

Chapter 16 - Non-Technical Summary

16.1 - Introduction

The Ministry of Public Works of the Government of Timor-Leste (GoTL) is seeking approval to construct and operate the Díli Drainage Infrastructure Upgrading Project (DDIUP), a critical project of rehabilitation of approximately 70Km of drainage channels which derives from the 2012 Díli Drainage and Sanitation Masterplan (DSDMP), under the Government's Strategic Development Plan (2011 – 2030).

This Drainage Project requires Government environmental licensing and approval under Timorese Law, where it has been classified as a Category A under Decree-Law no. 05/2011 – Environmental Licensing because it is assumed to have significant environmental and social impacts.

The National Directorate for Basic Sanitation (DNSB) is the project proponent representative and has requested Águas de Portugal – Timor-Leste (AdP-TL), the lead Engineering Consultant for the DDIUP, to provide for environmental services for this purpose, who in turn contracted the consultants OASIS-Sustainable Projects, together with JGP Consultancy-Portugal (OASIS/JGP or the EIS team) to provide said services.

This non-technical resume is the supporting document for public consultation, transcribing, in a simple and summarized way the most relevant information contained in that environmental impact study regarding the proposed DDIUP project, highlighting the baseline situation, impact analysis and minimization measures. Wherever there is doubt regarding the content of the Summary, please consult the Environmental Impact Statement (EIS) and the Environmental Management Plan (EMP) for clarification.

16.2 - What is the EIA process

EIA is a regulatory process that is governed by Timor-Leste law. The Timorese Government set out laws for the Environmental Impact Assessment (EIA) process in 2011 through Decree-Law no. 05/2011 – Environmental Licensing, on the assessment of certain public and private projects on the environment. This has been subsequently reinforced and regulated by a series of Ministerial Diplomas that have organized and defined the contents for the EIA process documentation, Public Consultation process, etc.

The EIA follows a process with the following stages:

- a) **Screening** is the first stage of the EIA process where the Environmental Regulator (the National Authority for Environmental Licensing (ANLA) or the Secretary of State for Environment decide if an EIA is required.
- b) Once it has been agreed that EIA is required, **Scoping** is undertaken to define what should be assessed as part of the EIA and reported in the Environmental Impact Statement (EIS). This is done in partnership between the proponent and the Environmental Regulator and results in a Terms of Reference (TOR) Document for the EIA.
- c) With the scope set, relevant information on the **environmental baseline conditions is collected**. This information is then used initially to understand the potential environmental effects and inform the design of the proposed development to minimize the potential for significant adverse impacts.

- d) The **formal impact assessment process** is then undertaken of the proposed scheme parameters to define the significant impacts of the proposed development.
- e) Where significant adverse impacts cannot be minimized through alterations to the design itself, **mitigation or reduction measures are considered**. Monitoring may also be considered to measure the actual significance of the impact during and post-construction to allow management of mitigation where appropriate.
- f) Once the EIA is completed, the draft EIS is submitted to the Environmental Regulator for **Public Consultation**, which is the phase this project in at the moment;
- g) After Public Consultation, the Proponent revises and finishes the EIS/EMP documents and delivers a final version of the document for **decision on the environmental licensing**.

16.3 - Purposes and Structure of the Environmental Impact Statement (EIS)

EIA is a process through which the likely significant environmental effects of a development proposal can be identified, assessed and, wherever possible, avoided or mitigated (reduced). This process and its outcomes are then reported in the EIS to decision makers, the Environmental Regulator, and the public. The NTS is provided to allow a wider public understanding of the project and environmental effects of the project.

The EIS is set out in a structured manner to allow easier navigation:

- Volume 1 comprises the Main Environmental Statement (EIS) and the Non-Technical Summary (NTS);
- Volume 2 comprises the Appendixes;
- Volume 3 comprises the Technical Drawings;
- Volume 4 comprises the Environmental Management Plan (EMP).

