

Invesif Spisis long Vanuatu

Smol buk blong ol fama



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<i>Merremia peltata</i> – Big Lif Rop	<i>Mikania micrantha</i> –Wan dei rop	<i>Cassia/Senna tora</i> – Wael pinat
		
<i>Solanum torvum</i> – Piko	<i>Sida acuta</i> – Brum wid	<i>Mimosa diplotricha</i> – Bigfala gras nil
		
<i>Mimosa pudica</i> – Smol gras nil	<i>Lantana camara</i> – Lantana	<i>Solenopsis invicta</i> –Smol faea anis
		
<i>Acridotheres tristis</i> – Sako	<i>Achatina fulica</i> – Afriken snel	<i>Rattus exulans</i> – Pasifik rat

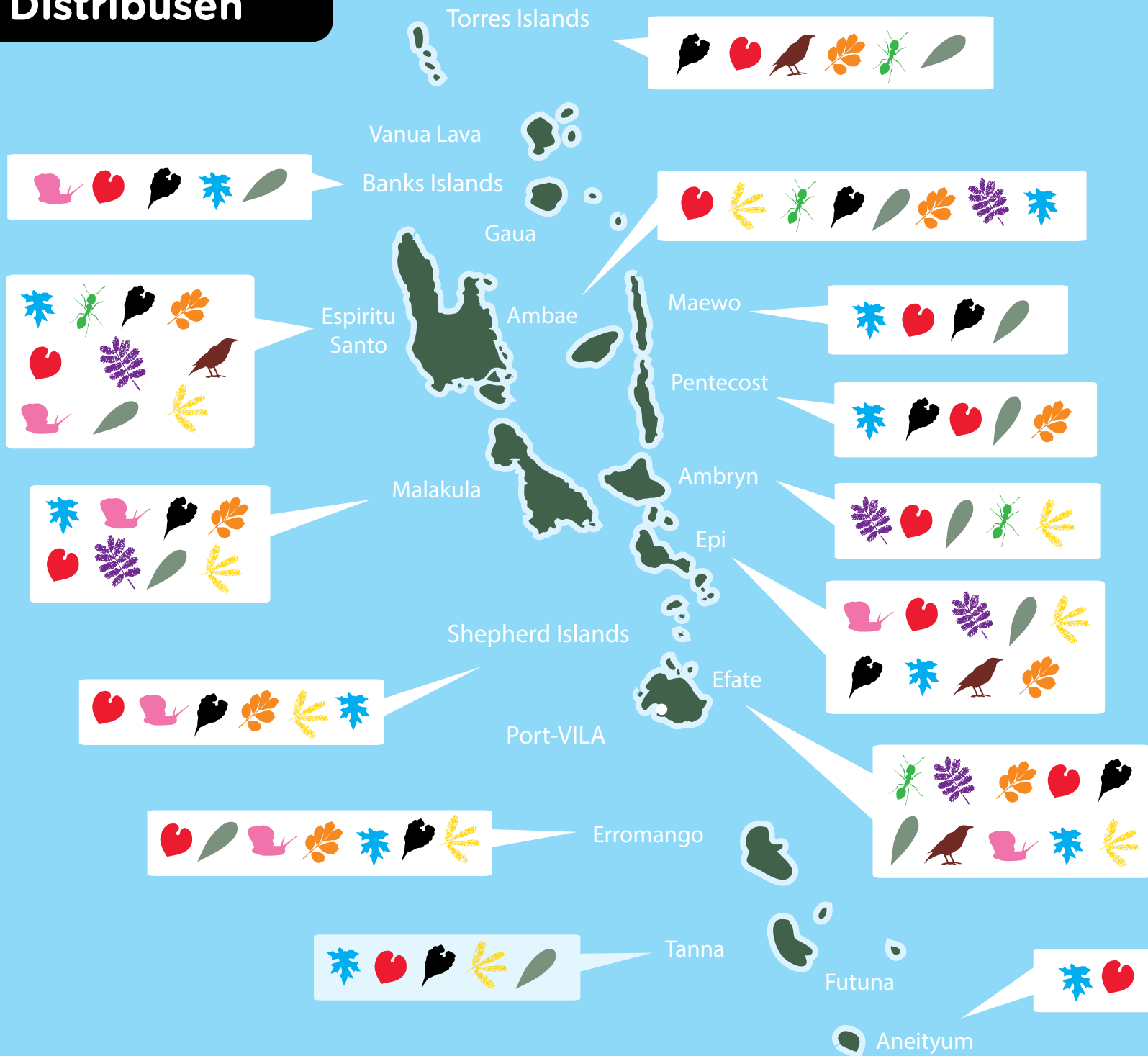
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Smol buk blong ol fama



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Environmental Education

Distribusen



Map ia i soem distribusen blong ol rabis gras mo anamol long Vanuatu. Ol smol pikja i soem ol difren kaen plant mo anamol long wanwan aelan.

Ki

-  Big lif rop
-  Wan dei rop
-  Piko
-  Brum wid
-  Bigfala nil gras
-  Smol nil gras
-  Sako
-  Afriken snel
-  Smol faea anis
-  Wael pinat

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Introdaksen

Stori blong buk ia

Long Vanuatu i klia se ol rabis gras mo anamol oli spoelem gudwan ol dakbus wetem ol plant mo anamol we stap long hem. Olgeta denja mo problem we olgeta samting ia oli bin mekem hemi stap olsem wan wari ova long plante yia. Be naoia nomo we ol man oli luksave long olgeta olsem wan nogud samting.

Ol rabis gras mo animol i no sem mak long evri aelan. Ol kaen rabis gras mo anamol we olgeta blong komuniti blong Loru long Santo oli luksave olsem wan big denja i difren long ol rabis gras mo anamol we olgeta blong Port Resolution long Tanna mo Ipota long Erromango i luksave. I impoten se taem ol man oli luk ol rabis gras mo anamol oli mas aedentifaem wiswan blong olgeta i wan bigfala denja long wan ples mo wanem kaen denja, mo blong aedetifaem wiswei i gud blong manejem olgeta blong kontrolem mo aotem olgeta long ples ia.

I gud tumas sapos ol man oli lukluk gud wan long ol kaen fasin blong manejem kontrol blong ol rabis gras mo anamol. I no gud blong oli mekem ol sem mak mistek we ol man bifo i bin mekem mo sem taem mekem moa damej long envaeromen. Wan eksampol hemi Euglandina rosea, wan snel we oli tekem blong kontrolem Afriken Snel we naoia hemi kam wan rabis anamol long kaontri ia. Taem ol man oli wantem manejem ol rabis gras mo anamol oli mas wok plante wetem ol narafala man, olsem olgeta we oli gat intres long problem ia, gavman, ol NGO, olgeta blong ovasi we oli givhan long yumi mo antap long olgeta ol komuniti we oli stap long denja, blong mekem sua se evriwan i serem save long saed blong ol fasin blong kontrol we i stap finis mo long ol niu kaen teknoloji.

Buk ia hemi minim blong givhan long ol fama mo ol komuniti blong luksave ol rabis gras mo anamol we i stap long komuniti blong olgeta. Hemi presentem ol infomesen long wan isi fasin blong tijim ol fama long saed long olgeta kaen plant mo anamol ia mo blong givhan long olgeta blong aedentifaem mo ripotem o kontrolem olgeta sipos i gat nid.

Live & Learn hemi produsim buk ia olsem pat blong wan projek, nem blong hem “Testing and modeling preventive measures to limit the spread and ecological impact of invasive species in Small Islands Developing Sates (SIDS)” we European Union i fandem. Papos blong projek hemi blong katemdaon fasin we ol rabis gras mo anamol ol seraot long Vanuatu mo blong gat gudfala impak long ol kaen plant mo anamol insaed long envaeromen, long ol komuniti mo long fasin blong mekem sua se i gat inaf kakae long fiuja.

Live & Learn hemi wan oganaesesen we hemi no pat blong wan gavman mo we hemi no wok blong winim mani be hemi traem blong enkarejem gudfala save mo aksen long saed blong mentenem situesen we hemi stap nao-ia long saed blong envaeromen mo ol man we oli stap insaed long hem tru long edukesen, komunikesen mo wok tugeta.

From wanem mifala i raetem smol buk-ia

Smol buk ia i blong:

- ❖ Givhan long ol fama mo maneja blong graon blong aedentifaem stret ol rabis gras mo anamol taem oli stap wok aotsaed tru long gudfala diskripsen blong ol kaen plant mo anamol ia;
- ❖ Givhan long ol maneja blong mekem ol stret desisen tru long save blong olgeta long hao blong manejem o katemdaon namba blong ol rabis gras taem olgeta i stap wok, mo hao blong yusum wan wei blong manejem ol gras we i yusum tu kaen fasin;
- ❖ Impruvum ol skil blong manejem rabis gras tru long wan integrated system we I save wok gud.

Hu maet i yusum buk-ia?

Ol fama, ol man blong agrikalja, ol man we oli wok long saed blong envaeromen, ol studen, ol grup blong ol komuniti, ol NGO mo ol nara maneja blong graon long Vanuatu oli save yusum smol buk-ia. Eni wanwan man o komuniti grup we oli intres blong lanem hao blong manejem ol rabis gras mo anamol long Vanuatu long wan fasin we i save gohed oltaem bae oli faenem ol infomesen long buk ia i gud tumas blong helpem olgeta blong aedentifaem ol kaen plant o anamol mo blong manejem olgeta.

Hao blong yusum buk-ia

Buk ia i gat trifala men seksen:



Seksen 1:

Seksen ia i provaedem wan samari blong problem blong ol rabis gras mo anamol mo hemi talemaot hao i impoten tumas blong manejem ifek blong olgeta mo distribusen blong olgeta ova long Vanuatu.



