UNEP WCMC

Proteus Annual Meeting

28th - 29th June 2016

David Attenborough Building, Cambridge, UK

BARRICK

bp

Chevron

eni

ExxonMobil

REPSOL

RioTinto

Statoil

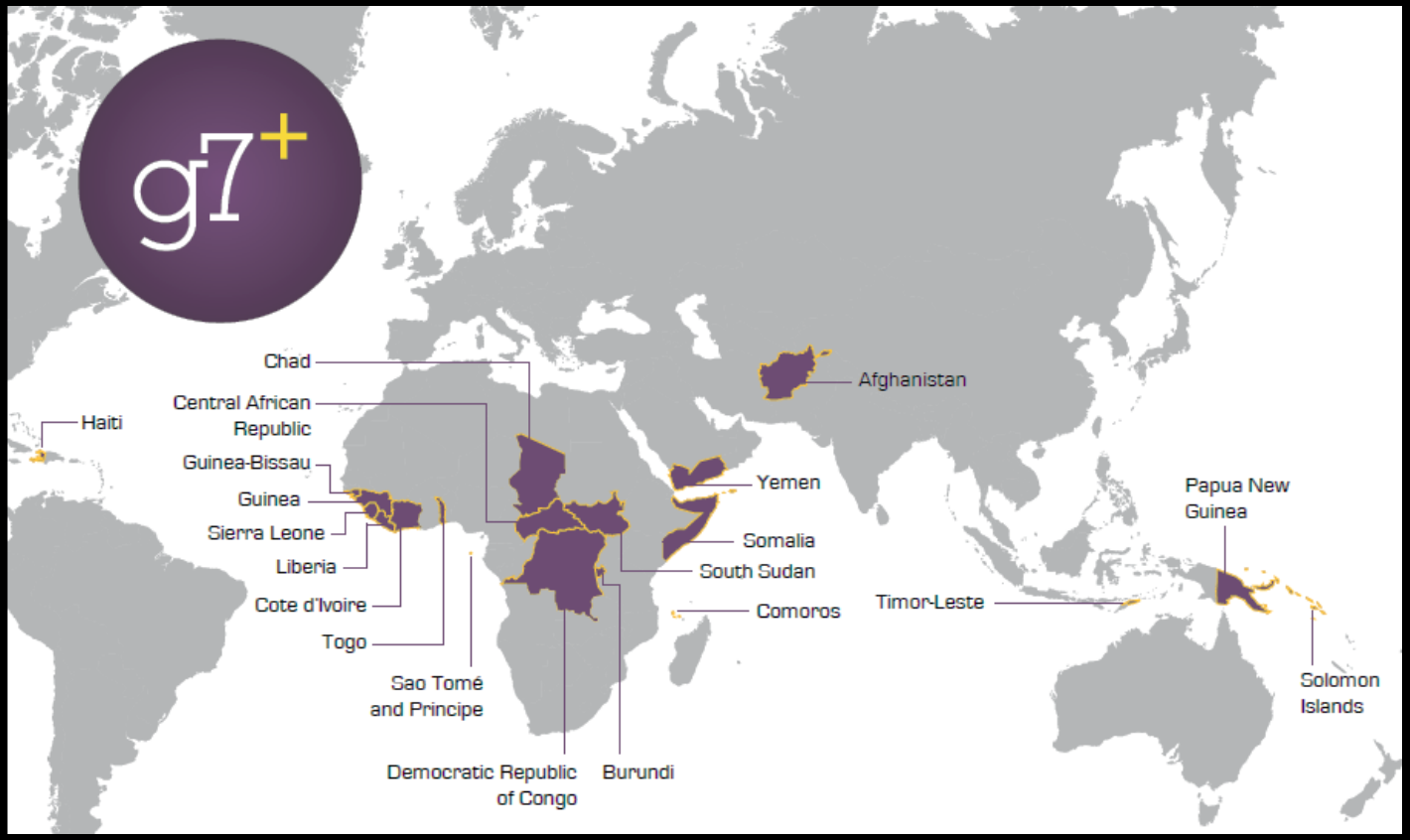
TOTAL

woodside

MAP-X

A web platform for authoritative information on the extractive industries in conflict-affected countries

Extractive Resources in Conflict-Affected Countries : Promise or Peril ?