16.4 - Opportunity for Public Consultation

Should interested parties or the public wish to make comment on the content of this EIS, during the Public Consultation phase, they must be made in writing and delivered to the Environmental Regulator at:

The Environmental Regulator

ANLA – Autoridade Nacional para Licenciamento Ambiental

Departamento de Avaliação de Impacto Ambiental

Edifício do Fomento, Avenida Dom Aleixo, Mandarim,

Díli, Timor-Leste

With copy to the following entity:

The Proponent

DNSB – Direção Nacional de Saneamento Básico

Departamento de Saneamento

Edifício DGAS, Rua Jacinto Cândido, Caicoli

Díli Timor-Leste

16.5 - Project Description and of the affected environment

The Project is located in Dili Municipality, Timor-Leste, covering approximately 36 km² of the Dili Urban area.

The project proposes the rehabilitation/new construction of a higher capacity drainage system with the following infrastructures:

- 1) Rehabilitation of existing and/or Construction of New Drainage Channel;
- 2) Major River Improvements to drain the runoff from the mountain to the sea more easily;
- 3) Flood Retention Basins to help control of the flow in the middle of the city; and
- 4) Important Drainage Interceptors or Channel Diversions in some areas of the lower hillside (Caicoli and Vila Verde) to divert some flow to the river systems (kuluhun and maloa) to ease risk of flooding from the city center.

The project is planned to be developed during 5 years (2020 to 2024), with a total investment estimated at close to 145 million US dollars (see Figure 16-1).

The project follows the environmental laws in effect in Timor-Leste, namely DL24/2012 called the base law for environment and Decree-Law no. 5/2011, on environmental licensing, as well as the World Health Organization (WHO) and International Finance Corporation (IFC) standards given Timor does not have these technical standards yet.

The project is located in the Díli urban basin, almost within the flat area. It is surrounded to the South by the mountain ranges from Becora Manleuana, in the West by Comoro River and the mountain ranges up to the airport and to the North by the coastal area of Díli city.

The capital Dili is, together with its surrounding areas, the only one in Timor-Leste with a population considered of high density, housing approximately 238,000 citizens (20% of the country's population). Because of this Díli city is very scarce in regards to existing wild animals and terrestrial flora, because of the constant urban pressure for development of the city, with green cover only in a few parks, where the natural vegetation is being substituted by introduced, aesthetic species for urban landscaping or being felled down due to be cleared for construction, industry or housing.

Throughout the project's AOI area, there is dense human occupation and social and economic use of the territory by populations (housing, kios, shops and commercial spaces, agricultural areas). Residential uses predominate in almost the entire city area except the central area, where public services and government institutions, port infrastructures are concentrated, as well as commercial and service activities. The commercial areas are distributed throughout the city, namely along the main roads, but with greater concentration in the western zone, where one of the main commercial areas is located, in the relative proximity of the airport.

16.6 - Why do we need to do the project?

The ultimate objective of the project is to build a Storm water Control System that will improve public health, influence better hygiene practices and improve environmental and social conditions so as to promote conditions that enable economic prosperity within the city and ensure:

- The inflow volume control from sub basins with the highest contribution.
- Improved planning, management, operation and maintenance of the drainage system.
- Implementation of flood reduction and flood protection strategies.

16.7 - What are the project's greatest impacts?

The project predicts that the highest negative impacts may be from the possible resettlement of an estimate 730 families, homes and businesses close to the drainages to be rehabilitated, as well as those impacts that come from the civil construction of the drainage, such as noise, dust, earthworks, etc.

However, the most important and positive impact will be the reduction of the flood risk in the city and, indirectly the improvement of the health conditions and the ground water quality in the city, for the benefit of its citizens.

16.8 - Who have we talked to about the project?

Since 2013, when the environmental impact assessment process started for this project, the government has engaged with stakeholders that are most likely to be affected by the projects components. The DNSB and the Inter-Ministerial Working Group set up to deal with Resettlement have carried out several meetings and Public Consultations regarding the implementation of Dili Sanitation and Drainage Master Plan, on the prepared DEDs in the most affected areas of the project, to identify the communities' feedback and preoccupations and who would be affected.

More recently, in May 2019, the Project EIA Team conducted public consultation and disclosure meetings for the preparation of the end of Phase II of the project, during the TOR and the Baseline Phases, with detailed fieldwork and meetings held with specific, targeted stakeholders.

With this information, the EIS team has been able to adapt more to the project's needs and to that of the community's needs and will now undergo a Public Consultation to explain which channels, etc, will be in which Administrative Post and the respective impacts and mitigation measures the proponent intends to implement to reduce the environmental impact.