Seksen 2:

Seksen ia hemi big bitim tufala nara wan. Hemi soem yu ol step blong aedentifaem ol rabis gras we i komon long Vanuatu. I gat ol pikja tu blong givhan long yu blong luksave ol rabis gras mo anamol.



Seksen 3:

Hemia maet hemi mos impoten pat blong buk, from hemi givim long yu ol infomesen blong hao blong manejem gud ol rabis gras mo anamol long komuniti blong yu.



Seksen 1:

Introdaksen long ol rabis gras mo anamol

From wanem i impoten blong manejem ol rabis gras mo anamol

Ol fama blong Vanuatu oli save gud ol nogud samting we ol rabis gras mo anamol i save mekem long agrikalja mo long envaeromen blong aelan blong yumi. Ol komuniti long ol rorol eria i dipen long ol kakae long garen mo ol anamol we oli kipim olsem kakae blong olgeta nomo mo fasin blong winim mani.

Eni samting we i spoelem haomas kakae oli save havestem i mas gat wan nogud ifek long mani we oli winim mo haomas kakae olgeta nomo i gat.

Mos long ol rabis gras mo anamol i save afektem yumi olsem:

- ❖ Ol rabis gras i save muv ova long graon mo faet blong tekemaot graon we ol kakae i stap gru mo ol buluk i stap kakae. Hemia i save daonem haomas kakae ol man i save groem, haomas mani oli save winim mo long em haomas kakae i stap blong olgeta nomo oli yusum. Hemia i save damejem bigwan ol komuniti, olsem ol memba oli kam mo pua, oli no sua se oli gat inaf kakae long fiuja mo laef i kam mo had.
- ❖ From ol rabis gras mo anamol oli damejem stret envaeromen blong kaontri, oli spoelem ol indastri we oli dipen long ol risos blong aelan, inkludim turism mo agrikalja.
- ❖ Ol rabis gras mo anamol oli wan denja long ol man mo oli save mekem ol problem long saed blong helt blong wan komuniti.
- ❖ Plante taem gavman i mas spendem planti mani long manejem ol rabis gras mo anamol. Hemi minim se mani blong spendem long ol nara nid olsem long edukesen, long ol rod, long ol sevis blong helt, i mas godaon.
- ❖ Olgeta rabis gras mo anamol oli jenisem mo daonem sam impoten wok we sevis blong ol plant mo anamol wetem ol nara samting raon long olgeta we i no laef i mekem, olsem blong klinim wota mo ea.
- ❖ Ol rabis gras mo anamol i daonem ol ples we plant mo anamol istap long hem mo daonem namba blong ol difren kaen plant mo anamol we i stap long wan ples.

Hemi klia se ol rabis gras mo anamol i save spoelem laef blong evri gud samting long Vanuatu. Sapos yumi managem ol rabis gras mo anamol gudwan yumi statem blong blokem fulap rabis samting long komuniti blo yumi mo mekem olgeta i mo helti mo i stap gud oltaem.

Olgeta rabis gras mo anamol i ol plant o anamol we oli seraot mo gru gudwan long wan eria we yumi i no wantem olgeta. **Rabis gras** i ol plant we i stap long graon mo long wota mo **rabis anamol** i ol anamol we oli stap spread long eria we yumi i no wantem olgeta. Oli spoelem gud wan envaeromen blong aelan, ol komuniti mo ekonomi.

Distribusen blong ol rabis gras mo anamol long Vanuatu

Vanuatu hemi wan grup blong aelan we i gat samples 82 aelan. No mata we Vanuatu hemi gat ol bigfala eria blong tropikol dakbus, hemi gat smol namba nomo blong ol difren kaen plant mo anamol. Hemia i minim se ol jalenj mo denja we ol rabis gras mo anamol i mekem i wan bigfala samting we yumi i mas luksave.

Ol rabis gras mo anamol oli seraot long plante difren aelan long Vanuatu. Aot long ol kaen rabis plant, hem we i mos komon hemi Ecuador Laurel o Salmwod (*Cordia alliodora*) we hemi kamaot long Sentrol Amerika. Oli introdusim kaen *Cordia* ia olsem wan tri blong mekem ol forestri plantesen wetem long ol yia 1970. Namba blong hem nao hemi kam antap long ol nara tri mo hemi kam olsem wan rabis plant long ol ples we oli bin plantem hem, long ol men aelan blong Vanua Lava, Ureparapara, Santo, Maewo, Ambae, Pentecost, Malakula, Epi, Efate mo Erromango. Hemi wan gud eksampol blong wan program blong givhan we i go nogud olgeta.

Ol nara rabis gras we oli seraot bigwan truaot long ol aelan i inkludim Big Lif Rop (*Merremia peltata*), Wan Dei Rop (*Mikania micrantha*), Kasis (*Leucaena leucocephala*), Lantana (*Lantana camara*), Piko (*Solanum torvum*), Smol gras nil (*Mimosa pudica*) mo Big gras nil (*Mimosa rhombifolia*). Olgeta rabis plant ia ol kavremap mo kilim i ded ol nara kaen plant, we oli no save produsim ol yang plant bakegen.

Ol rabis anamol tu oli mekem trabol ova long Vanuatu. Wan gudfala eksampol hemi Sako (*Acridotheres tristis*) wan pijin we hemi kamaot long wan nara kaontri mo we namba blong hem i kam antap bigwan long plante aelan nao ia. Wan nara rabis anamol hemi Afriken Snel (*Achatina fulica*) we hem i kam wan bigfala trabol long agrikalja mo ol garen long sam long ol bigfala aelan.

Map we i stap long insaed blong skin blong buk ia i soem long weples ol rabis gras mo anamol i stap truaot long Vanuatu. Ol difdifren kala oli representem ol difren kaen rabis gras mo anamol lng wanwan aelan. Plis luk long ki.



Seksen 2:

Blong aedentifaem ol rabis gras mo anamol

Blong aedentifaem ol rabis gras long komuniti blong yumi hemi wan long ol mos impoten step blong manajem gud ol rabis gras. Sapos yu save aedentifaem ol rabis gras, yu save faenemaot mo luksave saes blong eria we rabis gras i stap long hem, mo afta yu save aedentifaem wiswan eria yu mas manajem.

Smol buk ia hemi givim fo men pat blong aedentifaem ol rabis gras, i inkludim:

1. Hao blong aedentifaem ol rabis gras
2. Hao blong kolektem, presevem mo kipim ol rabis gras
3. Hao blong luksave mo diskraebem ol plant
4. Ol diskripsen blong ol rabis gras – ol toktok mo foto i save givim plante infomesen long yu

1. Hao blong aedentifaem ol rabis gras

I gat sam men wei blong aedentifaem ol rabis gras, i inkludim:

Luksave rabis gras ia yu wan

Sapos yu gat eksperiens olsem maneja blong graon mo save eria blong yu gudwan, maet yu save finis ol kaen rabis gras we i stap long komuniti blong yu mo ples we yu save faenem olgeta. Yu we yu gat gudfala save yu wan man we komuniti blong yu i save yusum yu olsem wan risos mo yu save givhan long wok blong aotem problem blong rabis gras wetem stret save blong yu.

Askem wan man we i gat gudfala save

Hemi dipen long weples yu stap long hem, be maet yu save askem help blong wan man blong agrikalja or wan man we hemi gat gudfala save long saed long ol plant. Sapos wan man olsem hem i stap klosap long yu, i gud yu yusum hem. Blong mekem gud yus blong ol man olsem, yu mas gat ol gud eksampol blong plant ia mo plante infomesen long saed blong hem, we i inkludim weples yu bin faenem hem mo tu, sapos yu gat wan kamera, sam foto blong hem taem hemi stap long graon.

Komperem eksampol blong plant wetem ol foto

Plante man oli no gat bigfala save long saed blong ol plant mo oli no gat ol nara man wetem stret save i stap klosap. Sapos i olsem wetem yu, yu save traem blong aedentifaem ol rabis gras yu wan, o wetem ol memba blong komuniti. Yu save yusum Seksen 2 blong buk ia. Hemi gat ol foto we i soem ol komon rabis gras blong Vanuatu. I gud yu yusum olgeta blong givhan long yu blong aedentifaem wan plant sapos yu wantem aedentifaem plant ia yu wan

Not: Wan nara fasin blong aedentifaem wan plant hemi blong yusum wan system blong "ki", we i wan fasin we i oganaes gudwan blong aedentifaem wan plant. Taem yu lukim ki ia yu save talem yes/no long wan diskripsen blong wan pat blong plant mo long en yu kasem plant we i stret wetem plant we yu wantem aedentifaem. Olgeta man we i gat bigfala save long ol plant mo ol nara man we i intres tumas oli stap yusum sistem ia. Luk long pej 15 blong karemaot mo infomesen long saed blong ol pat blong wan plant mo wok blong olgeta.

2. Hao blong kolektem, presevem mo kipim ol rabis gras

Seksen ia hemi soem long wan isi wei hao blong kolektem ol plant mo presevem mo kipem olgeta i stap sef blong blong aedentifaem olgeta mo kipim olgeta olsem wan rekod. Yu sud mekem olsem sapos yu no save aedentifaem wan plant long ples we hemi stap gru long hem mo taem yu nidim wan man we i gat bigfala save blong aedentifaem plant ia. Maet tu yu wantem kolektem mo kipim sam eksampol blong wan plant olsem wan rekod.

