

Lukaut long bus, graun na wara (envairomen)

Wei mipela bai lukautim envairomen



FRIEDA RIVER

Wanpela ples arere long Wara Frieda

FRL (Frieda River Limited) iluksave long ol bagarap ikamap long envairomen we arapela maining kampani imekim long PNG olsem na FRL lainim ol asua we ol i mekim na bai ino inap ripitim. Plen bilong FRL en long kamapim developmen we ilukautim bus, graun na wara na wankain taim bringim senis long ol pipol we dispela senis inap stap longpela taim. Igat 4pela het tok o as tingting we istiaim wok bilong mipela long kirapim dispela projek.

- Lukaut imas stap long envairomen
- Laip, sindaun na stap bilong pipol imas orait
- Yusim teknoloji we iorait
- Wok imas gat profit bilong en

Projek bai ino inap go het sapos em ino inapim dispela foapela as tingting antap.

FRL ibihainim olgeta loa bilong PNG wantaim tu loa na polisi bilong em yet taim em iputim kamap plen bilong kirapim projek. Antap moa yet, FRL ibihainim ol intensonel stendet na prektis bilong biknem grup olsem:

- Mineral Council of Australia's Enduring Value Framework;
- International Council on Mining and Metals Sustainable Development Framework;
- The Equator Principles; and
- International Finance Corporation (IFC) Environmental and Social **Standards**.

FRL kamapani wantaim papa kampani bilong en, PanAust isave bihainim dispela ol stendet na prektis. Olsem yu ken lukim ol prais na bikpela luksave we gavaman bilong kantri Laos igivim long kampani².

ENVAIROMEN PROSES BILONG KISIM TOK ORAIT LONG GAVMAN

Nau yet, han bilong gavaman igo pas long environment long kantri ol ikolim Conservation and Environment Protection Authority (CEPA) igo pas long glasim aplikesen bilong envairomen ol ikolim (EIS) we FRL ibin putim long han bilong gavman long yia 2018. Insait long dispela proses, CEPA ibin kisim ol namel man huset igat save bilong envairomen long skelim dispela aplikesen (EIS). Bihainim dispela, CEPA ibin go long ol kominiti na tokaut long stori bilong dispela envairomen aplikesen (EIS) na kisim tu tingting bilong ol pipol.

Igat kainain stadi long sait bilong envairomen na pipol ibin kamap long dispela projek long plenti yia. Dispela ol stadi ibin lukluk long ol kain bagarap na hevi inap kamap taim main ikamap. Wankain taim tu, stadi ilukluk long hau long banisim na stretim sapos birua ikamap. Ol saveman iputim wantaim ol wok painim aut bilong ol dispela stadi na kamapim EIS. Sapos CEPA igivim tok orait long project igo het, bai igat ol kondisen antap long dispela tok orait. Wanpela bilong ol dispela kondisen em olsem, kampani imas oltaim sekim envairomen antap long bus, graun na wara wantaim olsem nogat bagarap ikamap. Sapos kampani ino mekim dispela sek bai gavman ipasim projek.

Yu inap painim aut moa stori bilong EIS na ol arapela ripot bilong envairomen na pipol sapos yu bihainim dispela link hia: <https://www.friedariver.com/eis>

Ol ripot bilong EIS i longpela na i teknikal we ol saveman klia gut long dispela ol iken ritim na save. Olsem na dispela pepa nau yu ritim, igivim sampla tok klia long yu mas save long hau FRL bai lukautim envairomen na ol pipol.

WARA SIPIK

FRL i luksave olsem Wara Sipik em laip bilong ol pipol na kominiti long dring, kuk, waswas na rot bilong kisim moni. Ol pipol i wari olsem nogut hevi bilong main ibagarapim Wara Sipik na laip bilong ol pipol tu ibagarap. FRL ikisim ol dispela wari na tingting na em i disainim projek antap long dispela ol tingting poret olsem hevi ino ken kamap.