16.9 - How will we control the project's impact?

The environmental impacts from the Project during construction and operation will be guided by the Environmental Management Plan (EMP), which will guide the constructor and DNSB on what they will have to do and what environmental impacts they will have to mitigate so that the project doesn't impact a lot of people or the surrounding environment.

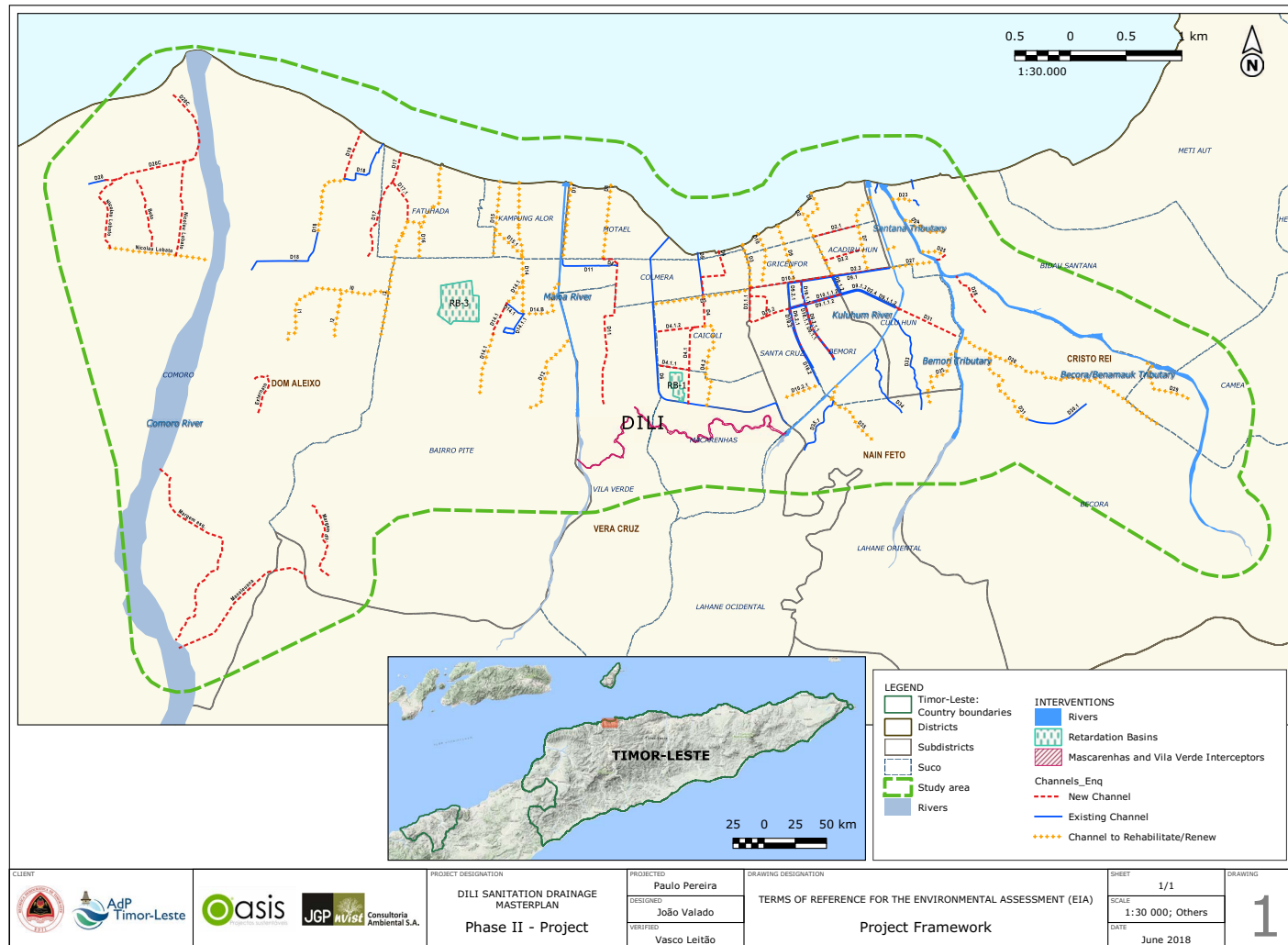
DNSB will be monitoring the construction and development impacts such as excavation waste, noise, air quality, water quality and supervising the process of resettlement with the interministerial group that has been organized just for this purpose. A system of complaints register will be established to help resolve issues associated with the Project and provide clarification to any interested party, whichever the doubt or problem, throughout the project's implementation and beyond.