Blong kolektem ol eksampol

Bifo yu tekem wan eksampol, askem fastaem long lida blong komuniti sapos i olraet blong tekem. Sapos eksampol hemi stap long praevet graon blong wan man, yu mas askem hem sapos yu save kolektem plant ia. Sapos yu wantem tekem wan plant long wan pablik ples o wan eria blong munisipaliti yu mas askem ol otoriti sapos yu save tekem.

Ol samting we yu nidim blong kolektem ol plant i inkludim:

- ❖ Samting blong dig wetem, olsem matik o sped, blong tekemaot gudwan wan smol plant long graon. Yu mas tekemaot gudwan ol rus mo ol nara pat blong plant we i stap andanit long graon. I nogud sapos yu pulumaot plant olsem nomo.
- ❖ Sisa blong flaoa o wan smol so blong katem branis aot long wan tri o wan smol tri;
- ❖ Plastik bag, lastik band, niuspepa we i no saen mo ol maka pen we raeting i no save kamaot long hem long wota mo ol smol pis kad blong raet long hem mo fiksime igo long wanwan eksampol;
- ❖ Wan smol buk blong raetem daon ol infomesen;
- ❖ Kamera mo GPS blong rikodim plant mo ples we hemi stap long hem (sapos yu gat).;

Taem yu kolektem ol eksampol, no foget blong:

- ❖ Tekem eksampol blong evri pat blong plant- sid, lif, stem, basket blong sid, frut mo flaoa (sapos i posibil). Yu mas gat ol kaen pat blong plant blong aedentifaem hem stret, mo i impoten tumas blong tekem ol flaoa mo basket blong sid.
- ❖ Kolektem wanem yu nidim nomo.
- ❖ Fiksim wan pis kad long plant wetem wan namba o wetem impoten infomesen (maet yu wantem inkludim det we yu kolektem hem, ples we yu kolektem hem).

Tinkbaot sefti fastaem! No traem kakae o tajem eni plant we yu no save gudwan long hem. Sam blong ol plant oli posen mo sam nara wan i save spoelem skin blong yu.



Hao blong presevem mo kipim ol eksampol blong plant

Taem we yu tekem wan eksampol finis, yu mas faenem wan wei blong kipim hem gudwan. Be sapos yu save se wan man we hemi save gudwan ol rabis plant i stap klosap, yu save putum eksampol ia long wan plastik o wan kontena nomo go kasem taem man ia i save tekemaot long yu. Be i gud tu blong kipim ol eksampol olsem wan rekod blong yu save luk bakegen long olgeta.

Wan long ol fasin we i isi mo komon blong presevem ol plant hemi blong draem mo prestem olgeta. Yu save mekem i isi nomo mo yu no nidim plante samting blong wokem. I gud blong presevem plant ia kwiktaem, stret afta yu kolektem, be yu save kipim hem long wan plastik o wa kontena blong wan dei nomo afta yu kolektem. Men tingting bihaen long teknik ia hemi blong tekemaot evri wota long plant blong mekem sua se kala blong hem i save stap.

1.



2.



3.



4.



Putum ol eksampol bitwin tu pis pepa we i save pulumaot wota long plant, olsem niuspepa we i no saen. Putum tufala pis pepa wetem plant insaed long hem long wan samting we i flat mo had, olsem wan pis strong kad o timba. Afta, putum wan nara pis strong kad o timba antap long hem bakegen. Wan nara fasin hemi blong putum niuspepa wetem plant ia long medel long wan bigfala buk. Afta, putum wan hevi samting antap long buk ia, olsem wan bigfala ston o wan blok. I impoten blong jenisim ol pis niuspepa fiu taem long fas wik, o mo sapos taem i wetwet. Livim i stap fiu wik go kasem taem eksampol i flat mo i drae. Kipim hem long wan kontena o bag we i fas go kasem taem oli rere blong aedentifaem o yusum plant ia (olsem long saed blong eduketem ol man long hem).

3. Hao blong luksave mo diskraebem ol plant

Seksen ia i impoten, from i save givhan long ol fama blong luksave ol difren pat blong wan plant wetem sep blong hem mo wok blong hem.

Taem yumi aedentifaem olgeta plant, yumi diskraebem olgeta long kaen sep blong hem (olsem wan tri o wan rop). Yumi tokbaot ol difren pat blong wan plant mo hao oli help blong mekem sua se plant i save stap laef.

Blong stat blong aedentifaem wan plant yu mas yusum Seksen 2, we i diskraebem wanwan rabis gras. Tekem plant we yu bin kolektem – luk long sep blong hem mo ol difren pat blong hem - mo komperem hem wetem ol pikja mo infomesen long buk. Sapos plant we yu kolektem hemi no sem mak wetem eni rabis gras long seksen ia, yu mas luk long eni nara buk we i diskraebem ol plant o tok wetem wan man klosap we hemi gat kaen save ia. Ol rabis gras long Seksen 2 oli olgeta we igat fulap blong olgeta i gru olbaot mo oli mekem plante problem, so plante taem yu save faenem plant we yu stap lukaotem.

Ples we plant i stap gru long hem

Olgeta plant oli kam long plante difren kaen mo sep mo saes. Olgeta we i gat plante blong olgeta i inkludim:

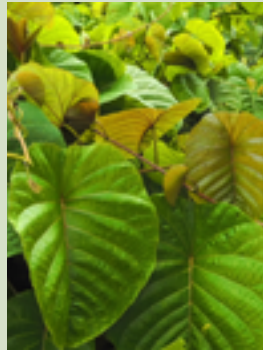
Ol tri: ol tri i longfala, oli gat wud insaed long stampa blong olgeta mo oli stap gru oltaem (oli laef bitim tu yia). Oli givim long yumi ol samting we yumi nidim long laef - kakae wetem ea blong pulum win.

Long pikja long raet: wan Nangai tri (Canarium indica)



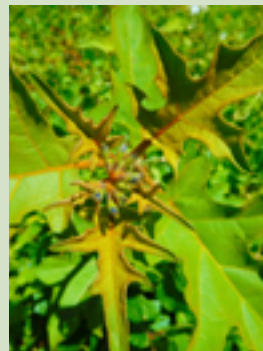
Ol rop: Ol rop oli ol kaen plant we fasin blong olgeta i blong klaem igo antap o blong go wokbaot long graon. Mos blong olgeta oli gat ol longfala stem.

Long pikja long raet: Big Lif Rop (Merremia peltata)



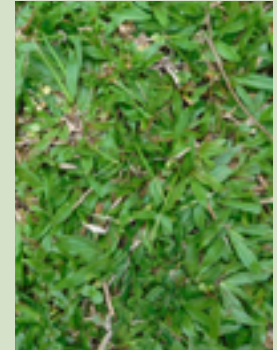
Ol smolsmol tri: Olgeta ia oli smol bitim ol bigfala wud, maet anda long sikis mita. Ol man i yusum plante blong olgeta blong flasem ples long ol pablik eria, ol garen blong flaoa o blong putum kala long wan eria.

Long pikja long raet: Pico (Solanum torvum)



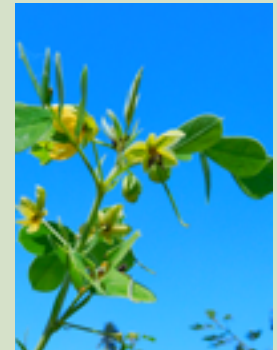
Olgeta kaen gras: Olgeta gras i ol smol plant. Plante taem oli gat ol lif we oli longfala be oli no waed tumas, mo oli stap gru aot long botom blong plant.

Long pikja long raet: wan kaen gras



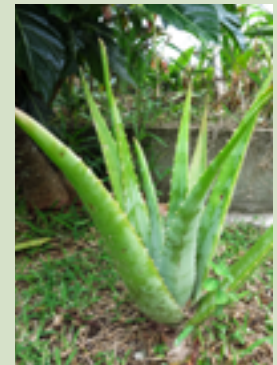
Ol smolsmol plant: Olgeta plant ia oli no gat eni wud insaed long stem blong olgeta. Olgeta lif mo stem blong olgeta oli stap ded long en blong sison blong gru sapos no afta oli bin karem flaoa mo frut blong olgeta.

Long pikja long raet: Wael pistas (Cassia tora)



Olgeta "Succulent": Olgeta succulent i olgeta plant we oli gat ol bigfala lif blong kipim wota insaed long olgeta, minim se oli save laef long taem tru long ol draetaem. Oli kam long ol eria blong wol we ples i drae o haf-drae mo ol ples we i drae olgeta mo i hot tumas.

Long pikja long raet: Aloe vera (wan plant we plante man i stap plantem long Vanuatu)



Ol pat blong wan plant

Long ples ia yumi luk long ol men pat we yu save lukim blong wan plant mo wok blong olgeta. Oli inkludim ol lif, ol rus, ol stem, ol flaoa mo ol frut. Blong aedentifaem wan plant yumi i mas save ol pat mo wok blong olgeta, from ol infomesen blong aedentifaem wan plant plante taem hemi diskraebem ol pat blong hem.

Ol lif i men pat blong wan plant. Ol lif i mekem i posibol se wan plant i save yusum laet blong san mo wan gas long ea mo wota we i stap insaed long lif blong givim kakae long plant tru long kala grin blong lif (nem blong wok ia i "photosynthesis"). Lif tu i letemaot smol wota olsem gas tru long ol smolsmol hol blong hem (nem blong wok ia i "transpiration"). Sem taem ol lif i protektem wan plant mo kipim hem i stap kol, i no hot tumas. Olgeta lif oli save gat ol difren kaen sep, saes mo kala mo oli save helpem yumi blong aedentifaem wan plant.



