



Responding to Spills in Remote Locations: **GULSER ANA** (Madagascar) & **OLIVA** (South Atlantic)

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Interspill, 13-15 March 2012, London

- Overview of incidents
- Incident location / remoteness
- Sensitivities
- Initial assessment / logistical issues
- Response logistics
- Response organisation
- Response implementation
- Waste management
- Conclusions

GULSER ANA, Faux Cap, Madagascar, 26th August 2009

- Bulk carrier (23,602 GT; Built 1985)
- Cargo: 39,000 MT of rock phosphate
- Grounding at Faux Cap – Southern Madagascar
- Split up in rough seas
- 568 MT of IFO180 spilled



MS OLIVA, Tristan da Cunha, 16th March 2011

- Bulk carrier (40,170 GT; Built 2009)
- Cargo: 65,000 MT of soya beans
- Grounding on Nightingale Island, Tristan da Cunha
- Split up after two days
- 1,400 MT of IFO320 spilled



INCIDENT LOCATIONS / REMOTENESS

GULSER ANA

- Southern tip of Madagascar – Faux Cap
- Remote location: road access from major city 3-4 days, 7 hrs from Fort Dauphin (airport)
- Impoverished nation with limited response capabilities
- Political difficulties (Coup d'Etat in March 2009)

Faux Cap

- Limited accommodation / limited fuel / supplies...

OLIVA

- Nightingale Island, Tristan da Cunha, South Atlantic, UK Overseas Territory
- No airstrip / 5-6 days sailing from Cape Town
- No response capacities – UK agencies remote advice
- 262 inhabitants

