu stap konstraktem hemi stret mo hemi level oltaem.

Tampem: ramem o pusum strong samting igo daon.

Toelet pan: pat blong toelet we i risivim toti blong man (pispis mo faeces).

Toetet raesa: part blong toelet we toelet sit i sidaon long hem.

Weswota: wota we oli yusum finis long hom, indastri mo bisnis we man i no moa save dring spos oli no tritim.

Wil pubel: rabish bin blong toti we igat wil blong muvum isi nomo.

Wota-log: toktok ia i minim samting we i fulap long wota.



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Ol Refrens

Crennan, L (2007) *Sustainable sanitation manual and construction guidelines for a waterless composting toilet*, IWP-Pacific Technical Report (International Waters Project) no. 52, Apia, Samoa, SPREP.

Fewtrell L, Kaufmann R.B., Kay D., Enanoria W., Haller L., and Colford, J.M.C., Jr. (2009) *Water, sanitation, and hygiene interventions to reduce diarrhoea in less developed countries: A systematic review and meta-analysis*, The Lancet Infectious Diseases, Vol. 5, Issue 1: 42–52.

Government of Fiji, (1982) *Basic Science 3, Pupils Book*, Suva Fiji.

Tawnley, E. *How to construct a compost toilet*, www.cee.mtu.edu/sustainable.../Composting_toilet_Manual_vanuatu.pdf.

WHO (2005) *Sustainable Development and Healthy Environments, Water, Sanitation and Health*, Geneva, World Health Organization.

WHO (2008) *Sanitation, hygiene and drinking-water in the Pacific island countries : converting commitment into action*, Suva, Fiji Islands, World Health Organisation.

WHO *Composting latrines*, Fact Sheet 3.7, www.who.int/water_sanitation_health/hygiene/emergencies/fs3_7.pdf



Fibak fom

Plis helpem mifala blong impruvum hanbuk ia. Talemaot ol tingting blong yu long mifala taem yu stap anserem ol kwestin aninit mo sendem long mifala. Mifala i wantem se bae yu fotokopi long fom ia o raetemaot/taepemaot ol kwestin mo ol ansa blong yu, be bae yu no teremaot pej ia, so bae ol narafala yusa blong ol material ia oli save talemaot tingting blong olgeta tu long mifala. Yu save sendem fom ia tru fax o mel igo long wan long ol ofis blong Live & Learn we oli stap long list blong pej 91. O yu save provaedem fidbak tru long email: resources@livelearn.org

Nem blong yu wetem lokesen: _____

Oganaesesen o komiuniti: _____ Kontak ditel (opsenal) : _____

1. Mekem wan sotfala explanesen olsem wanem yu yusum hanbuk ia. (e.g. yu wan bilda, o yu ownem wan bisnis, o yu wokman blong NGO?)

2. Gaedlaen ia hemi isi blong folem? (spos no talemaot wanem ino klia long mifala)

3. Yu ting se i bin gat sam infomesen iet we i nogat?

4. Olsem wanem hanbuk ia i save impruv?

5. Plis listimdaon eni narafala komen mo tingting aninit:

Tank yu!

Toktok toelet!



*Ful famli i save benefit long
wan toelet we istap long hom.
Mo bisnes i save helpemaot
komiuniti blong yumi.*



*Wetem ol kompost toelet, no
wota, no problem mo nogat smel.*



*Ol toelet klosap long hom oli
sef moa blong ol gel mo ol
woman.*



*Mifala i bin stap wokbaot longwe
blong kasem toelet be naolia mifala
igat wan kompost toelet bihaen
long haos nomo. Hemi isi moa,
hemi klin moa mo hemi sef moa.*



*Sanitesen we igat impruvmen
long hem i lid igo long ol klin
komiuniti mo ol helti, hapi pikinini.*



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