- ✓ Many conflict-affected countries hold extractive resources
- ✓ Huge opportunity for revenues, jobs and infrastructure
- ✓ Major natural asset for stabilization and development
- ☒ Often subject to corruption, mismanagement and secrecy
- ☒ Driver of environmental damage, inequality and social conflict
- ☒ Most in need of the benefits, but low capacity to mitigate risks

70% of fragile states contain extractive resources (35/51)

Help requested by Chair of g7+

Emília Pires, Timor-Leste's Minister of Finance, 2007-2015
Chair of g7+, 2010-2014

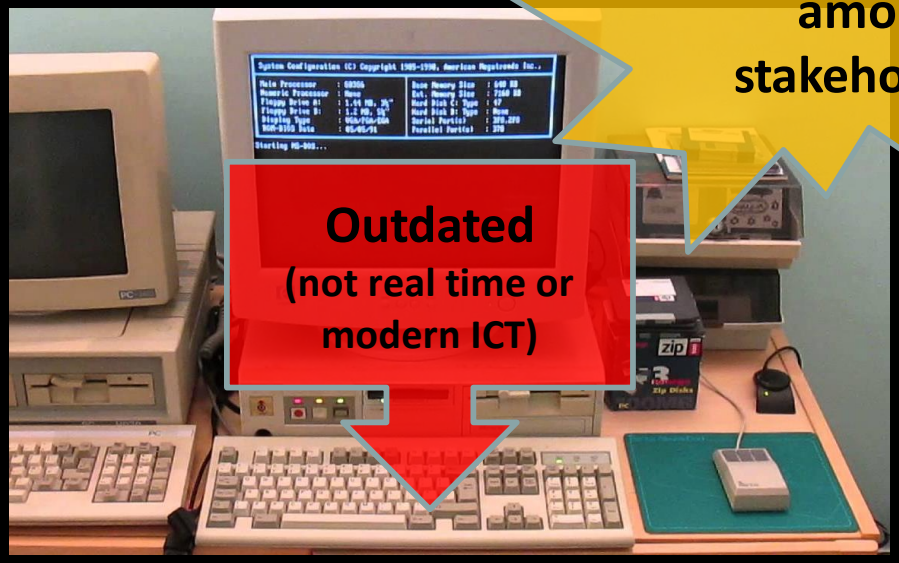
Five key capacity challenges that undermine the good governance of the extractives sector:
information, expertise, laws, enforcement, investment

Information challenges faced by g7+ extractive sector stakeholders

Fragmented
(across Ministries and scales)

Locked
(not open or accessible)