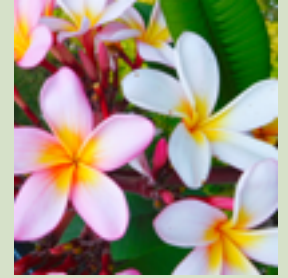
Ol rus: klosap evri taem yumi faenem ol rus blong wan plant andanit long graon. Oli holem plant i stap strong long graon mo tu i tekemap wota blong fidim plant. **Ol stem** blong wan plant i karem wota mo ol nara samting aot long graon i go long ol nara pat blong plant. Olgeta stem oli karem ol lif mo klosap evri taem oli gru i go antap.

Pikja long raet: Rentri (Samanea saman)



Ol flaoa oli holem olgeta pat blong wan plant we i save mekem wan niu plant bakegen, mo wok blong olgeta i blong mekem ol niu plant. Plante taem oli gat ol gudfala kala we yumi laekem mo oli gat senta blong pulum i kam olgeta insek o pijin we oli kam blong tekemaot paoda blong ol flaoa mo blong ronemaot olgeta we oli wantem spoelem plant.

Pikja long raet: flaoa blong Frangipani



Ol sid i pikinini blong plant, we oli kamaot tru long fasin blong mekem niu plant bakegen.

Frut hemi karem ol sid, mo i givhan long olgeta blong oli go aot long mama plant mo blong gru. I gat plante difren kaen sid mo frut, mo plante taem oli ol difren sep from fasin blong seraotem ol sid.

Pikja long raet: Sid blong Nangai



4. Hao blong aedetifaem ol rabis gras mo anamol

Long seksen ia yu save faenem olgeta pikja mo infomesen long saed blong olgeta rabis gras mo anamol we yu save faenem olbaot long Vanuatu. Infomesen ia i save givhan long yu taem yu wan yu traem aedentifaem olgeta o taem yu traem aedentifaem olgeta wetem komuniti o grup blong yu.



I gat ol difren fasin blong givim nem long olgeta plant o anamol we i dipen long situesen we yumi stap long hem. I no gat wan fasin we i mo gud bitim nara wan. Be i gud sapos yu save ol difren kaen fasin.

Nem blong saens: Hemia i wan fasin blong saens we ol man blong saens olbaot long wol o save recognaesem olgeta plant o anamol, no mata wanem i lanwis blong olgeta. Oli givim tu nem long wanwan plant o anamol. Faswan i nem blong bigfala grup we plant o anamol i memba blong hem, nara nem hemi soem stret i wiswan insaed long grup ia.

Komon nem: Ol nem ia ol man olbaot we oli no man blong saens oli givim long wan plant o anamol. Ol nem ia i stap long Inglis lanwis.

Nem long Bislama: Nem ia i nem we ol man ples long evri aelan blong Vanuatu i save yusum blong aedentifaem wan plant.

Lokol nem: (Nem blong stret man ples): Nem ia olgeta blong wan komuniti i givim long wan plant o anamol. Olgeta long komuniti oli save gudwan wanem oli tokbaot. Be i mo gud taem yu no stap insaed long komuniti blong yu sapos yu yusum nem blong saens o komon nem.

Blong givim wan eksampol:

<i>Merremia peltata</i>	Big leaf Rope	Big lif rop
(Nem blong saens)	(komon nem)	(lokol Bislama nem)

Nusifiliau	_____
(nem long lanwis blong Erromango)	(lokol name)

I gat fofala kaen nem blong evri plant o animol we i stap long seksen ia blong buk.

Names	Nem blong saens	<i>Merremia peltata</i>
	Komon nem: Big Leaf Rope	Nem long Bislama: Big lif rop
	Lokol nem: Nusifilau (Ipota, Erromango,) Tukora (Port Resolution, Tanna), Nwele (Lorum, Santo)	
		
Diskripsien	Kaen plant	Rop
	Hao hemi gru	Hemi stap klaem, mo i gat ol fatfat samting olsem rus anda long graon
	Lif mo stem	Lif i big mo sep blong hemi i olsem hat, mo anda long hem i gat ol string we i kala pepol. Stem i save kasem 20 mita.
	Flaoa	Yelo o waet smol wetem sep blong fanel, longfala blong hem i 15 go kasem 30 sentimita. Plante oli stap tugeta long wan grup.
	Frut mo sid	Sid i braon, i no saen, mo i stap insaed long wan “sel” we maet longfala blong hem i 15 milimita.
Ples we i stap long hem		Long bus, saed blong rod, saed blong hil, ol eria we ol man i bin distebem graon
Wanem plant i stap mekem		• Hemi go olbaot long graon mo kilim i ded o kavremap ol tri blong bus • Hemi kilim i ded ol nara kaen plant
Ples we yu save faenem hem		Olbaot long Vanuatu long ol ples we haet blong olgeta i anda long 300 mita.
Ples we i kamaot long hem		Ol kaontri insaed long Saot-Is Esia mo Pasifik
Hao hemi stap spred		Hemi save gru gudwan long ol ples we envaeromen hemi disteb. Hemi stap mekem niu plant tru long ol sid blong hem mo hemi stap spred wetem ol niu rus we i save gru aot long stem.
Wei blong manajem		Fasin blong manajem Big Lif Rop hemi tru wan fasin we i yusum tu kaen kontrol: wan hemi blong tekemaot rabis gras ia, nara wan hemi blong yusum wan fasin blong groem ol tri mo plant blong blokem hem. Fasin ia i yusum ol tri blong waetwud (<i>Endospermum medullosum</i>) antap mo i plantem kumala daon long graon blong blokem Big Lif Rop blong i no save gru bakegen.

Names	Nem blong saens	<i>Mikania micrantha</i>
	Komon nem: Mile-a-Minute	Nem long Bislama: Wan Dei Rop
	Lokol nem: Null ta plane (Port Resolution, Tanna) Nos talrap (Ipota, Erromango)	
		
Diskripsien	Kaen plant	Rop
	Hao hemi gru	Hem i stap klaem
	Lif mo stem	Lif i olsem trikona o hat. En blong hemi kam long wan poen mo ol saed blong hem i olsem ol smol tut.
	Flaoa	Oli waet mo oli grup plante long wan ples. Oli produsim ol smol sid we i blak (2 miimita) mo long en blong hem i gat ol smol waet hea.
	Frut mo sid	Sid i longfala mo i blak. I gat faef saed mo longfala blong hem i 2 milimita.
	Hemi olsem wanem	Hemi i wan rop we i raonem plante mo hemi strong tumas. Ol rus i gru aot long ol pat blong stem blong hem taem hemi stap long graon.
Ples we yu save faenem hem		Olbaot long Vanuatu long ol ples we haet blong olgeta i anda long 300 mita. Hemi wan bigfala rabis gras long ol ples we ol buluk i kakae, long ol plantesen, ol saed riva, ol bus we i disteb, long saed blong rod mo tu hemi miksim wetem ol plant insaed long ol eria blong kakae mo blong forestri.
Ples we i kamaot long hem		Long ol kaontri long Sentrol mo Saot Amerika
Wanem hemi stap mekem		- Hemi go olbaot ova long ol tri mo garen - Hemi blokem mo stopem ol nara plant blong no mekem ol niu plant.
Hao hemi stap spred		Ol sid blong hem win i karem olgeta i go long ol ples olbaot mo oli save gru long wan niu plant isi nomo sipos oli stap long graon we hemi emti mo hemi wetwet smol.
Wei blong manajem:		- Oli manajem Wan Dei Rop taem we rabis gras ia i stap finis long kaontri (tru long wan fasin we oli kolem Post-entry Biosecurity) wetem wan rosta masrum we nem blong hem i <i>Puccinia spegazzinii</i>, we yumi long Vanuatu i givim nem blong hem rosta masrum blong lif laplap. Oli tekem masrum ia long Papua Niugini mo hemi wok gudwan long Papua Niugini wetem Ostrelia. - Oli bin serem masrum ia raon long Efate mo long Tanna, long medel bus mo saot blong aelan ia.
Kontrol blong Fama		Katem mo tekemaot wota blong hem long hot san.

Names	Nem blong saens	<i>Cassia tora</i> or <i>Senna tora</i> or <i>Cassia obtusifolia</i>
	Komon nem: Tora, Sicklepod	Nem long Bislama: Wael Pinat/Wael Pistas/Wael Pistat
	Lokol nem	
		
Diskripsen	Kaen plant	Smol plant
	Hao hemi gru	Hemi stanap stret, i kasem 1 – 2 mita mo 1 mita waed.
	Lif mo stem	Lif i divaed long tri pea blong smolsmol lif we wan blong pea i stap narasaed long stem blong narawan. Ol smolsmol lif i raon long en blong olgeta be olsem trikona long pat we i kamaot long stem blong hem. Longfala blong lif i 4 sentimita, waed blong hem i 2 sentimita.
	Flaoa	Yelo wetem faef lif blong flaoa, 1 sentimita waed.
	Frut mo sid	Basket blong sid i longfala mo bunbun, we sep blong hemi i no stret, i stap ben. Longfala blong hem i 10 – 15 sentimita, mo waed blong hem 1 3 – 5 milimita. Sid i braon mo flat, mo longfala blong hem i 3 milimita.
	Wanem plant i stap mekem	Hemi wan rabis gras we i stap gru long ol eria blong agrikalja mo long envaeromen blong aelan.
Ples we yu save faenem hem		
Long ol eria klosap long solwota we i klia, ol open ples we buluk i stap kakae, saed blong rod.		
Aelan we i stap long hem		
Efate, Tanna, Santo, Malakula, West Ambae, Malo, Aore		
Ples we i kamaot long hem		
Oli no save gudwan, maet long saot blong Esia. Oli tink se i gru plante olbaot long ol tropik mo olgeta kaontri blong Amerika.		
Hao hemi stap spred		
Ol sid i spred tru long ol buluk mo nara anamol.		
Wei blong manejem		
Katem mo tekemaot wota blong hem long hot san.		