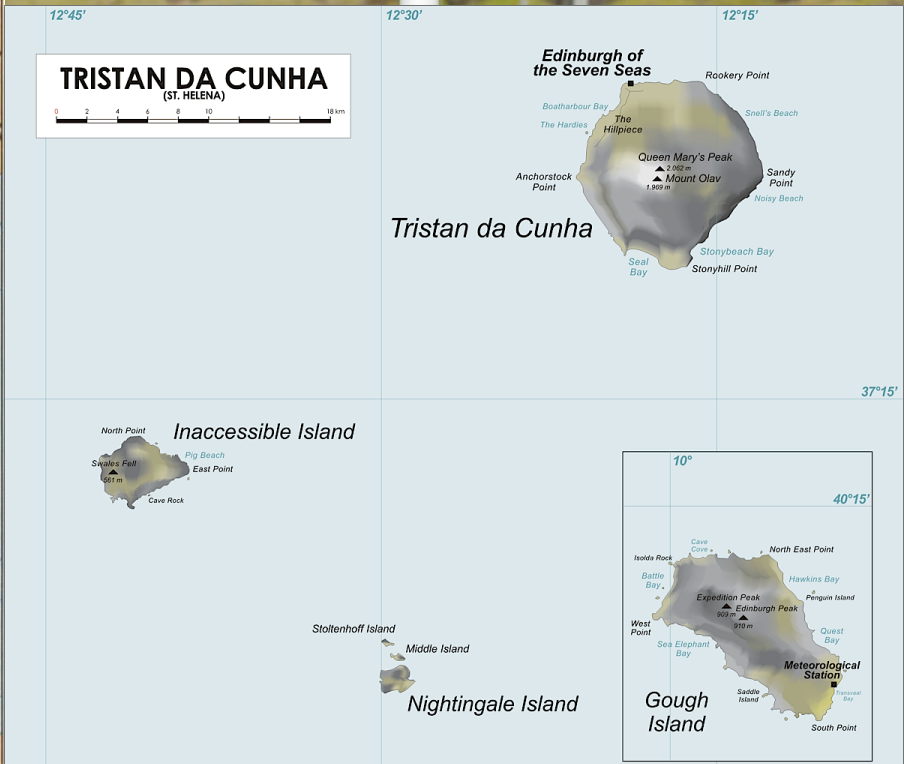
Nightingale / Tristan da Cunha

- Nightingale: seabird territory
- Limited accommodation on Tristan da Cunha

GULSER ANA INCIDENT LOCATION



OLIVA INCIDENT LOCATION



1,511 Nautical Miles from Cape Town

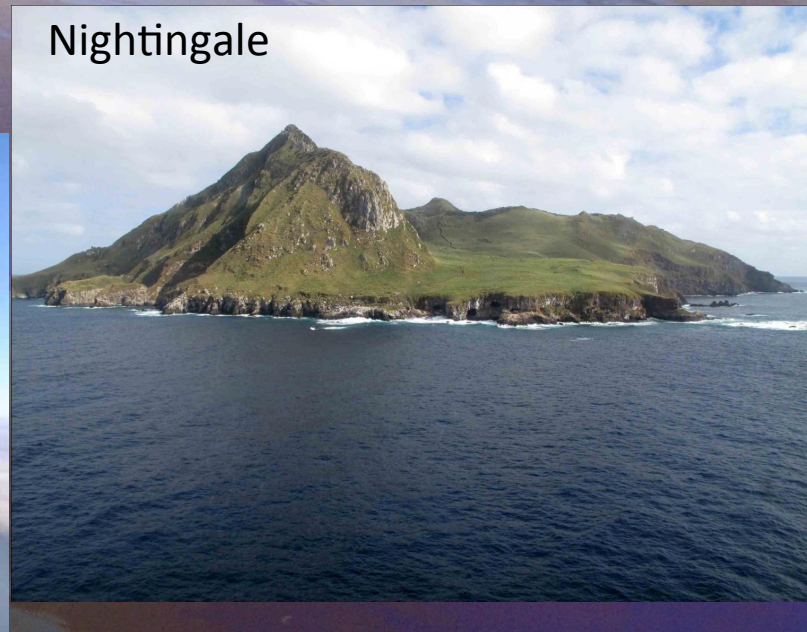


TRISTAN DA CUNHA, SOUTH ATLANTIC



Tristan da Cunha

Edinburgh of the
Seven Seas



Nightingale



Inaccessible

GULSER ANA: SENSITIVITIES

- Subsistence fishing
- Commercial lobster fishery
- Shoreline water wells
- Widespread usage of shoreline:
people and cattle pathway / drinking
water / bathing - washing
- Coral reef