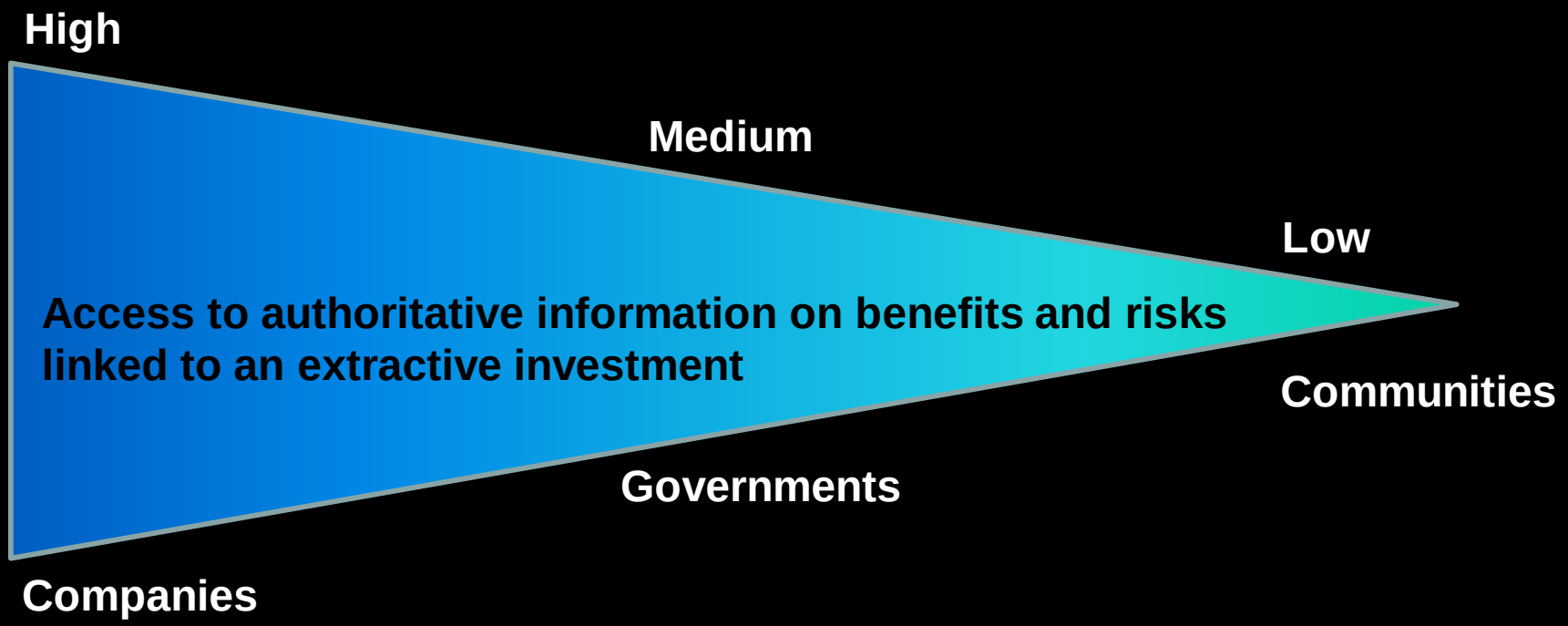
Large information asymmetries among stakeholders



Outdated
(not real time or modern ICT)

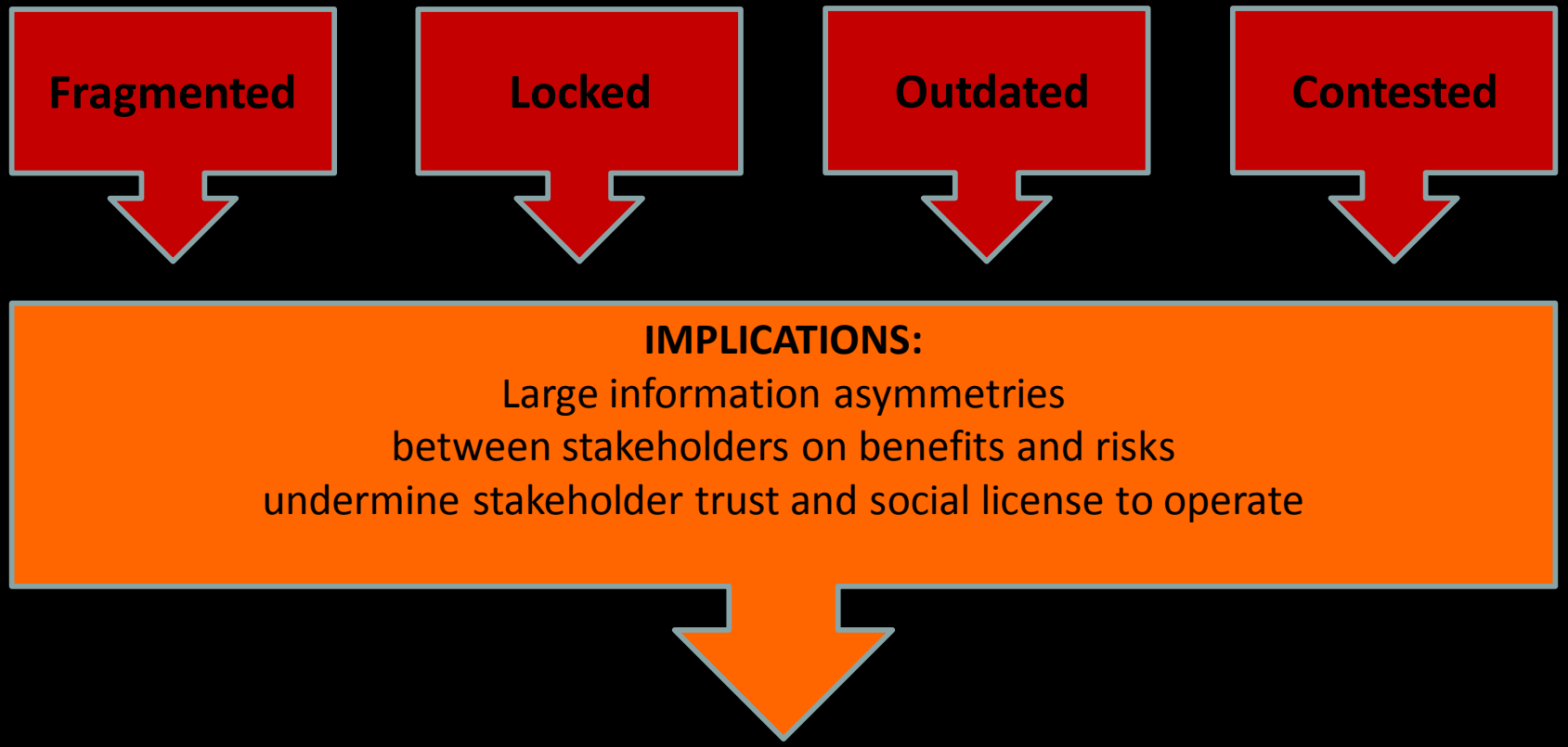
Contested
(not trusted or reconciled)