Names	Nem blong saens	<i>Solanum torvum</i>
	Komon nem: Turkey Berry, Pico	Nem long Bislama: Piko
	Lokol nem	Nawan patikar (Port Resolution, Tanna)
		
Diskripsen	Kaen plant	Smol tri we longfala blong hem i kasem 0.8 – 3 mita be hemi save kasem 4 mita.
	Hao hemi gru	Hemi stanap stret. Hemi save gru klosap tugeta wetem plante narawan, mo ol man i no save pas bitwin long olgeta. I gat sam nil olbaot long ol stem.
	Lif mo stem	Sep blong lif i olsem wan eg, mo en blong hem i finis long wan poen. Klosap long stem hemi raon. Longfala blong hem i 15 – 20 sentimita. Saed blong lif i olsem wan man i bin katem, i no stret. Olgeta yangfala stem oli grin o haf red, mo ol smol hea long sep blong wan sta i kavremap olgeta. Taem ol stem i kam olfala, oli jenisem kala mo kam braon o grin-braon mo taem oli olfala tru oli lusum ol hea blong olgeta.
	Flaoa	Waet, mo medel blong hem i yelo. Oli stap gru long grup long ples we lif i joen igo long stem.
	Frut mo sid	Ol frut i raon mo grin. Taem oli rere oli kam yelo, oli 10 – 15 milimita waed mo oli gru long ol grup. Insaed long evri frut i gat plante flat, raon sid we kala blong olgeta i braon.
	Wanem plant i stap mekem	• Ol nil oli blokem rod blong ol man mo anamol. • Oli save kam wan rabis gras long graon we ol buluk i kakae long hem.
Ples we yu save faenem hem		
Long ol eria we oli disteb, saed blong ol rod, ol plantesen, ol rabis graon		
Aelan we i stap long hem		
Efate, Tanna, Santo, Malakula, Pentecost, Epi, Tongoa, Aniwa		
Ples we i kamaot long hem		
Olgeta tropikol eria blong Amerika		
Hao i stap spred		
Ol pijin i kakae ol frut mo oli spredem ol sid taem oli sitsit		
Wei blong manejem		
Katem daon mo bonem olgeta		

Names	Nem blong saens	<i>Sida acuta</i>
	Komon nem: Broom Weed	Nem long Bislama: Brum Wid
	Lokol nem: Wetangnign (Port Resolution, Tanna) Uyowi (Ipota, Erromango)	
		
Diskripsen	Kaen plant	Smol plant
	Hao hemi gru	Hemi gat ol stem we i strong mo hemi go olbaot mo gru tugeta blong blokem eria
	Lif mo stem	Oli gru wanwan long stem. Oli saed blong hem i olsem ol smol tut mo andanit long hem i gat ol smolsmol hea.
	Flaoa	Oli gru wanwan mo oli yelo mo aranis. Oli produsim wan smol “sel” we hemi brok long ol smol pis taem hemi rere, mo wanwan long ol pis i gat tu sap ben long hem.
	Sid	Ol sid i smol mo raf, oli sep blong wan trikona mo i save kasem 1.5 milimita. Oli grin taem oli yang mo red-braon o blak taem oli drae.
Ples we yu save faenem hem		Pastures, crops, roadsides. Dislikes dry conditions
Wanem plant i stap mekem		Ol nil oli blokem rod blong ol man mo anamol. Oli save kam wan rabis gras long graon we ol buluk i kakae long hem.
Aelan we i stap long hem		Efate, Santo, Epi, Tanna, Malakula
Ples we i kamaot long hem		Hemi gru long ol tropical eria, maet hemi kam fastaem aot long Sentrol Amerika
Hao i stap spread		Hemi stap fas long ol klos, ol hea blong anamol mo long sofmad long ol trak
Wei blong menejem		Ol smol plant yu save pulumaot long graon mo livim olgeta blong drae long san. Gavman tru long wok bong Dipatmen blong Baeosekuriti i aedentifaem finis wan smol bebet (sida beetle: Calligrapha panthera) olsem wan kontrol blong Brum Wid. Oli tekem ikam long Papua Niugini, mo oli wok blong bridim mo distributim olgeta truaot ol aelan blong Vanuatu.

Names	Nem blong saens	<i>Mimosa diplotricha</i>
	Komon nem: Giant Sensitive Plant	Nem long Bislama: Bigfala Gras Nil/Waet Gras Nil
	Lokol nem Nikiable Asul (Port Resolution, Tanna), Neiahakur (Ipota, Erromango)	
		
Diskripsen	Kaen plant	Smol tri we hem i gru antap kasem 2 mita. Plante blong olgeta plant i save gru wanples. Ol rus is strong, mo i olsem timba long botom.
	Hao hemi gru	Hemi gru mo spred olbaot, mo plante oli gru wanples blong blokem rod.
	Lif mo stem	Lif i grin we i saen mo oli olsem gras blong pijin. I gat 15 go kasem 30 smolsmol pat blong lif (6 – 12 milimita long, 1.5 milimita waed), we samtaem ol man oli tink se olgeta i stret lif blong plant. Ol smolsmol pat blong lif oli klos taem wan samting i tajem o spoelem olgeta mo long naet. Ol stem i gat ol nil we i sap mo i gat huk long en blong olgeta. Longfala blong olgeta l 3 – 6 milimita.
	Flaoa	Oli red we i laet, mo sep blong olgeta i olsem wan smol bol we oli mekem wetem plante smolsmol hea. Hemi 12 milimita akros long hem.
	Frut mo sid	Ol basket blong sid oli stap long ol grup. Longfala blong olgeta i 10 – 35 milimita mo waed blong olgeta i 6 milimita, mo ol smol nil i kavremap olgeta. Ol sid insaed long basket blong sid oli braon mo flat mo sep blong olgeta i olsem wan eg, mo longfala blong olgeta i 2 milimita.
	Wanem plant i stap mekem	Oli blokem ol nara kaen plant blong mekem ol niu plant mo hemi kavremap graon fulwan taem hemi gru finis. Ol nil i save spoelem ol man.
Aelan we i stap long hem		Efate, Santo, Epi, Tanna, Malakula
Ples we i kamaot long hem		Brazil, tropikol Saot Amerika
Hao hemi stap spred		Ol sid i save holtaet long ol klos blong man o ol hea blong anamol. Ol baskwt blong sid i save flot.
Management Options		Ol bigfala plant – katem mo livim olgeta blong drae long san. Ol plant we i mo smol – pulumaot long graon mo livim olgeta blong drae long san

Names	Nem blong saens	<i>Mimosa pudica</i>
	Komon nem: Sensitive grass	Nem long Bislama: Smol gras nil
	Lokol nem: Neiahaka (Ipota, Erromango) Nikiable (Port Resolution, Tanna)	
		
Diskripsien	Kaen plant	Smol plant
	Hao hemi gru	Daon long en blong stem we hemi kamaot long graon hemi had smol olsem wud, hemi no stanap stret be hemi go olbaot long graon. Hemi gat wanwan nil long ol bigfala ples blong stem.
	Lif mo stem	Ol smolsmol lif long wan lif i red smol, 12 – 25 pea, oli stret mo longfala i kasem 9 – 12 milimita mo waed blong hem i kasem 1.5 milimita. Taem wan samting i tajem olgeta o distebem olgeta ol smol lif i pul ikam bak mo i benem i go tugeta.
	Flaoa	Kala i laet red, sep i olsem eg mo oli 9 milimita akros
	Frut mo sid	I gat ol smol sid go kasem faev long wan basket blong sid. Oli flat mo kasem 3 – 5 milimita long medel.
Wanem plant i stap mekem		Oli blokem ol nara kaen plant blong no mekem ol niu plant. Taem hemi gru finis hemi kavremap graon gudwan. Ol nil i save spoelem man.
Ples we yu save faenem hem		Long graon we hemi no wetwet tumas, long saed long rod, long eria we ol buluk i stap kakae long hem mo ol rabis graon.
Aelan we i stap long hem		Efate, Epi, Santo, Malakula, Tanna and the Shepherds Group
Ples we i kamaot long hem		Brazil
Hao hemi stap spread		Ol basket blong sid i save flot minim se wota i save seremaot olgeta mo tu oli save holtaet long ol klos blong man, ol hea blong ol anamol mo sofmad long ol trak.
Hao blong manejem		Ol bigfala plant - katem mo livim olgeta blong drae long san. Ol smol plant - pulumap mo livim olgeta blong drae long san

Names	Nem blong saens	<i>Lantana camara</i>
	Komon nem: Lantana	Nem long Bislama: Lantana/Blakbari
		
Diskripsien	Kaen plant	Smol tri
	Hao hemi gru	Hemi gat plante branis. Oli save spreadaot mo blokem ples.
	Lif mo stem	Sep blong lif i olsem wan eg mo oli gru wanwan. Ol stem i skwea wetem ol nil we i sot mo i gat huk long en blong hem. Sapos yu kakae ol lif ia, bae yu sik tumas.
	Flaoa	Ol flaoa i olsem wan smol paep mo oli gat fo lif blong flaoa. Oli stap long ol grup long en blong ol stem.
	Frut mo sid	Ol frut i raon mo oli kam pepol/blak taem oli rere.
Ples we yu save faenem hem		Hemi gru gudwan long ol drae eria we buluk I stap kakae, ol plantesen, mo graon we man i stap groem ol samting long hem mo graon tu we ol man i no yusum.
Aelan we i stap long hem		Efate, Tanna, Malakula, Aneityum
Ples we I kamaot long hem		Saot mo Sentrol Amerika
Hao hemi stap spread		Ol pijin mo ol nara anamol i seremaot ol sid
Hao blong manejem		Katem ol rabis gras ia mo livim olgeta blong drae long san