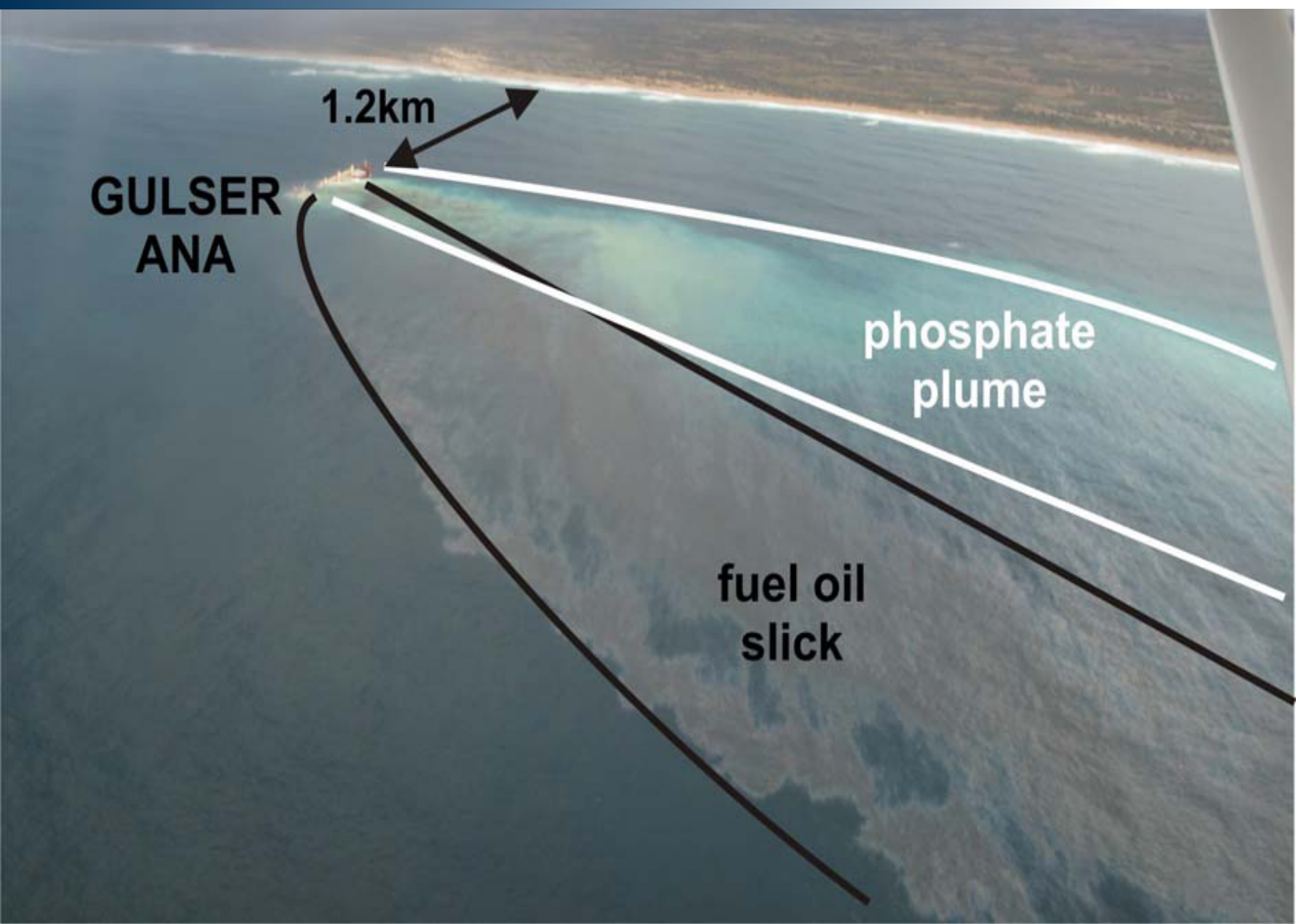


OLIVA: SENSITIVITIES

- Seabirds breeding colonies
- Lobster fishery
- Concerns with risk of rodent introduction
- Concerns with risk of non-native seeds/plants introduction