In your experience, what are the outcomes of major information asymmetries among extractive sector stakeholders ?



Is there any value in maintaining large asymmetries among stakeholders in accessing and using authoritative information ?

Information challenges undermine good resource governance



In addressing this challenge, stakeholder consultations identified 3 core needs:

MAP-X

1. Authoritative information platform for extractive sector

+

2. On-line tools to analyze, visualize and access geospatial data sets

+

3. Processes to support stakeholder dialogue, comms and monitoring

SUPPORT INFORMATION ACCESS

IDENTIFY RISKS AND BENEFITS

SHARE VALUE AND HOLD ACCOUNTABLE

OUTCOME:
Improved benefit sharing, stakeholder communication and trust across extractive industry value chain.

IMPACT:
Increased development impact of extractives sector with reduced adverse impacts on local societies and ecosystems.

The g7+ challenge to UNEP and the World Bank:

How can MAP-X combine the revolutions in transparency, information technology and sustainability to address these challenges?

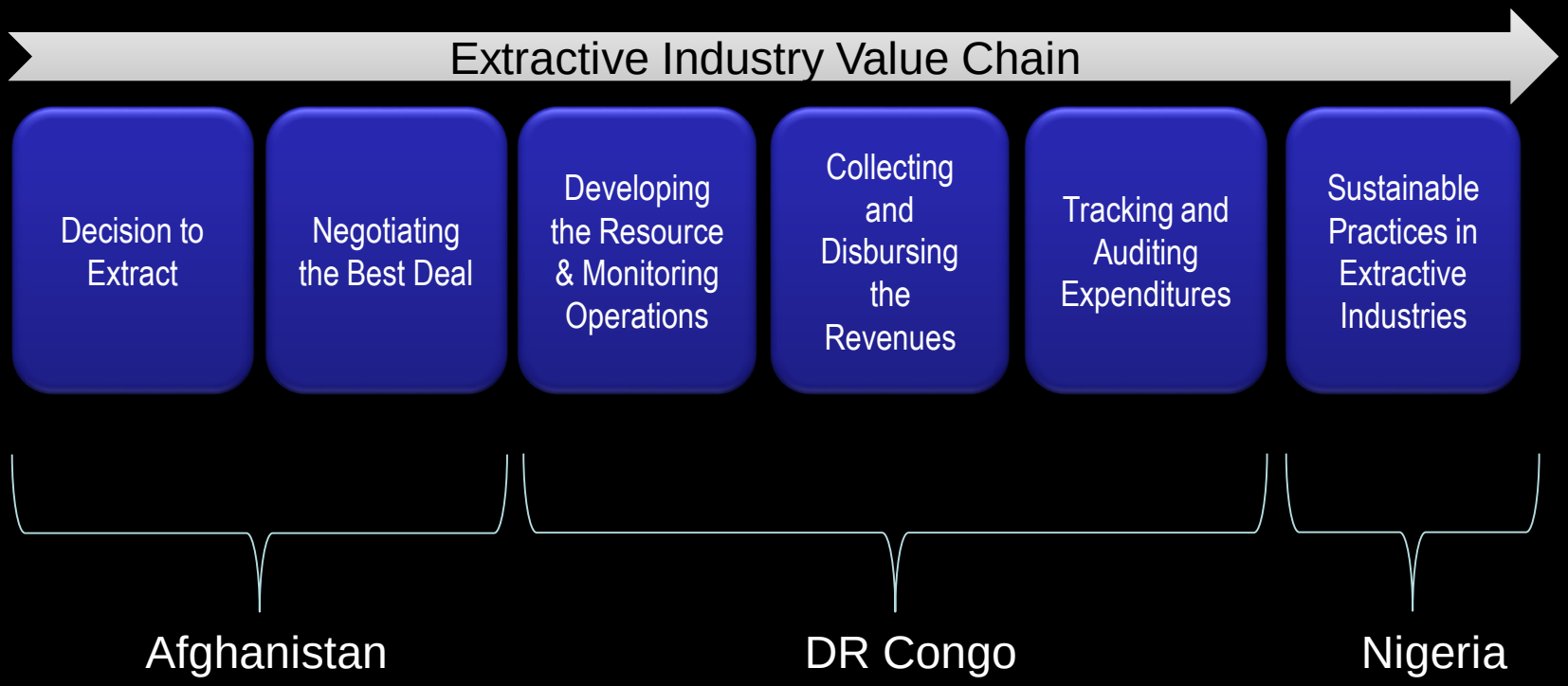
EITI Extractive Industries Transparency Initiative

+

+

THE GLOBAL GOALS
For Sustainable Development

MAP-X Prototype Field Pilots



1. Authoritative information platform for extractives sector

Goal: Web platform that dynamically aggregates and offers authoritative spatial data at national and local scales

Spatial data categories:

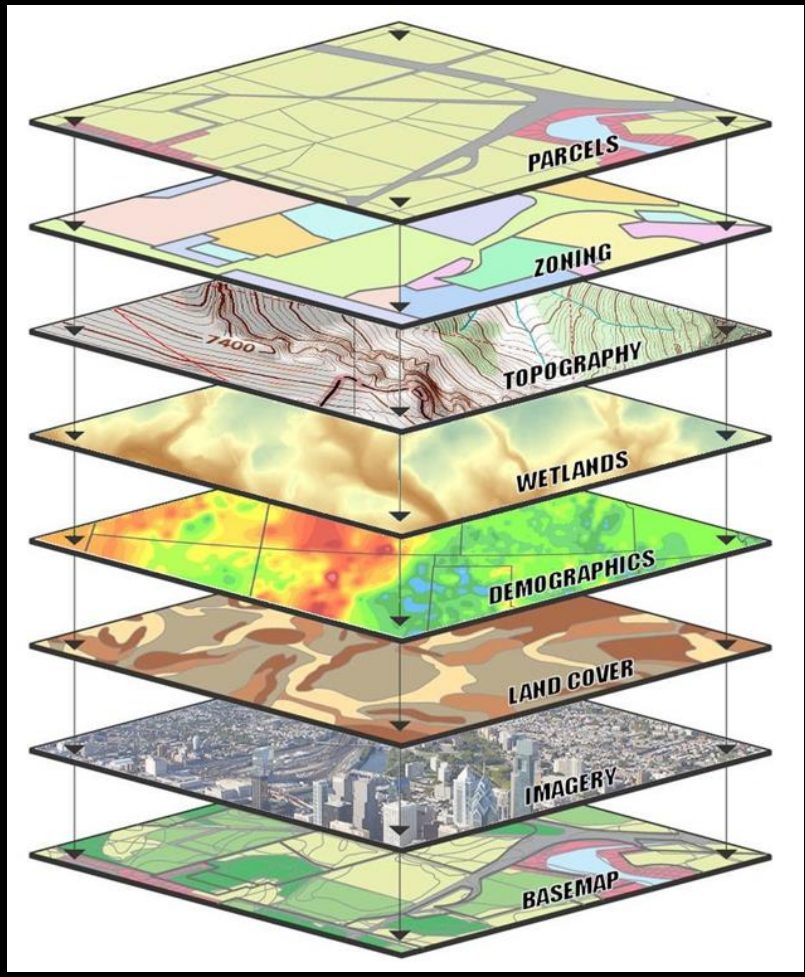
- ✓ Extractive concessions + EITI reporting
- ✓ Environmental and social data
- ✓ Stresses (conflicts, disasters)