Ol ki samting yu mas save:

- Haidro pawa dem bai istap antap long Wara Frieda. Wara Frieda em joinim Wara Sipik. Olsem 5% tasol bilong Wara Frieda imekim kamap bikpla Wara Sipik.
- Ol arapela main long PNG olsem Ok Tedi, Porgera na Lihir main, ol itromoi pipia bilong main igo long wara solwara. Tasol long Frieda, mipela ino inap tromoi pipia igo long wara o igo long solwara.
- Long Frieda, olgeta pipia ston na teling bilong main bai slip aninit olsem 40 mita insait long haidro pawa dem. Dispela bai banisim ol pipia long noken kamapim esid nogut na wankain taim, dem bai holim ol dispela pipia ino inap igo daun long Wara Frieda na Wara Sipik.
- Antap long wok bilong holim pipia bilong main, dispela haidro pawa dem inap long holim bek olsem 99% bilong ol graun ipas wantaim wara o long tok Inglis, sedimen. Dem bai holim bek ol graun wara o sedimen so ino inap igo daun long Frieda or Sipik Wara.
- Dispela teknoloji bilong mekim dem bilong putim pipia bilong main igo aninit long wara long igat luksave long en long maining indastri bikos dispela wei tasol bai inap long banisim hevi bilong bagarap ikamap long wara.
- Haidro pawa dem olsem dispela kain we mipela iplenim long Frieda, em istrong moa winim teling dem. Kain haidro pawa dem mipela ilaik mekim long Frieda luksave long ren na guria na mipela i disainim gut. Yu inap painim moa stori bilong dispela long [hia](#).
- Plen bilong mekim strongpela haidro pawa dem na putim ol pipia bilong main igo insait em wanpela rot bilong abrusim birua long ino ken kamap long wara, we ol arapela main imekim long PNG.
- FRL bai bihainim stendet bilong Wol Helt Ogenaisesen we luksave long kwaliti bilong wara bilong drink. Taim konastraksen bilong main ikamap, taim main i operet inap taim main ipas, Kampani bai bihainim dispela stendet oltaim long lukautim wara. Mipela ilaik tok klia olsem igat ol arapela kemikol we istap bipo yet long graun na wara pastaim long main ikamap. (Dispela ol kemikol em FRL imekim wok painim aut na istap insait long envairomen stadi).

OL IMPEK LONG TAIM MAIN IKIRAP NA TAIM EM IPAS

Bai igat liklik impek long envairomen olsem long graun na wara taim konstraksen bilong haidro pawa dem ikamap. Em hia sampela samting yu mas save:

- Bai igat sampela graun wantaim wara o tok Inglis sedimen igo insait long Wara Sipik.
- Levul bilong Wara Frieda bai igo daun liklik taim dem stat long pulap. Tasol levul bai kam bek nomol taim dem ipulap pinis.
- Taim dem ipulap pinis, Wara Frieda bai ron nomol na bai nogat senis ikamap long levul bilong wara igo olsem bungim Wara Sipik.

Main bai operete moa long 33 pela yia na haidro pawa dem tu bai operet moa long 100 pela yia. Taim main na haidro pawa dem tu ipas, levul bilong Wara Frieda bai wankain. Ino gat senis bai kamap.

Ol sampela hevi bilong enviromen inap kamap na wei bilong banisim

Ino konsen bilong Wara Sipik tasol em FRL ilukaut long en. Igat ol arapela konsen bilong envairomen istap (we EIS na ol arapela stadi ipainim aut dispela) na FRL bai putim banis long daunim wanem kain hevi bai kamap. Sampela bilong ol dispela hevi na rot bilong banisim em istap tamblo we yu ken ritim na save.

WANEM KAIN HEVI

Esid nogut kam aut long pipia bilong main: Pipia ston na teling bilong main sapos istap long ples klia, inap kamapim esid nogut we iken go insait long wara na bagarapim wara.

Graun i miks wantem wara o sedimen na ol arapela kemikol: Projek istap long maunten hap we ren isave pundaun plenti taim. Igat sans bilong graun i miks wantem wara o sedimen na ol arapela kemikol bipo yet istap, ol igo insait long wara kamapim hevi.

Graun i luslus: Taim wok ikamap long projek eria, ol graun bai i luslus na sampela taim, graun iken bruk.

Ples ino inap wankain olsem bipo: Pit bilong main na ol wok bilong maining bai senisim pes bilong bus, graun na ol samting.