GULSER ANA: INITIAL ASSESSMENT



GULSER ANA: ASSESSMENT OF LOGISTICAL ISSUES / ACCESSIBILITY



GULSER ANA LOGISTICS: HELICOPTER AND QUAD BIKES

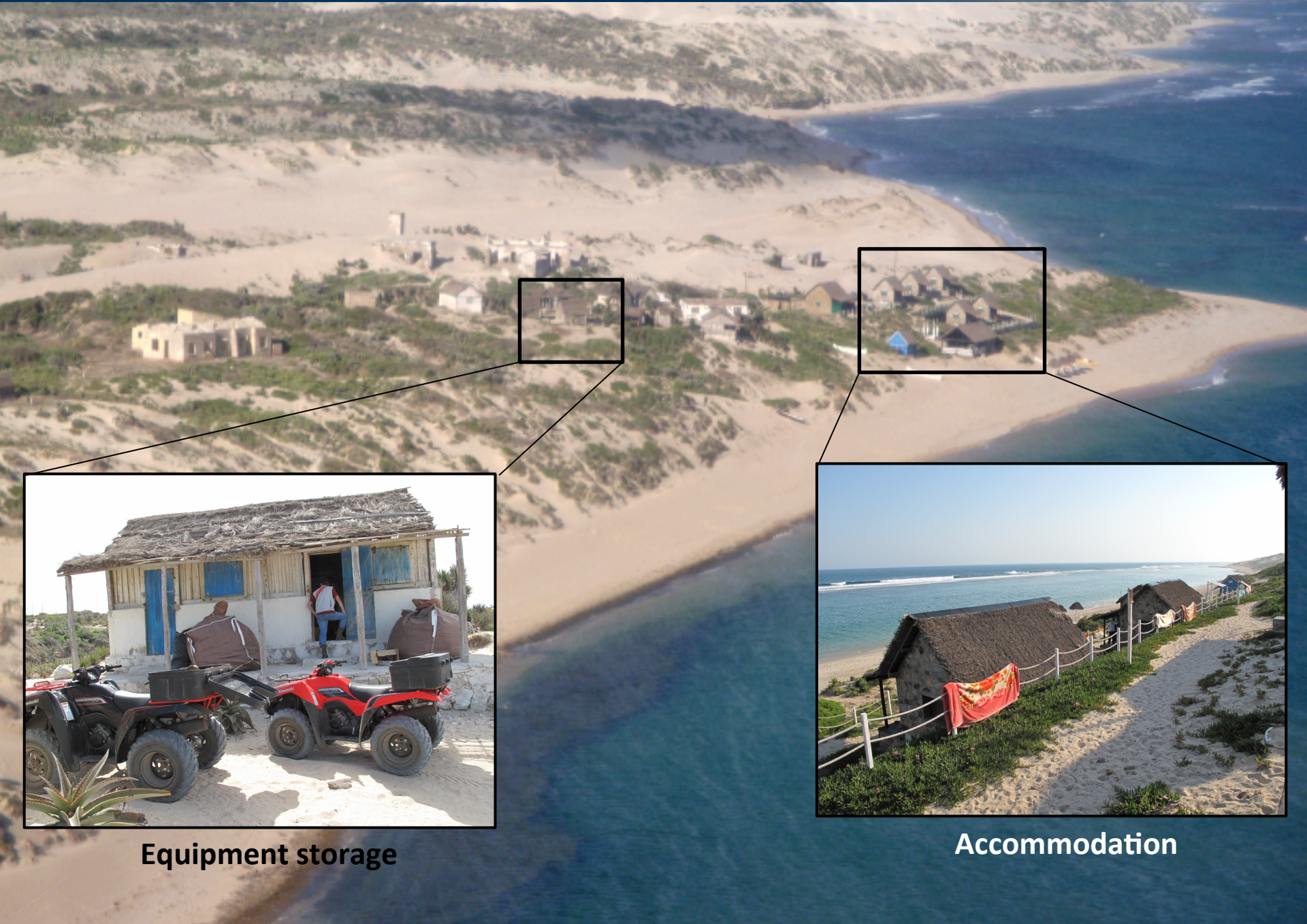


GULSER ANA

Access

- Helicopter for staff and some equipment
- Road for fuel / equipment
- Quad bikes for beach surveys / access to worksites

FAUX CAP: ACCOMODATION AND EQUIPMENT STORAGE



Equipment storage



Accommodation

OLIVA: INITIAL ASSESSMENT



- First picture of shoreline oiling received after a week
- Need for shoreline response and wildlife (penguins) rehabilitation measures
- Response options / techniques worked out from the few pictures available - Clean-up plan set-up remotely (rocky shore clean-up techniques)

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OLIVA LOGISTICS: VESSELS AND HELICOPTER



Salvage tug SMIT AMANDLA
17th March / 21st March (Day 2)



SA Fishery vessel SARAH BAARTMAN
Not made available for charter



Salvage tug SVITZER SINGAPORE
29th March / 4th April (Day 13)



Polar icebreaker IVAN PAPANIN
7th April / 12th April (Day 22)

RESPONSE ORGANISATION

GULSER ANA

Staff

- Spill manager / Mechanic
Le Floch Dépollution
- Local contractor and villagers as
team leaders / beach masters
- Local population as manpower

Equipment

- Brought from Tana / Fort Dauphin
(PPE, small tools) and France for
the specialised equipment

Health and Safety

- Helicopter
- Satphones
- First aid kits
- Fort Dauphin facilities

OLIVA

Staff

- Spill manager / Mechanic
Le Floch Dépollution
- Additional staff from SMIT/SA
contractor
- SANCOBB
- Islanders as manpower

