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# PERFURASAUN ESPLORASAUN TIMOR-LESTE

Konsulta Maksoin-lisuk (stakeholder) (Parte 3, 4)

24 Agostu 2010

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## PART THREE:

- Environmental risks and management
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## PARTE TOLU:

- Risku no jestaun ambientál



## Environmental impacts

- Oil spills
  - Discharge of drill cuttings
  - Solid and hazardous waste
  - Sewage, wastewater, food scraps
  - Air emissions from fuel use
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## Impaktu ambientál

- Fafakar petróleu nian
- Sasোক perfurasaun eskavasaun nian
- Fo'er sólidu no perigozu
- Fo'er, bee-fo'er, hahán nia restu
- Emisaun ár hosi uzu kombustivel



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### Oil spills:

- Avoid oil spills through good procedures and equipment
    - Refuelling procedures
    - Emergency shut-down valves
    - Blow-out preventer (BOP)
    - Monitoring of reservoir pressure
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### Fafakar petróleu:

- Evita fafakar petróleu liuhosi prosedimentu no ekipamentu **di'ak**
  - Prosedimentu reabastesimentu
  - Válvula taka emerjénsia nian
  - **Blow-out preventer (BOP)/Ekipamentu ne'ebé** prevene rebenta nian
  - Monitorizasaun presau rezervatóriu nian



### Oil spills:

- Preparation for accidental spills
  - member of OSRL for tier 3 emergencies
  - hiring spill response equipment from OSRL
  - possible spill response centre at Com
  - identified relief well locations
  - consulting with other operators



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### Fafakar petróleu:

- Preparasaun ba fafakar asidentál
  - Membru OSRL nian ba emerjénsia kamada 3 nian
  - aluga ekipamentu resposta fafakar nian hosi OSRL
  - sentru resposta fafakar posivel iha Com
  - identifika lokasaun posu assisténsia nian
  - konsulta ho operadór sira seluk



Drill cuttings:

- Sea water and water-based muds (WBM)
- ROV survey before and after drilling
- Well location is in very deep water – no sensitive seabed habitats

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Perfurasan nia eskavasaun:

- Tasi-been no water-based muds (WBM)/Tahu ho bee
- Levantamentu ROV molok no liutiha perfurasan
- **Lokasaun posu ne'e iha bee ne'ebé kle'an tebes** – ábitat tasi-okos sensitivu



## Solid waste

- No solid wastes overboard
  - Store onboard and transfer to Darwin for disposal
  - Hazardous wastes disposed at facility in Darwin
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## Bee sólidu

- **La iha fo'er sólidu hosi ró**
- Armazena iha ró-leten no transfere ba Darwin atu soe
- **Fo'er perigozu sira soe iha facilidade iha Darwin**



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### Liquid waste

- Sewage treated onboard
- Food scraps ground to small pieces (<25 mm)
- Treated sewage, wastewater (e.g. from kitchen, showers) and food scraps discharged overboard
- MARPOL 73/78 Annex IV

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### Fo'er líkidu

- Fo'er ne'ebé trata iha ró-leten
- Hahán nia restu dulas to'ó rahun didi'ak (<25 mm)
- Trata fo'er, bee-fo'er (ez. Hosi dapur, xuveiru) no hahán nia restu ne'ebé soe iha ró-leten
- MARPOL 73/78 Aneksu IV



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### Liquid waste

- Drain system on deck to collect water
  - Treated in oily water separator
  - **Clean water discharged overboard ( $\leq 15$ ppm oil)**
  - Sludge and oil stored onboard, taken to land (Darwin)
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### Fo'er líkidu

- Sistema drenajen iha konvés nia leten atu halibur bee
- Trata iha separadór bee ho petróleu
- **Bee moos ne'e hasai hosi ró ( $\leq 15$ ppm petróleu)**
- **Fo'er no petróleu armazena iha ró-leten, lori ba rai-maran (Darwin)**



### Air emissions

- Diesel use will be around 80 000 L/day
  - Equipment maintained to burn diesel efficiently
  - Flaring will only be required to release pressure if oil is unexpectedly found during drilling. Low volumes only.
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### Emisaun ar

- **Uzu gazóleu ne'e maizumenus 80 000 L/loron**
- Ekipamentu ne'ebé mantein atu sunu gazóleu ho eficiente
- Lalakan/sasunuk so presiza atu hasai **presaun karik petróleu ne'e hetan ho lahein** durante perfurasaun.  
**Volume ki'ik de'it.**



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Documents:

- Eni HSE Integrated Management System
  - Environmental Management Plan (EMP)
  - Saipem 10000 Operations Manual
  - Various standards and procedures
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Dokumentu sira :

- Eni nia Sistema Jestaun Integradu HSE nian
- Environmental Management Plan (EMP)/Planu Jestaun Ambientál
- Manuál Operasaun Saipem 10000
- Padraun no prosedimentu sira oioin



Documents:

- Eni Incident Management System
  - Eni S06-03 Oil Spill Response Manual
  - Saipem 10000 Emergency Response Plan
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Dokumentu sira :

- Eni nia Sistema Jestaun Insidente
- Eni nia Manuál Resposta Fafakar Petróleu
- Planu Resposta Emerjénsia Saipem 10000