16.10 - Conclusions for now...

The main conclusions in the impact assessment are that the beneficial or positive impacts that stand out coincide with the development stage to meet the overall objective of the project, which is the reduction of the flood risk itself, with all the indirect benefits of decrease of soil erosion and landslides, improvement of ground water quality, land use management and the implementation of regional plans and programs that deal with urban planning and the improvement of urban living.

It is reasonable that the higher negative impacts of this project refer broadly to the social aspect of the future resettlement of persons and households and the contents of this EIS will be paramount in guiding the established DDIUP inter-ministerial group for resettlement in the preparation of the Resettlement Action Plan, led by DNSB. The overall objective of reducing frequent flooding occurrences in Díli, during the wet season, is a solution that should be agreeable between all parties and stakeholders. This will be reviewed in the public consultations to come in the next stage, opening the opportunity for the affected communities to review and identify any issue that may have not been covered and discuss on the possible solution for mitigation.

Figure 16-1 Proposed Rehabilitated and New Drainage Channels in Dili



Kapítulu 16 – Rezumu La’ós-Tékniku

16.11 - Introdusaun

Ministériu Obras Públikas Governu Timor-Leste nian (GoTL) buka hela aprovasaun hodi harii no opera Projetu Atualizasaun Infraestrutur Drenajen nian iha Díli (PAIDD, iha ingles DDIUP), projetu krítiku ida ba rehabilitasaun aproximadamente 70KM ba kanal drenajen nian mak hahú hosi Drenajen Díli 2012 no Planu Prinsipal Saneamentu no Drenajen (PPSD), iha Planu Estratéjiku Dezemvolvimentu Governu nian (2011 – 2030).

Projetu ne’e presiza lisensiamentu no aprovasaun ambiental Governu nian iha abrigu Lei Timorens, ne’ebe klassifikadu hanesan Categoria A ba abrigu Dekretu-Lei nº 05/2011 – Lisensiamentu Ambiental tanba konsidera katak fó impaktu signifikante ba ambiente no sosial.

Diresaun Nasionál ba Saneamentu Báziku (DNSB) ne’e representante proponente ba projetu no husu ona Águas de Portugal – Timor-Leste (Adp-TL), konsultor enjeñeria prinsipal ba (DDIUP), atu fornese servisu ambiental sira ba objetivu ne’e, no ba ninia vez kontrata konsultor sira hosi OASIS-Sustainable Projects, hamutuk ho JGP Consultancy-Portugal (OASIS/JGP ka ekipa DIA) atu fornese servisu mak dehan tiha ona.

Rezumu la’ós-tékniku ne’e dokumentu apoiu nian ba konsulta públika, transkreve, ho maneira simples no resumida ba informasaun ne’ebe relevante liu iha estudu nia laran ba impaktu ambiental kona-ba projetu DDIUP nia proposta, destaca situasaun liña baze nian, análize impaktu nian no sasukat ba minimizasaun. Bainhira iha dúvida kona-ba rezumu konteúdu nian konsulta Deklarasaun Impaktu Ambiental (DIA) no Planu Jestaun Ambiental (PJA) ba klarifikasaun.

16.12 - Saida mak prosesu AIA

AIA ne’e prosesu regulatóriu ne’ebe hala’o ho lei Timor-Leste nian. Governu Timorens hasai lei ba prosesu Avaliasaun Impaktu Ambiental nian (AIA) iha 2011 liuhosi Dekretu-Lei nº 05/2011 – Lisensamentu Ambiental iha avaliasaun ba projetu públiku balu no privadu kona-ba meu ambiente. Ida-ne’e refsadu no regulamentadu tiha ona ho diploma ministerial mak organiza no define nia konteúdu ba prosesu dokumentasaun, prosesu Konsultasaun Públiku, sst.