ROT BILONG STRETIM

FRL bai putim ol dispela pipia ston na teling bilong main igo slip aninit long raun wara long haidro pawa dem. Sapos ol dispela pipia ston na teling istap ples klia, ol bai pas wantaim win na kamapim esid nogut. Putim ol igo aninit long wara bai ol ino ken pas wantem win.

Namba wan wok bilong dispela haidro pawa dem em long holim ol pipia ston na teling bilong main. Wankain taim tu, dispela dem inap long holim ol graun i miks wantem wara. 99% bilong ol graun i miks wantem wara bai stap insait long dem.

Narapela samting tu bilong mekim em:

- kamapim klinpela wara na salim wara igat graun o sedimen igo long ples bilong en yet; na
- tritim wara i kamaut long pit bilong main na kontrolim esid nogut na ol arapela kemikol.

Igat plen istap long daunim hevi bilong graun i luslus na bruk. Ol hap we istap klostu long wara, bai ino gat bikpela disteb ikamap bikos eria arere long wara inap kamapim graun lus. FRL bai tanim ron bilong wara long abrusim wara ino ken go long eria bilong wok. Taim olgeta wok ipinis, bai wok bilong stretim ples ikamap. Mipela bai growim bek ol bus na diwai samting bilong strongim graun.

Bai igat program bilong stretim ples na growim bek ol bus bihian long wok ikamap. Igat wok bai kamap long ol bus arere long hap ples istap. Program bai lukluk long stretim ken ol bus na growim bek ol diwai samting long hap we disteb ikamap.

WANEM KAIN HEVI

Impek long wara aninit long graun: Taim konstraksen bilong main istat, bai igat wara i kamaut long hap bilong karamapim pipia. Bensin iken lik, na sampela kemikol ikapsait na igo insait long wara aninit long graun.

Long konstraksen bilong haidro dem pawa, bai igat sampela disteb ikamap tu long wara insait long graun.

ROT BILONG STRETIM

Stadi bilong envairomen o EIS itokaut long sampela rot bilong daunim na banisim hevi ino ken kamap long wara aninit long graun. Em hia sampela bilong dispela.

- Bai igat progrem bilong tritim wara we igat impek long en;
- Menesmen progrem bilong wara aninit long graun;
- Prektis bilong karamapim pipia o hol wantaim graun, bai bihainim intenesonel standet na prektis;
- Sekim bai kamap klostu klostu long wara aninit long graun;
- Taim main ipas, hol we ol i dikim long rausim kopa gol, bai wara karamapim long stopim esid nogut long ino ken kamap; na
- Graun wara we i bagarap bai ol i luksave na tritim inap kwaliti bilong wara iorait.

Mipela bai bihainim olgeta step antap long daunim hevi bilong wara aninit long graun ibagarap. Taim mipela iskelim, em iluk olsem ino gat bikpela hevi bai kamap long wara aninit long graun.

Impek long wara iron antap: hevi bilong bagarap ikamap long wara long ol wok ikamap antap long graun. Dispela wara i ron igo daun long Wara Sipik na ol kominiti.

Igat luksave olsem dispela em wanpla hevi olsem na plen em long mekim haidro pawa dem. Dispela haidro pawa dem tasol inap long holim ol ston na pipia bilong main. Long wankain taim, igat arapela eksen long mekim olsem:

- Wokim baret antap eria bilong hol bilong main. Dispela baret bai klinpela wara iron long en we ino ken pas long eria bilong maining.
- Ol wara i ron long sait sait bilong hol bilong main, bai stretim ol so o liken go long hap bilong ol yet. Bihain bai ol irausim ol dispela wara na salim igo long tritmen plent.
- Dispela ol wara we iraus long hol bilong main, bai mas pastaim, tritim wantem kambang. Kambang igat pawa long daunim esid nogut. Taim esid nogut iraus pinis orait, dispela wara bai ol itritim na mekim em klin na bihain, putim igo insait long haidro pawa dem we bai miks wantem raunwara bilong haidro dem bilong givim pawa.

WANEM KAIN HEVI

Kliaim ol bus na diwai samting: Ol abus, pisin na enimol nambaut bai ranawe o dai sapos disteb ikamap long hap bilong ol istap.