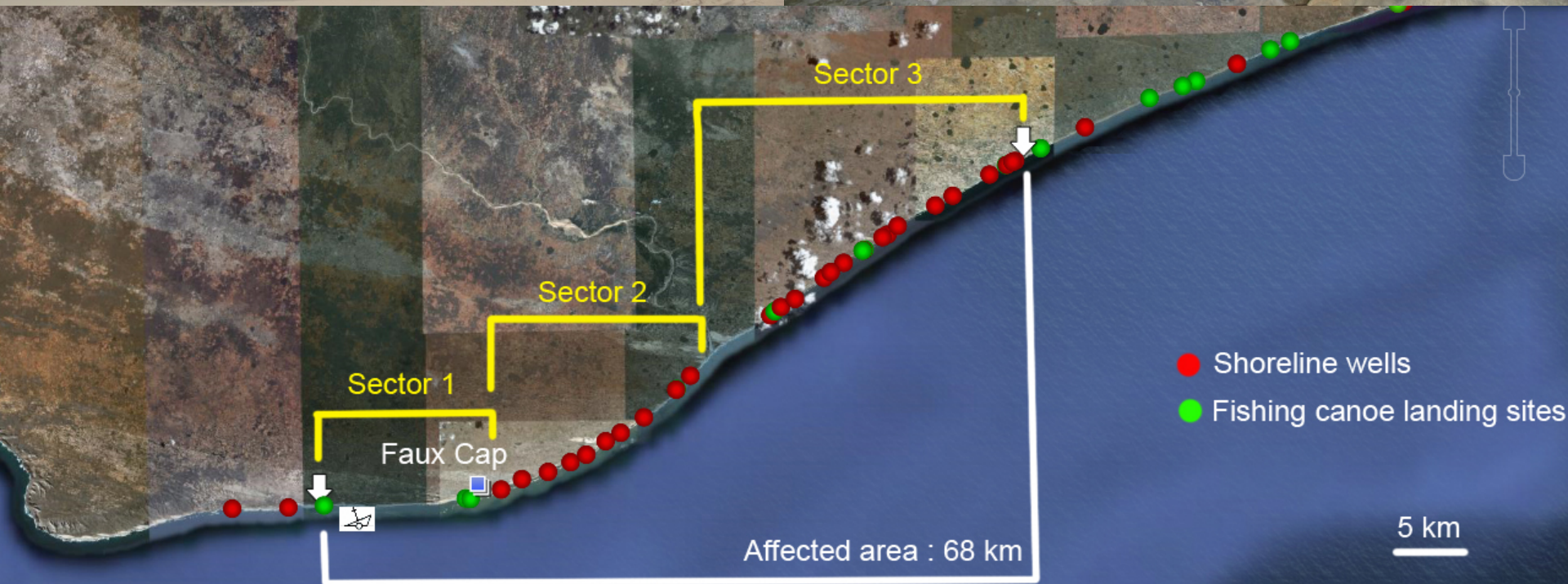
Equipment

- Brought from South Africa and
France for the specialised
equipment

Health and Safety

- Helicopter
- VHF / Satphones
- Paramedic
- Tristan da Cunha facilities

GULSER ANA: SHORELINE AERIAL AND GROUND SURVEYS



GULSER ANA: SEVERITY OF OILING

- Variable along 68 km of coastline
- Tarballs predominant along entire length
- Rocky areas heavily oiled
- Buried and sunken oil along sections of beach



GULSER ANA RESPONSE: LOCAL POPULATION TRAINING

- Beach clean-up carried out by local villagers using hand tools.
- All PPE brought in by road or helicopter and transferred by quad bikes.
- Wages paid on a daily basis.

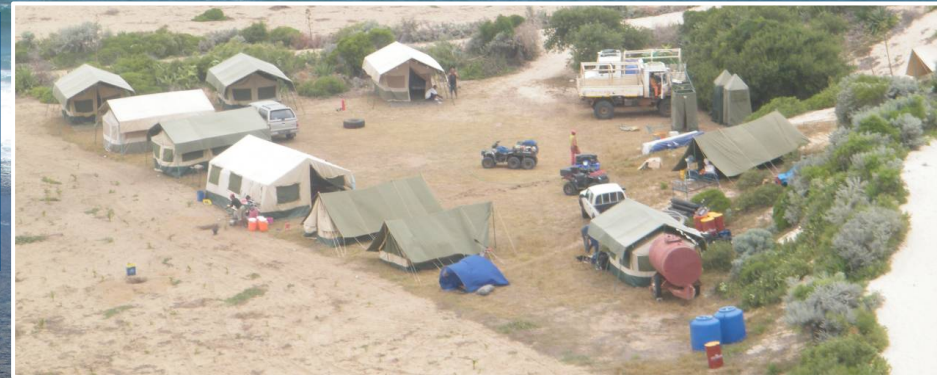


RESPONSE : PRIMARY CLEAN-UP (HEAVY)