AIA tuir prosesu hanesan etapa sira tuirmai:

- h) **Triajen** ne’e etapa dahuluk iha prosesu AIA ne’ebe Regulador Ambiental (Autoridade Nasionál ba Lisensiamentu Ambiental (ANLA) ka Sekretáriu Estadu ba Meu Ambiente decide se AIA presiza ka lae.
- i) Karik dala ida iha akordu AIA presiza, **Scoping** se relaiza atu define saida mak atu avalia hanesan parte AIA nian relata ba Deklarasaun Impaktu Ambiental (DIA). Ida-ne’e halo iha parseria entre proponente no Regulador Ambiental no rezultadu iha dokumentu Termus ba Referensia (TBR) AIA nian.
- j) Ho Scope halo ona, relevante informasaun kona-ba **kondisaun ambiental liña baze tau hamutuk ona**. Informasaun ne’e orsida uza inisialmente hodi hatene potensial efeitu ambiental nian no informa dezeña dezemvolvimentu propostu hodi minimiza potensial impaktus oioin mak signifikativu.
- k) **Prosesu formal ba avaliasaun impaktu nian** realiza ona ho parametru eskema ba propostu nian atu define impaktu signifikativu sira hosi dezemvolvimentu propostu.

- l) Bainhira impaktu significativu oioin la bele minimiza liuhosi alterasaun ba dezeñu ne'e rasik, **mitigasaun ka sasukat redusaun sira-ne'e bele konsidera**. Monotoriza mós bele konsidera hodi sukat significansia atual loloos hosi impaktu durante no depois konstrusaun para permite jestaun mitigasaun nian ne'ebe hanesan.
- m) Bainhira AIA konklúdu ona, esbosu ka draft DIA ne'e submetidu ba Regulador Ambiental ba **Konsultasaun Públika**, ne'ebe faze atual projetu nian;
- n) Depois Konsultasaun Públika, proponente haree fali no finaliza dokumentus DIA/PJA no entrega dokumentu versaun final ba **desizaun kona-ba lisensiamentu ambiental**.

16.13 - Objetivu no Estrutura ba Deklarasaun Impaktu Ambiental (DIA)

DIA ne'e prosesu ida liuhosi buat ne'ebe efeitu provável ambiental significativu hosi proposta dezemvolvimentu ida bele identifika, avalia no, bainhira possível, evita ka mitigadu (reduz). Prosesu ne'e ho nia rezultadu tuirmai bele relata ba DIA iha sira ne'ebe foti desizaun, ba Regulador Ambiental no ba públiku. Rezumu la'ós-Tékniku (RLT) fornese hodi permite kompreensaun públika nian luan liután atu hatene projetu no efeitu ambiental projetu nian.

DIA estabesele ho maneira estruturada hodi fasilita navegasaun:

- Volume 1 inklui Prinsipal Deklarasaun Ambiental (DIA) no Rezumu La'ós-Tékniku (RLT);
- Volume 2 inklui Anexu sira;
- Volume 3 inklui Dezeñu Tékniku sira ;
- Volume 4 inklui Planu Jestaun Ambiental (PJA).

16.14 - Oportunidade ba Konsultasaun Públika

Karik parte interessada ka públiku mak hakarak komenta kona-ba konteúdu DIA ida-ne'e, durante faze Konsulta Públika sira bele hakerek no entrega ba Regulador Ambiental iha:

Regulador Ambiental

ANLA – Autoridade Nasionál ba Lisensiamentu Ambiental

Departamentu Avaliasaun ba Impaktu Ambiental
Edifísiu Fomento, Avenida Dom Aleixo, Mandarim,
Díli, Timor-Leste

Ho kópia ba entidade tuirmai:

Proponente

DNSB – Diresaun Nasionál ba Saneamentu Báziku

Departamentu ba Saneamentu
Edifísiu DGAS, Rua Jacinto Cândido, Caicoli
Díli Timor-Leste

16.15 - Deskrisaun Projetu nian no ambiente mak afetadu

Projetu lokalizadu iha Munisípiu Díli, Timor-Leste, kobre aproximadamente 36 km² iha área urbana Díli.