Names	Nem blong saens	<i>Wasmannia auropunctata</i>
	Komon nem: Little Fire Ant	Nem long Bislama :Smol faea anis
	Lokol nem: Moleh nom (Ipota, Erromanto), Nar (Lorum, Santo)	
Kaen anamol		Insect
		
Diskripsen		Wan smol anis we i save atakem ol man, longfala blong hem i 2 – 6 milimita, hed mo bodi blong hem i braon-red mo bel blong hem i braon-blak. Hemi save stikim wan man mo i soa tumas.
Ples we i stap long hem		Hemi laekem ol ples we i hot mo drae. Hemi stap long ol difren kaen ples, olsem klosap long solwota, long eria we oli wokem agrikalja, ol yad blong ol man, ol bus mo ol saed riva. Yu save faenem olgeta i stap plante long ol eria we graon idisteb. Bed blong ol smol faea anis ia oli ol difren kaen saes mo sep. Samtaem yu no save lukim bed ia, be samtaem i luk olsem wan hip we i save go antap kasem 40 sentimita. Yu no save luk we ples ol anis i go insaed o kamaot long hip ia. Insaed long hip i olsem bed blong ol hanibi. I save gat ol difren saes anis long hip.

Fasin blong olgeta	Oli save faet strong mo plante blong olgeta i stap wanples. Taem i gat plante olsem i minim se oli save kontrolem ol kakae we i gru long wan ples, mo bloken ol nara kaen anamol blong no tekem kakae ia.
Aelan we oli stap long hem	Vanua Lava, Mota Lava, Gaua, Mota, Santo, Efate
Ples we oli kamaot long hem	Is blong Afrika long ol eria klosap long solwota
Wanem hemi stap mekem	• Oli woman anis i save flae go kasem 2 kilomita blong faenem patna blong olgeta • Oli man i save spredem olgeta
Wanem hemi stap mekem	• Hemi kilim ol nara kaen anis, minim se namba blong ol anis we i stret anis blong Vanuatu i stap go daon. • Oli anis ia oli katemdaon fasin we ol stret plant blong Vanuatu oli seremaot ol sid mo mekem ol niu plant taem oli aotem ol stret anis blong Vanuatu mo taem oli kakae ol sid. • Oli save faetem ol nara insek blong kakae olgeta • Oli katem daon namba blong ol nara kaen anamol olsem pijin, ol smolmol anamol olsem rat, lised o frog, taem oli stikim olgeta, faetem olgeta mo kakae olgeta. • Oli save haed insaed long ol haos mo ol ekwipmen. • Oli save stikim ol man long wan nogud fasin, minim se wan man maet i save sik olgeta. I no gud nating sipos wan anis i stikim wan pikinini.
Hao blong manejem	Dipatmen blong Baeosikuriti i yusum nao-ia wan posen, nem blong hem Fibromil, we oli miksim wetem pinat bata blong pulum ol anis i kam. Taem oli kakae, oli kam slak sloslo go kasem long en oli ded. Oli hop blong kilim i ded mo aotem kwin we i stap wetem olgeta nara anis long hip. Olgeta anis we i stap wok oli mas tekem eni kaen kakae we oli faenem i go long kwin fastaem bifo oli tekem kakae blong olgeta. So wetem Fibromil mo pinat bata ol man blong Dipatmen oli hop se ol woka bae i tekem hem i go long kwin mo taem hemi ded olgeta anis i no gat wan kwin blong produsim ol niu anis.

Names	Nem blong saens	<i>Acridotheres tristis</i>
	Komon nem: Indian Mynah, Common Mynah	Nem long Bislama: Sako
	Lokol nem: Kaul (Port Resolution, Tanna), Koul (Ipota, Erromango)	
Kaen anamol		Pijin
		
Diskripsen	Bodi blong hem i 23 – 26 sentimita mo hevi blong hem i 82 -143 gram. Taem i openem wing longfala blong tufala i save i kasem 120 – 142 milimita. Ol sako oli dak braon wetem hed i blak, mo maot, leg mo skin raon long ae i yelo.	
Ples we oli stap long hem	Hemi laekem ol ples we i hot smol mo we i gat wota klosap. Oli laekem laef long ol ples we oli wokem agrikalja mo tu ol ples we ol man i stap long hem.	
Fasin blong olgeta	Oli maj olsem oli wokbaot olsem wan Mobael be i no olsem ol nara kaen pijin. Oli no fraet tumas long ol man. Oli stap tugeta wetem plante nara sako long taem blong slip long sapa.	
Aelan we oli stap long hem	Tanna, Efate, Santo, Malakula, Epi	
Ples we oli kamaot long hem	Long Medel Is, India mo Esia.	

Hao hemi stap spred	Olgeta sako oli putum eg blong olgeta long ol hol blong tri, insaed long wol mo ruf blong wan haos o raet antap long ol pamtri. Oli save putum eg i go kasem 3 taem long wan yai mo long evri taem oli gat 3 go kasem 6 yangfala. Mama mo papa tufala i stap rao wetem ol nara pijin blong protektem nes blong olgeta.
Wanem hemi stap mekem	- Oli winim ol stret pijin blong Vanuatu taem oli tekem blong olgeta ol nes blong nara pijin ia, kilim i ded ol smol wan blong olgeta mo brekem ol eg. Minim se namba blong ol stret pijin blong Vanuatu i go daon. - Oli damejem mo kakae ol frut we oli stat blong kam raep, we i afektem hao mas agrikalja i produsim mo haomas kakae bae l gat long fiuja. - Oli save karem mo spredem ol sik inkludim ol bebet we i haed insaed mo laef long olgeta mo wan kaen malaria we i afektem ol pijin. - Oli save seraotem ol rabis gras.
Hao blong manejem	Dipatmen we i lukaotem Envaeromen (DEPC) i introdusim wan kontrol wan taem nomo long 2012 long taem blong aniveseri blong Independens. Oli ofrem wan praes long wiswan komuniti i kilim i ded wan hae namba blong ol sako bitim ol nara komuniti. Afta long taem ia i no gat eni nara kaen fasin blong kontrolem ol sako.



Names	Nem blong saens	<i>Achatina fulica</i>
	Komon nem	Giant African Land Snail
	Lokol nem: Takieu (Port Resolution, Tanna) Yelongi (Ipota, Erromango) Nem long Bislama: Afriken Snel	
Kaen anamol		Wan kaen anamol we i gat bodi we i sof mo wan sel we i had
		
Diskripsen		Wan snel we hemi stap long graon, i no long wota, mo we hemi bigfala tumas. Kala blong sel blong hem i red-braon wetem ol mak long hem we oli yelo smol. En blong sel hemi sap. Klosap evri sel i 5 – 10 sentimita, be samtaem hemi save gru kasem 20 sentimita. Longfala blong sel hemi tu taem bitim waed blong hem. Klosap evri taem saes blong snel i 15 go kasem 30 sentimita mo wet blong hem i 250 go kasem 450 gram.
Ples we hemi stap long hem		Yu save faenem snel ia olbaot long plante difren kaen ples – olsem long dakbus, plantesen, eria blong agrikalja, graon we ol smol tri i stap gru, ol eria we i wetwet, ol eria klosap long solwota, ol eria klosap long freswota, ol eria we i disteb, ol eria blong taon. Plante taem yu save faenem olgeta anda long ol stampa blong wud o pis timba, anda long ol plant, insaed long kompos, long ol fanis, long medel blong tu ston mo long ol rus blong tri. Hemi laekem tumas ol tropikol eria we oli hot smol, mo hemi i wetwet smol.

Fasin blong hem	Wan snel i save kakae fulap plant long wan sot taem nomo. Hemi wan rabis anamol olgeta we i save spoelem gudwan ol plant long saed blong agrikalja mo tu long garen. Hemi stap kakae ol lif, ol kakae long garen, ol flaoa, ol frut. Antap long hemi save kakae ol tri olsem Nangalat (<i>Dendrocnide latifolia</i>) mo ol yangfala tri we oli stat blong gru.
Aelan we i stap long hem	Efate, Santo, Malakula, Epi, Tanna, Emae
Ples we hemi kamaot long hem	Ol eria klosap long solwota long Is blong Afrika.
Hao hemi stap spread	Hemi stap mekem pikinini plante taem, mo hemi putum 100 - 400 eg long wan taem nomo. Taem hemi stap finis long wan ples, hemi save kavremap ful eria kwiktaem nomo. Hemi save muv igo long ol niu kaontri mo eria insaed long kago – long ol kontena long sip, long ol plato we oli putum kago long hem mo long ol trak.
Wanem hemi stap mekem	- Hemi wan long ol tropikol snel we hemi save mekem mo problem bitim ol nara wan, from hemi save kakae tumas plant, hemi strong tumas, mo hemi save putum plante eg blong hem kwiktaem. - Hemi kakae ol kakae blong agrikalja mo spreadem ol sik blong plant, we i afektem haomas kakae yumi save produsim nao-ia mo hao yumi save mekem sua se yumi i gat inaf kakae long fiuja. - Hemi kakae ol plant we i stret blong Vanuatu mo i damejem ol sistem blong plant mo anamol we i stap long envaeromen mo jenisim hao i wok. - Namba blong ol lokol snel i go daon from kompetisen ova long kakae mo ples blong stap long hem. - spreadem wan kaen raon wom we i save karem ol bigfala sik olsem “meningitis” (<i>Eosinophilic meningoencephalitis</i>), wan sik we i save damejem bren blong man.
Hao blong manejem	Vanuatu hemi bin tekem i kam long kaontri wan nara kaen snel, nem blong hem <i>Euglandina rosea</i> , komon nem blong hem Rosy wolf snail o Cannibal snail. Oli faenemaot se no mata we snel ia i bin atakem gudwan ol Afriken Snel, sem taem oli faenemaot se long plante nara kaontri snel ia i bin kilim i ded sam stret snel blong ples. Minim se snel ia, we yumi tekem blong kilim wan rabis anamol we i kam insaed long kaontri, hem tu hemi kam wan rabis anamol we i kam long nara ples we i save spoelem kaontri blong yumi. Nao ol man blong agrikalja oli traem faenem wan fasin blong kontrolem snel ia bakegen.