GULSER ANA RESPONSE : SECONDARY CLEANUP

- Mobilisation of HP washing / flushing equipment from France
- Transfer of equipment to site and establishment of tent camp



GULSER ANA RESPONSE : SECONDARY CLEANUP

- Training of HP crews
- HP cleaning of heavily oiled rocky surfaces
- Collection of residual tarballs
- Cleanup completed in March 2010



OLIVA: WILDLIFE RESPONSE / CAPTURE



OLIVA: WILDLIFE REHABILITATION



- Set-up of bird rehab units:
 - Stabilisation / feeding
 - Intensive care unit / Euthanasia
 - Washing unit
 - Waterproofing / pools



OLIVA RESPONSE: AERIAL AND GROUND SURVEYS



OLIVA: SHORELINE RESPONSE LOGISTICS



OIL SPILL RESPONSE LOGISTICS: WORKSITE SET UP



OLIVA: SHORELINE RESPONSE



OLIVA: CLEAN-UP ENDPOINTS



GULSER ANA: WASTE MANAGEMENT



Primary storage accessible with 4x4



Intermediate storage accessible by truck



Heavily oiled area

GULSER ANA: WASTE MANAGEMENT



- Waste collected in small bags / Temporary storage on beach head
- Three intermediate storage locations – manual/Quad/4x4 transfer
- Transfer by 6x6 trucks to local town with “road” access and packaging in big bags
- Final transfer to Antananarivo in large trailer trucks – 3-4 days by road

RESPONSE : WASTE DISPOSAL



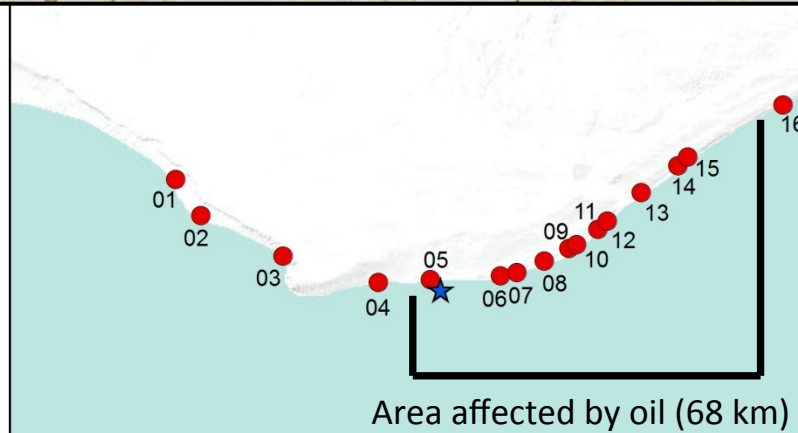
- Final storage in Antananarivo
- Quicklime stabilisation in oily waste treatment facility

OLIVA: WASTE MANAGEMENT



- All waste transferred on board IVAN PAPANIN (helicopter)
- All waste shipped to and disposed of in South Africa

GULSER ANA: FISH / LOBSTER SAMPLING



- Helicopter to reach fishing communities
- 19 sampling stations (10 reference stations outside area affected by oil)



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Sources: USGS, ESRI, TANA, AND



Legend

- ★ Vessel Location
- ITOPF Sample (Number)

OIL SPILL RESPONSE IN REMOTE LOCATIONS: CONCLUSIONS

- Logistical challenge:
 - Means of transportation:
 - Personnel
 - Equipment
 - Waste stream
 - Helicopter was key in both cases
 - Health and Safety
 - Assessment and scaling of response
 - Space limitation (transport / storage...): prompt and accurate evaluation of needs
 - Trade offs
 - Use of local humane resources (training)





*Thank you for your attention
Any Questions?*