Data quality scorecard:

- ✓ Criteria for good, better, best data verification
- ✓ Government verified
- ✓ Expert verified
- ✓ Company verified
- ✓ Community verified

Can link spatial data with legal documents:

- ✓ Concession agreements
- ✓ Benefit sharing agreements
- ✓ Environmental and social assessments



2. On-line tools to analyze, visualize and access geospatial data sets

Goal: Help stakeholders identify potential risks and benefits from the extractive sector

Functions:

- ✓ Layers overlays
- ✓ Proportional symbol mapping
- ✓ Heatmaps
- ✓ Cumulative impacts
- ✓ Timesliders and layer opacity
- ✓ Import and analysis of external data sets
- ✓ Upload and analyze user defined data

Identify:

- ✓ Concession overlaps
- ✓ Land use conflicts
- ✓ Environmentally sensitive sites
- ✓ Cumulative impacts
- ✓ Compliance against international standards
- ✓ Data conflicts and need for reconciliation
- ✓ Development impact

3. Processes for dialogue, communications and monitoring

Goal: Enable stakeholders to use MAP-X data to inform community dialogue, communications and monitoring

Functions:

- ✓ Define areas of interest
- ✓ Map project impacted communities
- ✓ Inform and document community consultations
- ✓ Enable transparent monitoring of benefits, risks and grievances
- ✓ Monitor evolution of conflicts
- ✓ Communicate positive impacts
- ✓ Storymaps from different stakeholder perspectives