ROT BILONG STRETIM

Bai igat impek taim wok ikamap long bus na graun, tasol em hia sampla samting mipela bai mekim long daunim hevi bilong dispela:

- Igat mak na tambu long wanem hap blong rausim ol diwai bus samting, na wanem hap long noken rausim nating ol bus na diwai;
- Luksave long wanem ol enimol namba bilong ol i liklik na ol ilaik pinis. Bai igat progrem bilong lukautim ol na bus eria we ol iken stap gut;
- Sapos i hat long larim ol enimol istap bikos long distebens, bai igat progrem bilong muvim ol igo long narapla hap o bus we ol inap kisim gutpela lukaut na kamap plenti;
- We mipela inap mekim, bai mipela growim ol diwai na ol arepla gras o plent na planim ol bek long hap disteb ibin kamap;
- Luksave long ol gras nogut na arapela ol sik bilong bagarapim diwai samting na banisim ol ino ken kam insait na bagarapim bus.

Win nogut ol ikolim Grin Haus Ges: Projek iluksave olsem ol masin bilong wok bai kamapim dispel ages nogut igo long win, tok Inglis ol ikolim Green Haus Ges (GHG).

Long plen bilong how dispela projek bai ikamap, bai yu lukim olsem olgeta wok bilong en, bai daunim hevi bilong GHG winim ol arapela maining projek. Em hia sampela as na mipela bilip olsem:

- Yusim bilong haidro pawa projek na ino bensen long pawarim main na arapela samting bilong operesen;
- Projek bai yusim ol kar iwok long pawa;
- Liklik namba tasol bilong ol kar o masin isave yusim disel o bensen na bai igat rul i stap long hau ol iyusim masin so masin ino inap kamapim plenti ol dispela ges nogut; na
- Putim wanpla menesmen sistem bilong sekim, meserim, luksave na daunim GHG long wok mipela imekim.

WANEM KAIN HEVI

Impek long solwara eria long Vanimo:

Disteb ikamap long nambis eria na solwara taim upgret bilong Vanimo pot ikamap.

ROT BILONG STRETIM

Em ol sampela samting mipela bai mekim long daunim ol impek long taim wok ikamap long Vanimo pot.

- Luksave na wok arere long hap we ino ken tasim o distebim rif na ol gras bilong rif long taim bilong konstraksen;
- Yusim wanpela kain sistem long tok Inglis, 'Soft Start' long taim bilong wok olsem bai ino gat bikpela nois bilong ronim ol abus bilong solwara istap long eira bilong wok;
- Bihainim menesmen plen bilong holim gut ol pipia long tok Inglis ol itok, 'quarantine management plan';
- Ol pipia we ikamap long taim bilong wok na aninit long loa bilong PNG we itambu long tromoi ol dispela pipa, em bai igat wanpela sip i hanga bilong holim ol dispela pipa. Projek bai bihainim loa na stendet bilong IMO long rausim ol dispela pipa, tritim, yusim ken o nogat bai tromoi gut long ples stret bilong holim ol kain pipia.
- Bai igat menesmen plen bilong lukatim ol rabis o pipia; na
- Bai igat plen tu bilong hau projek iken kwik taim rispon long taim hevi bilong oil, bensin o ol samting olsem ikapsait.

Haidropawa dem ibruk: Igat bikplela poret istap sapos haidro pawa dem ibruk na bagarapim ples na laif bilong pipol na envairomen.

Dispela dem em mipela i disainim long stendet bilong haidro pawa dem. Haidro pawa dem em i strong moa winim ol arapela kain dem olsem teling dem bilong main. Antap moa, dispela haidro pawa dem em mipela i stadi gut long strong bilong en long holim pipia na tu kamapim pawa na inap sindaun long hap we igat bikpela ren na guria. Igat plen tu istap long hau bilong luksave sapos hevi bilong dem ikamap na wanem wei mipela iken toksave long ol pipol na kominiti long taim bilong emejensi. Yu inap painim moa long dispela link [hia](#).

WANEM KAIN HEVI

Sait sait bilong hol bilong main ibruk: Dispela hevi inap kamap taim main ipas. Wara bai pulmapim hol bilong main na mekim sait sait bilong hol i malumalu na inap bruk kamapim hevi long envairomen.