Names	Nem blong saens	<i>Rattus exulans</i> , <i>Rattus rattus</i> , <i>Rattus norvegicus</i>
	Komon nem: Pacific rat, Black rat, Brown rat	Nem long Bislama: Rat
	Lokol nem: lakisi (Ipota, Erromango), Yasuk (Port Resolution, Tanna)	
Kaen anamol		Anamol we hemi gat bun long baksaed blong hem
		
Diskripsen		Pasifik rat kala blong hem i blak mo braon. Hemi gat bigfala sora we i raon, wan nos we i sap long en, mo fut we i smol lelebet. Bodi blong hem i bunbun mo longfala, mo hemi save kasem 15 sentimita. Blak rat hemi gat wan longfala tel komperem wetem tu nara kaen rat. Kala blong hem i blak-braon we i no dak tumas. Taem hemi kam bigwan longfala blong hem i save kasem 32.4 - 46.4 sentimita mo wet blong hem i save kasem 110 - 340 gram. Braon rat kala blong hem i braon. Logfala blong hem i 25 sentimita stat long en blong nos blong hem go kasem ples we tel i joen long bodi blong hem. Longfala blong tel i sem mak wetem longfala blong bodi blong hem. Man rat taem hemi gru finis wet blong hem i save kasem 350 gram. Woman rat taem hemi gru finis wet blong hem i save kasem 250 gram.
Ples we hem i stap long hem		Braon rat hemi laekem ol ples we i wetwet smol, maet long saed blong riva. Yu save faenem ol rat long ol ples blong septik long taon, ol ples blong jakem doti long hem mo ol nara ples we i wet smol.

Ples we hemi stap long hem	Yu save faenem Pasifik, blak mo braon rat long evri aelan blong Vanuatu. Ol rabis anamol ia i mekem finis wan bigfala problem.
Fasin blong hem	Pasifik rat hemi kakae sid, frut, lif, skin blong tri, insek, wom, spaeda, lised, mo eg mo smolmol pikinini blong pijin. Sam blong kaen rat ia i save tekem kakae i go bak long wan sef ples we oli save stap kwaet blong tekemaot skin blong sid o mekem rere wan nara kaen kakae. Blak rat hemi save kakae eni kaen samting, inkludim ol plant, sid mo nat, frut mo eg blong ol stret pijin blong Vanuatu. Braon rat hemi laekem stap long wan grup wetem ol nara rat, oli plei tugeta, oli klinim hea blong olgeta tugeta, oli stap slip tugeta. Oli laekem stap long wan eria we i blong grup blong olgeta mo oli save kros sapos wan nara rat we oli no save long hem i go insaed long eria blong olgeta. Ol yang wan oli save digim hol blong haed long hem.
Ples we hemi kamaot long hem	- Pasifik rat hemi kamaot long eria blong Indo-Malaysia. - Blak rat hemi kamaot fastaem long tropikol kaontri blong Esia. Olgeta i spred igo long ol kaontri long Is blong Esia long taem blong ol man Rom, afta oli go long Europe mo ova long hol wol. - Braon rat hemi kamaot fastaem long not blong Saena, mo hemi spred finis i go long evri kontinen blong wol be i no long Antaktika.
Hao hemi stap spred	Trifala kaen rat oli kam long ol aelan blong Pasifik inkludim Vanuatu insaed long ol bot we oli kamaot long ol nara kaontri.
Wanem oli stap mekem	- Oli pasem wan kaen rabis sik we yu save ded from, nem blong hem "Hantavirus Pulmonary Syndrome" (HPS) we ol rat we i gat sik ia oli save pasem tru long pispis, sitsit mo spet. - Oli save karem sam bebet we i save givim sam nogud sik long ol man. - Oli kakae ol kakae we i afektem haomas kakae yumi save produsim nao-ia mo hao yumi save mekem sua se yumi i gat inaf kakae long fiuja. - Oli spoelem ol haos from oli kakae wud blong doa mo wol - Oli damejem ol klos mo ol samting we i stap insaed long haos, olsem bed o jea.
Hao blong manejem	- Setem ol trap blong kasem rat - Kilim olgeta wetem posen - Protektem eria blong haos wetem net we rat i no save go tru long hem.



Seksen 3:

Hao blong manejem ol rabis gras

Ol fasin blong manejem Big Lif Rop tru long putum wan ples ol difren kaen fasin blong manejem rop ia

I gat sam difren kaen fasin blong manejem rop ia we ol fama mo ol man we i manejem graon i save yusum. Fasin we oli disaed blong yusum maet i difren long wan ples from hemia long wan nara ples. Hemi dipen long ol teknikal save mo risos, speseli hao mas mani oli gat. Olgeta oli mas tinkbaot ples tu, hao ol plant mo ol anamol oli wok tugeta wetem envaeromen blong olgeta, taem oli jusum wiswan fasin we bae oli yusum.

Ol fama mo maneja blong graon we oli gat plante mani maet oli jusum ol kaen posen bong kilim rabis gras, olsem fasin blong wok. Ol posen blong kilim gras we yu save pem nao i inkludim "Weedmaster Duo", Glyphosate 2, 4-D, 2, 4, 6-T", "Victoria Gold", "Vigilant Gel" mo "Ultimate".

Ol posen blong kilim rabis gras oli wok kwiktaem mo i bitim kontrol we yu wokem wetem han nomo o tru long fasin blong groem ol nara plant blong blokem rabis gras. Be ol posen ia i save kostem plante mo watu mo oli had blong pem taem yu stap long wan aelan o komuniti we i longwei aot long taon. Oli save spoelem tu ol anamol mo plant long eria mo oli save afektem nogud helt blong man we i stap yusum. Taem yu yusum ol posen olsem ova long wan long taem hemi save livim ol nogud posen long ol kakae we i stap gru. Ol rabis wid tu i save kasem wan taem we posen ia i no save gohed blong wok bakegen mo i no save kilim rabis wid ia. Posen ia i save pas tru long graon mo go insaed long ol riva mo spred olbaot long fasin ia taem i gat tumas posen we oli putum long ol fam o ples blong plei.

Ol fama mo maneja we oli stap wari tumas long kondisen blong envaeromen oli save yusum ol fasin blong kontrolem tru long wok blong han mo fasin blong groem ol nara plant blong blokem rabis wid ia. Long plante kaontri blong Pasifik oli gohed blong fasin blong katem daon mo pulumaot long graon ol Big Lif Rop. Olgeta oli save pulumaot ol stem wetem ol fatfat rut mo bonemap plant ia o letem hemi drae long hot san. Oli save letem ol buluk, ol nani mo ol hos i kakae rabis plant ia.

Long sam ples long Vanuatu oli kontrolem Big Lif Rop tru long fasin blong plantem sam difren kaen plant blong blokem hem. Olsem long Is blong Santo oli mekem ol forestri plantesen blong Waetwud (Whitewood, Endospermum medullosum) we bae i blokem Big Lif Rop taem ol tri i kam longfala mo ol branis antap oli blokem san. Fasin ia hemi blong plantem ol plant we oli save gru kwiktaem olsem wan rabis gras, sapos no, i gru kwiktaem tumas mo bitim hem. Long ol eria we buluk i stap long hem oli yusum ol tektnik blong saed blong fam, olsem plantem ol gras long wan taem we i save gohed blong gru bifo ol sid blong rabis gras i stat blong gru. Sapos ol fama oli manejem gudwan ol eria blong buluk blong no letem ol buluk i kakae tumas long eria ia hemi wan wei we ol fama truaot long Vanuatu i kontrolem ol rabis gras. Wan nara fasin i blong no letem gras i kam longfala tumas mo blong kontrolem haomas plant i gru long eria ia. Fasin ia i save blokem ol sid blong rabis gras i no gru mo blokem eria blong ol buluk.

Wan difren sistem we nem blong hem i "Integrated Approach System" Live & Learn Vanuatu Vanuatu hemi bin developim mo hemi stap testem nao long tri difren ples. Sistem ia i yusum tu difren fasin, fas wan hemi blong katemdaon rabis plant ia, pulumaot stem blong hem mo banem ful plant. Namba tu fasin we oli folem wetem hemia i blong yusum ol nara plant blong kontrolem rabis gras long wan fasin we i groem ol kakae andanit long ol tri. Oli plantem wan tri we hemi save winim gud mani olsem timba mo andanit long hem oli plantem wan kaen kakae olsem rus blong kavremap graon. Rus ia (kumala) i kavremap gudwan graon fastaem go kasem taem we ol tri i grup inaf blong bloken san wetem ol branis mo lif blong hem antap.