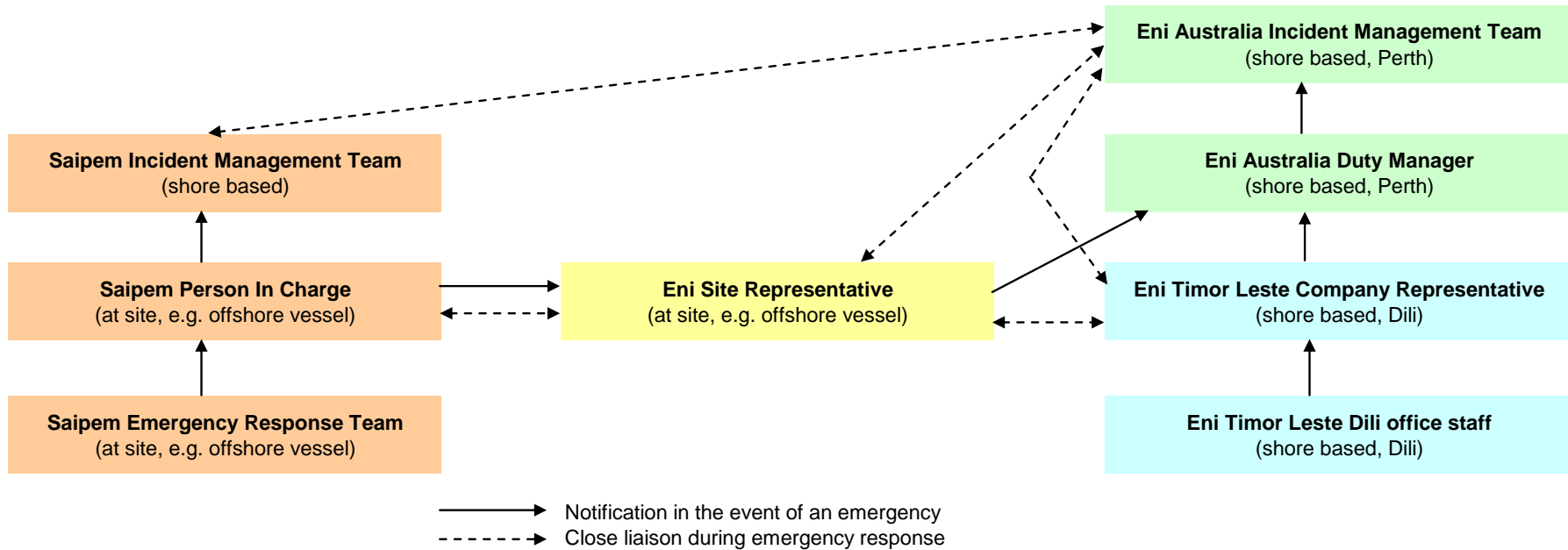


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## Estrutura resposta Emerjéncia :



### Reporting

- Incident report – DNMA, 48 hours
    - Oil spill >80 L
  - Well Completion Report – DNMA, 6 weeks
    - Monitoring with ROV
    - Chemicals and fuel used
    - Environmental incidents
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### Reportajen

- Relatoriu incidente – DNMA, oras 48
  - Fafakar petróleu >80 L
- **Relatoriu Banhira remata tiha posu ne'e** – DNMA, semana 6
  - Monitoriza ROV
  - Kimiku no kombustive ne'ebé uza
  - Incidente ambientál sira



- Audits
    - Planning stage
    - Drilling stage
    - Demobilisation stage
  - DNMA and ANP invited to come onboard to observe activities
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- Fiskalizaun konta nian
  - Faze planeamentu
  - Faze perfurasaun nian
  - Faze demobilizasaun
- DNMA no ANP hetan konvite atu mai iha ro-leten hodi observa atividade sira



### Conclusion:

- The drilling can be managed to achieve its objectives, without causing unacceptable environmental and socio-economic effects.
  - The exploration drilling program will assist the development of the petroleum industry in Timor Leste, which provides benefits to the Timorese people.
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### Konkluzaan:

- Perfurasaun bele jere atu atinji ninia objetivu sira sem kauza ba efeitu meu-ambiente no sosio-ekonomiku sira nebe labele tolera
- Programa perfurasaun esplorasaun nian sei ajuda desenvolvimentu industria petroleo iha Timor-Leste, nebe oferese benefisiu ba Timor oan sira.





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## PART FOUR:

- Finalising the assessment of the EIS

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## PARTE HAAT:

- Finalizasaun avaliasaun EIS



## EIS assessment/avaliasaun EIS

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- 24 August 2010 — final stakeholder review meeting for Cova EIS
  - DNMA have collected stakeholder comments
  - DNMA to make decision on approval, according to terms of regulations
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- 24 Agostu 2010 — soru-mutu revizaun maksoin-lisuk (stakeholder) final ba EIS Cova nian
- DNMA halibur ona komentáriu maksoin-lisuk (stakeholder) sira ne'ebé halibur tiha ona
- DNMA atu halo desizaun kona-ba aprovasaun, haktuir ba termu regulamentu sira