Hevi kamap long paipain: Projek bai putim tupela kain paipain:

- Paipain bilong teling long hap bilong prosesim kopa gol na paip lain bilong salim teling igo long dem; na
- Paipain bilong karim kopa wesan igo long hap bilong prosesim long pot long Vanimo.

Sapos wanpela bilong tupela kain paipain ibruk inap kamapim hevi long envairomen.

ROT BILONG STRETIM

Ol enjina bai mekim disain na putim kontrol long dispela hevi ino ken kamap. Sampela bilong ol kontrol em olsem:

- Haidro pawa dem istap tamblo long pit bilong main inap long holim ol wara na wanem samting iron wantaim wara bilong graun.
- Katim bilong sait sait bilong main pit bai bihainim gut disain na plen bilong ol enjinia. Dispela plen isave skelim hau ston na graun islip na tu wara iron insait long graun. Olsem bai projek ikatim graun bihainim stadi na save istap.
- Bai igat kwaliti kontrol na tu projek bai kisim namel man ol igat save long lukluk long disain na wok bilong stretim na lukautim pit bilong main taim maining ipinis.
- Disain bilong ples bilong wara i ron kamaut long main pit taim pit ipulap long wara. Bai igat rilis point, o ples taiming bilong rausim wara olsem bai igat gutpela kontrol long level bilong wara insait long pit.

Em hia sampela ol plen bilong mipela sapos hevi bilong paipain ikamap:

- Igat plen istap long kwiktaim luksave na stretim hevi;
- Yusim spesol kain paplain we ol i disainim gut na igat kwaliti bilong mekim dispela wok. Ino ol nomol paip nambaut;
- Wok bilong testim ol paipain bai kamap bifo long putim ol igo blong wok;
- Bai igat wanpela spesel test long paip sapos em istrong long muvim ol samting bifo ikisim tok orait long instolim;
- Igat progrem bilong lukautim ol paip;
- Bihainim prosidja bilong operetim paipain;
- Mipela bai skelim gut ol ples na lukave long wanem hap bilong silipim ol paip;
- We inap, mipela bai silipim paipain aninit long graun;
- Bai igat imejensi paipain bilong teling sapos igat hevi ikamap long wanpela paip. Dispela bai inap long larim wok iken igo na stretim iken kamap; na
- Wok bilong sekim wara, graun na envairomen tamblo long Wara bai kamap klostu klostu long sekim sapos hevi bilong paip ino ken gat impek.

WANEM KAIN HEVI

Meterial we inap kamapim hevi long man na enviromen: Igat ol meterial we sapos ino lukaut gut na istap long ples klia o i kapsait inap kamapim hevi long man na tu long enviromen. Sampela bilong ol kain meterial em, bensin bilong kar na moto, oil, na ol arapela marasin bilong miksim wantem kemikol.

ROT BILONG STRETIM

Igat loa na stendet istap nau we ikaramapim yus, lukaut, na muvim bilong ol meterial we inap long kamapim birua long arapela man na tu long enviromen. Sampela bilong ol laukaut we mipela bai bihainim em:

- Makim gut ol bokis, o karamap bilong ol dispela kain meterial so ol man iken lukim na save;
- Igat plen istap long menesim hevi we kain ol meterial inap kamapim. Proses na prosidja ikaramapim tu lukaut sapos igat kapsait ikamap;
- Bai igat hap bilong putim gut ol kain meterial olsem;
- Ol samting we yus bilong ol ipinis olsem ol oil, wara bilong miksim kemikol em igat spesol hap bilong putim ol. Mipela bai putim long dram na bihaim putim stret igo long hap bilong haitim we iseif.
- Bai igat menesmen fesiliti bilong lukautim enviromen klostu long hap we main i operet. Mipela i disainim dispela fesiliti long menesim pipia ikamap long main; na
- Bai igat wankain menesmen fesiliti long Vanimo long taim bilong konstraksen. Dispela fesiliti em bilong mekim wankain wok bilong lukautim na holim bek ol pipia.

¹See: <https://panaust.com.au/wp-content/uploads/2022/02/PanAust-Sustainability-Policy-English-Nov21.pdf>

²See: <https://panaust.com.au/external-recognition>