Ol impoten wod mo wanem ol i minim

Word	Bislama	Definition
Agroforestry		Wan wei blong wok we i putum tugeta fasin blong manejem graon wetem agrikalja. Ol man we i yusum wei ia oli plantem ol tri we i stap gru antap mo andanit oli plantem ol kakae o fidim ol anamol.k
Biodiversity		Haomas difren kaen plant mo anamol i gat mo haomas blong olgeta oli stap laef long wol o insaed long wan eria.
Biological control agent		Wan wei blong kontrolem ol rabis gras mo anamol we i yusum sam nara laef samting, olsem wan kaen sik o wan bebet, blong kontrolem olgeta.
Biotic		Ol kaen samting we i laef long envaeromen, olsem ol plant, ol rabis anamol.
Dehydrate		Wei blong tekem evri wota aot long wan samting blong presevem o bonem hem

Word	Bislama	Definition
Ecosystem		Hao ol laef samting mo ol samting we i no laef (olsem graon, wota) oli rilet mo wok tugeta long wan eria.
Ecosystem services		Olgeta risos we najrol wol i provaedem long ol man mo anamol blong gohed blong laef. Olsem ol plant oli provaedem ea (oxygen), ol wetland oli tekem ol rabis aot long wota blong mekem hemi klin. Luk long 'wetland'.
Endemic species		Olgeta plant, anamol mo nara kaen laef samting we i stret blong eria, aelan o kaontri blong yumi we yumi no save faenem long wan nara ples.
Environmental weeds		Olgeta rabis gras we oli go insaed ol ecosystem mo afektem nogud helt blong ol plant mo anamol we i stret blong Vanuatu. Look long 'ecosystem' (above).
Fungus		Wan laef samting we i no gat flaoa o kala grin, olsem musrum, nalumlum.

Word	Bislama	Definition
Habitat		Hom blong wan plant, wan anamol mo ol nara samting we i laef, olsem long wan tri, long wan rif.
Herbicides		Wan posen we yu save putum long ol rabis gras blong kilim olgeta i ded, olsem Glyphosate.
Insect		Wan bebet we hem i no gat bon long baksaed blong hem. Hemi gat sikis leg, mo tri pat blong bodi blong hem – bel, jes mo hed.
Integrated pest/weed management		Wan fasin we hemi save gohed oltaem blong manejem ol rabis gras mo anamol, we hemi yusum wan gudfala miks, we hemi inkludim ol kontrol tru long wan kaen sik o bebet, tru long ol poesen mo tru long ol wei blong wok long graon, olsem fasin blong kontrolem o manejem ol rabis gras mo anamol.
Invasive species		Ol plant o anamol we oil spadaot mo gru kwiktaem tumas long wan eria we yumi i no wantem olgeta. Oli save damejem gudwan najrol envaeromen, ol komuniti mo ikonomi.

Word	Bislama	Definition
Land degradation		Wei we helt blong wan graon i save go daon, from wan sapos no mo samting, we maet i inkludim katemdaon bus, wasemaot graon, fidim tumas anamol, fasin blong katem mo bonem bus blong mekem garen mo wei we ol rabis gras mo anamol i save kam insaed.
Mollusc		Wan kaen anamol we hemi no gat bun long baksaed blong hem be hem i gat wan strong fut, olsem wan snel.
Native species		Luk long 'endemic species'
Pesticide		Wan posen we oli yusum blong kilim i ded ol rabis anamol o mekem olgeta i ronwe aot long wan eria.
Pest		Wan kaen anamol, we plante taem hemi no wan anamol blong ples ia, we i damejem ol komuniti, najrol envaeromen mo ikonomi.
Parasite		Wan small bebet o plant we hem i stap laev long wan anamol o plant we i mo big, mo hemi tekem kakae blng hem aot long hem.

Word	Bislama	Definition
Reforestation		Plantem bakegen ol tri mo bus o letem bus hemi gru bakegen hem wan we bifo hemi spoel tru long ol kaen aktiviti olsem mekem fam, katem daon ol tri o najrol disasta.
Riparian zone		Pis graon wetem ol plant blong hem we i stap klosap long wota.
Ruderal species		<i>Ol rabis gras we oli stap gru mo spredaot afta we ol samting i distebem wan eria olsem taem oli klinim graon, o katem mo bonem graon rere blong mekem garen, o wan saeklon i kam. Wan eksampol blong hem i Big Lif Rop (Merremia peltata).</i>
Run-off		Taem wota i stap ron ova long wan eria taem graon i fulap finis wetem wota, hemi wan stret pat blong saekol blong wota.
Siltation		Taem wota i wasem ol smol pis blong graon igo long ol riva mo nara ples blong wota, we oli kam olsem klaod o oli stap tantanem olbaot.

Word	Bislama	Definition
Slash and burn agricultural technique		Fasin blong katem, bonem mo plantem ol kakae long graon blong mekem garen.
Sustainable agriculture		Wan difren kaen fasin blong agrikalja we i traem blong skelem ol nid blong ol fama mo famli blong olgeta mo sem taem kipim najrol envaeromen i sem mak. Hemi inkludim ol praktis olsem plantem ol tri mo ol kakae andanit long olgeta we i help blong kipim graon i rij mo i stap stret.
Sustainable development		Diveelopmen we hemi mitim ol nid blong ol man we i stap nao-ia be we i no spoelem hao ol man long fiuja i save mitim ol nid blong olgeta.
Threatened species		Sam plant mo anamol we oli stap long denja blong evriwan long ol kaen ia i ded olgeta mo i lus aot long wol.
Transpiration		Wei we ol smol drop wota oli kamaot long plant tru long lif blong olgeta. Hemi pat blong proses blong ivaporesen insaed long saekol blong wota.

Word	Bislama	Definition
Vertebrates		Ol anamol we i got bon long baksaed long olgeta, olsem ol fis, ol pig.
Weed		Wan kaen plant we ol man i no wantem, we hemi demejem ol komuniti, najrol envaeromen mo ikonomi.
Wetland		Wan kaen envaeromen we hemi fulap long wota, maet oltaem, maet blong smol taem nomo.

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Fidbak long risos ia

Plis giv han blong mekem buk ia I kam mo gud. Letem mifala i save wanem yu tinkbaot hem. Fulumap fom ia (daon) o raet street long mifala long email address ia:

resources@livelearn.org.

You save sentem fom ikam tru long fax o post I kam long Live & Learn Vanuatu (look insaed long bak kova blong faenem address).

Nem blong yu mo ples we yu stap long hem (yu no gat nid blong givim sapos yu no wanted)

.....

Yu yusum buk ia long wis wei?

.....

Yu faenem i isi blong folem ol samting insaed long buk ia? (Sipos no, talemaot wanem I no klia)

.....

I gat eni kaen infomesen we i no stap long buk ia we yu tink se i sud stap?

.....

Hao maet mifala i mekem bukia i kam mo gud?

.....

Yu gat eni nara mo samting blong talemaot?

.....

Tangyu tumas from ol tingting blong yu!

Ples blong raetem ol not



Ples blong raetem ol not



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Environmental Education

This 'Invasive Species' Pocket Guide was produced by Live & Learn Vanuatu and funded by the European Union as a part of the project 'Testing and modelling preventative measures to limit the spread and ecological impact of invasive species in Small Islands Developing States (SIDS)'.

Acknowledgements:

Thank you to all of the people and organisations who have contributed to the writing of this 'Invasive Species' Media Guide and the series of resources for this project in combating invasive species in Vanuatu. In particular we thank the following organisations:

- Department of Forests (DOF)
- Department of Environmental Protection and Conservation (DEPC)
- Department of Agriculture and Rural Development (DARD)
- Department of Fisheries
- Farm Support Association (FSA)
- Department of Biosecurity (DBS)

We would also like to acknowledge the contributions of the National Invasive Species Technical Advisory Committee (NISTAC), its chairperson and members: Sylvério Bule (Bio-Security), Peter Kaoh (Farm Support Association), Donna Kalfatak (Department of Environmental Protection and Conservation), Philemon Ala (Department of Forests), Peter Iesul (Department of Agriculture), Javen Ham (Department of Fisheries), Lily Fatdal (Invasive Species Project Coordinator, Department of Environmental Protection and Conservation), Sandy Hoffman Mael and Dr Andrina KL Thomas.

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Ol rabis gras mo anamol long Vanuatu

Smol buk

Long Vanuatu, olgeta rabis gras mo anamol oli gat wan big ifek long dakbus blong yumi, long ol anamol mo plant blong kaontri mo ol fasin blong laef blong yumi. I gud tumas sapos ol man oli luk gudwan long ol kaen fasin blong manejem graon blong olgeta. I no gud blong oli mekem ol sem mak mistek we ol man bifo i bin mekem mo sem taem mekem mo damej long envaeromen.

Ol fama, ol man blong agrikalja, ol man we oli wok long saed blong envaeromen, ol studen, ol grup blong ol komuniti, ol NGO mo ol nara maneja blong graon long Vanuatu oli save yusum smol buk-ia. Papos blong buk ia hemi blong katemdaon fasin we ol rabis gras mo anamol ol seraot long Vanuatu mo blong gat gudfala impak long ol kaen plant mo anamol insaed long envaeromen, long ol komuniti mo long fasin blong mekem sua se i gat inaf kakae long fiuja.

Smol buk ia i blong:

- Givhan long ol fama mo maneja blong graon blong aedentifaem stret ol rabis gras mo anamol taem oli stap wok aotsaed tru long gudfala diskripsen blong ol kaen plant mo anamol ia.
- Givhan long ol maneja blong mekem ol stret desisen tru long save blong olgeta long hao blong manejem o katemdaon namba blong ol rabis gras taem olgeta i stap wok, mo hao blong yusum wan wei blong manejem ol gras we i yusum tu kaen fasin.
- Impruvum ol skil blong manejem rabis gras tru long wan sistem we i yusum ol difren kaen fasin mo we i wok gudwan.



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