Projetu propor rehabilitasaun/konstrusaun sistema drenajen foun ho kapasidade boot iha infraestrutura sira tuirmai:

- 5) Reabilitasaun ba sira ne'ebe iha ona no/ka Konstrusaun Kanal Drenajen Foun;
- 6) Hadi'a mota boot hodi bee sulin hosi foho ba tasi ho diak;
- 7) Basia Retensaun Bee-sa'e nian atu ajuda kontrola bee nia sulin ka halai iha sidade laran; no
- 8) Importante Interseptors Drenajen ka Kanal Desviu nian iha área badak mak rabat ba foho (Caicoli ho Vila Verde) atu desvia bee ba mota sira hanesan (mota Kuluhun no Maloa) hodi hamenus risku bee-sa'e iha sidade laran.

Projetu ne'e planea atu dezemvolve durante tinan 5 nia laran (2020 to'o 2024), ho total investimentu estimadamente besik ba 145 milliaun dólar (haree Figure 16-1).

Projetu hala'o tuir lei ambiental sira mak vigor iha Timor-Leste, mak DL24/2012, bolu lei baze ba ambiente ho Dekretu-Lei nº 5/2011 kona-na lisensiamentu ambiental, hanesan mós padraun Organizasaun Mundial ba Saúde (OMS) no Korporasaun Finanseira Internasionál (KFI), sei fó hanoin katak Timor-Leste seidak iha padraun tékniku sira-ne'e.

Projetu ne'e lokalizadu iha basia urbana Díli nian, kuaze iha área plana nia laran. Hadulas hosi sul liuhosi foho Becora Manleuana, osidental hosi Mota Comoro no foho mak to'o aeroportu no norte liuhosi zona kosteira sidade Díli.

Kapital Díli hamutuk ho área sira mak hadulas nia, ne'e únika iha Timor-Leste ho populasau mak konsiderada densidade aas, ne'ebe nia emar besik hamutuk 238,000 (20% hosi emar Timor-Leste nian). Tanba ne'e sidade Díli la iha animal selvajen no flora terestrial, devidu presau urbana ba dezemvolvimentu sidade, ho ai-hun uituan mak iha deit jardin balu, ne'ebe ai-horis natural troka fali ho ai-horis estétika introduzida, espésie estétika sira ba paizajismu urbanu ka hamoos hodi loke ba konstrusaun, industria ka ba hela-fatin.

Iha área projetu **AOI** nian hotu-hotu, iha okupasaun emar nia mak densa ka butuk hamutuk ne'ebe uzu ba sosial ekonómiku territóriu hosi populasau (uma sira, kios, loja no espasu komersial sira, área agrikultura). Uzu ba rezidencia domina iha área hotu-hotu iha sidade exetu iha área sentral, ne'ebe iha servisu públiku no instituisau governamental sira, infraestrutura portuária sira konsentrada, alein de atividade komersial no servisu sira. Área komersial sira fahe iha sidade tomak, prinsipalmente iha dalan prinsipal, maibé ho konsentrasau boot iha zona oeste, ne'ebe lokaliza fatin prinsipal komersial boot, relativamente besik aeroportu.

16.16 - Tanbasá ita presiza halo projetu ne'e?

Objetivu final projetu nian mak harii Sistema Kontrolu Bee-Udan nian atu hadi'a saúde pública nian, influencia prátika ijiene ho diak no hadi'a kondisaun ambiental no sosial hanesan mós promove kondisaun mak permite prosperidade ekonómika iha sidade no garante:

- Kontrola volume mak tama hosi subbasia ho konstrubisaun aas.
- Hadi'a planeamentu, jestaun, operasaun no manutensaun ba sistema drenajen.
- Implementasaun estratéjia ba redusaun no protesau kontra bee-sa'e ka inundasaun.

16.17 - Saida mak projetu nia impaktu boot liu?

Projetu kalkula ninia impaktu negativu boot liu mak bele mosu hosi halo uma fali ka reassentamentu ho estimativa 730 família, uma sira no fatin negosiu sira besik ba fatin drenajen presiza rehabilitada, hanesan mós impaktu mak mai hosi konstrusaun sivil drenajen nian, hanesan barullu, rai-rahun, terraplenajen, no sst.

No entantu, impaktu positivu boot liu mak sei reduz bee-sa'e iha sidade laran no, indiretamente hadi'a kondisaun saúde no kualidade bee subterranea nian iha sidade, hodi fó benefísiu ba nia emar.

16.18 - Ho sé mak ita ko'alia ona kona-ba projetu?

Hosi 2013, bainhira prosesu avaliasaun impaktu ambiental hahú ba projetu ne'e, governu envolve ona ho parte sira interresada mak dalaruma sei afeta sira ho komponente projetu nian. Diresaun Nasionál ba Saneamentu Báziku ka DNSB ho Grupu Servisu Interministerial nian halo atu tomakonta ho reassentamentu hala'o ona reuniaun hirak no konsulta públika kona-ba implementasaun ba Saneamentu no Planu Prinsipal Drenajen, iha **DEds** nia prepara iha área afetadu liu ba projetu, atu identifika comunidade nia feedback no preokupasaun no sé mak sei afeta ho projetu.

Foin daudauk ne'e, iha Maiu 2019, ekipa Projetu AIA hala'o konsultasaun públika no divulgasaun ba preparasaun final faze II projetu nian, durante TBR no Faze ba Liña Baze, ho servisu iha kampu nian mak detalladu no halo reuniaun espesífika ho alvu parte interessada ka stakeholders.

Ho informasaun ne'e, Deklarasaun Impaktu Ambiental (DIA) nia ekipa consege adapta-an liután ba projetu nia nesessidade no ba comunidade nia nesessidade no agora sei liubá Konsultasaun Públika atu esplika kanal ida ne'ebe, no sst, sei iha postu administrativu ida ne'ebe no respetivu impaktu no sasukat mitigasaun ba proponente nia intensaun atu implementa hodi reduz impaktu ambiental.

16.19 - Oinsá ita atu kontrola projetu nia impaktu?

Impaktu ambiental hosi projetu durante konstrusaun no operasaun sei orienta hosi Planu Jestaun Ambiental (PJA) , ne'ebe sei orienta konstrutor no DNSB iha saida mak sira sei halo no impaktu ambiental saida mak sira sei halo mitigasaun ba atu projetu la afeta ema barak ka ambiente mak hadulas projetu.

DNSB sei monitoriza impaktu konstrusaun nian no impaktu dezenvolvimentu nian hanesan resíduos hosi eskavasaun, barullu, ar nia kualidade, bee nia kualidade ho sei supervizona prosesu reassentamentu ho grupu interministerial mak organiza-an hodi ba deit objetivu projetu ne'e. Sistema ida ba rejistu reklamasaun sei halo atu ajuda resolve problema mak assosia ho projetu no fornese klarifikasaun ba parte sira ne'ebe mak interessada, dúvida ka problema saida deit, durante implementasaun hotu-hotu projetu nian.

16.20 - Konklusaun ba agora....

Konklusaun prinsipal ba avaliasaun impaktu nian mak benefisial ka impaktu positivu ne'ebe destaca hanesan ho faze dezenvolvimentu nian atu hasoru objetivu hotu-hotu hosi projetu nian, ne'ebe redusaun iha risku bee-sa'e, ho nia benefísiu indireta hosi rai tuun ka erusaun no rai monu, hasa'e kualidade bee nian, jere ba uza rai nian no planu implementasaun regional i programa mak iha relasaun ho planeamentu urbana mak hasa'e moris ka vida urbana nian.

Ne'e razoavel katak impaktu negativu boot liu hosi projetu ne'e refere luan liu ba aspetu sosial ba futuru reassentamentu ka halo hela-fatin foun ema no familia sira, no konteúdu hosi AIA sei sai fundamental hodi orienta grupu interministerial DDIUP estabilisidu ba reassentamentu iha Planu Asaun nian ba Reassentamentu, lideradu hosi DNSB. Objetivu jeral atu reduz akontesimentu frekvente bee-sa'e iha Díli durante tempu udan, ne'e solusaun ida mak hotu-hotu bele simu. Ne'e sei haree filafali iha konsultasaun pública mak sei mai iha etapa tuirmai, loke oportunidade ba comunidade afetada sira haree filafali no identifika problema ruma mak seidauk koalia no diskuti kona-ba possível solusaun ba mitigasaun.