Monitoring of Land Use

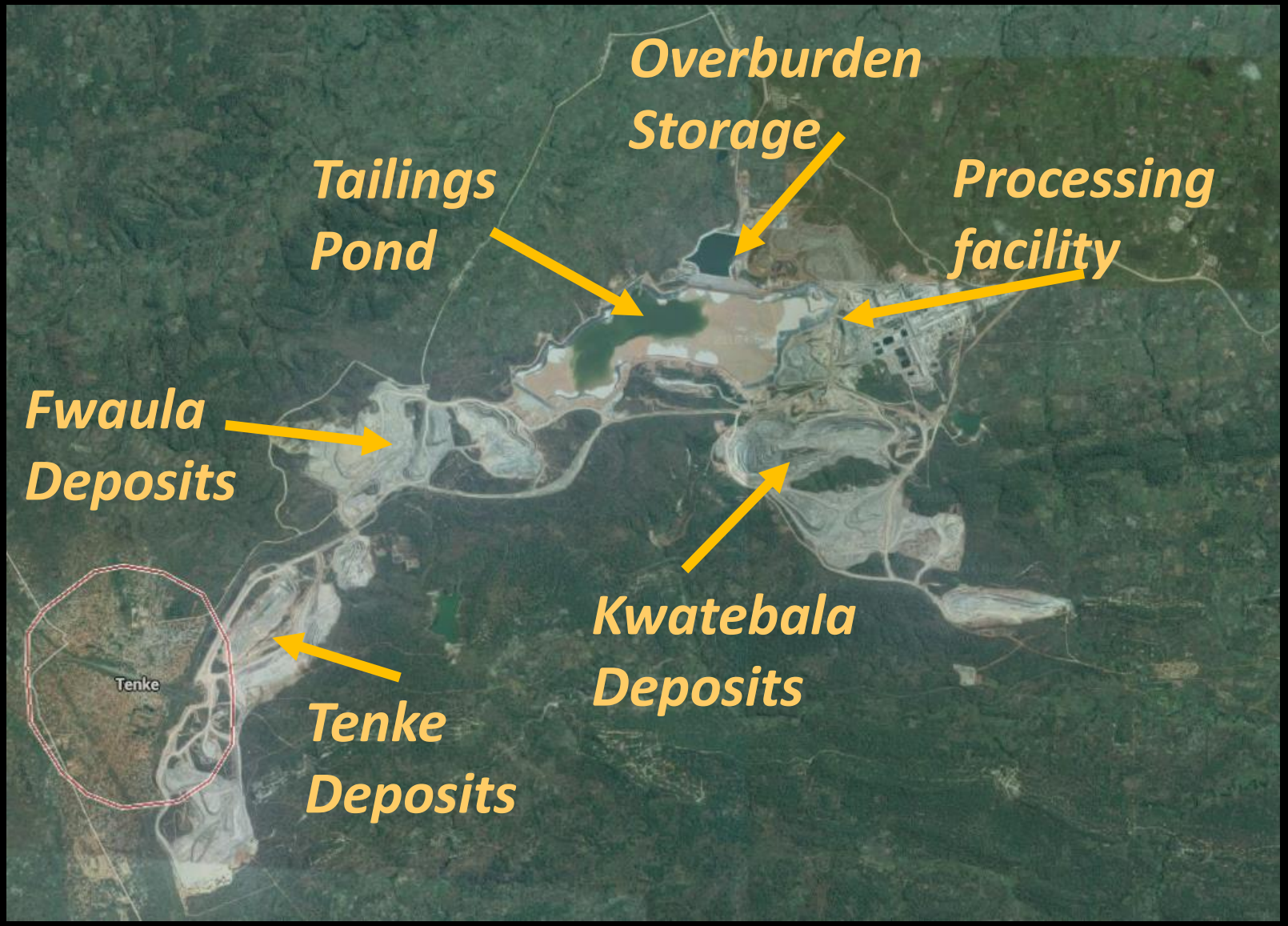
MAP-X

2008

2015

Monitoring of Infrastructure

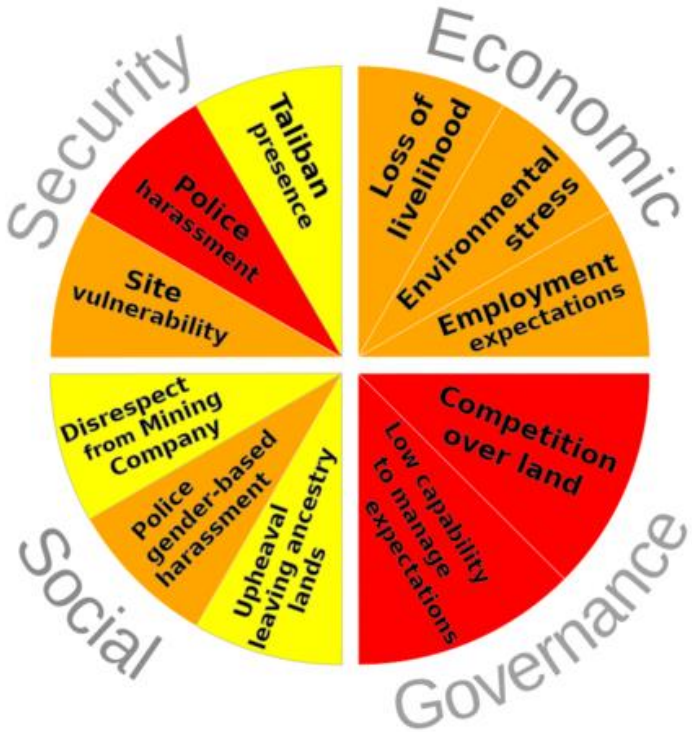
MAP-X



High-resolution satellite images to document reported benefits (e.g. infrastructure, health, schools, water)

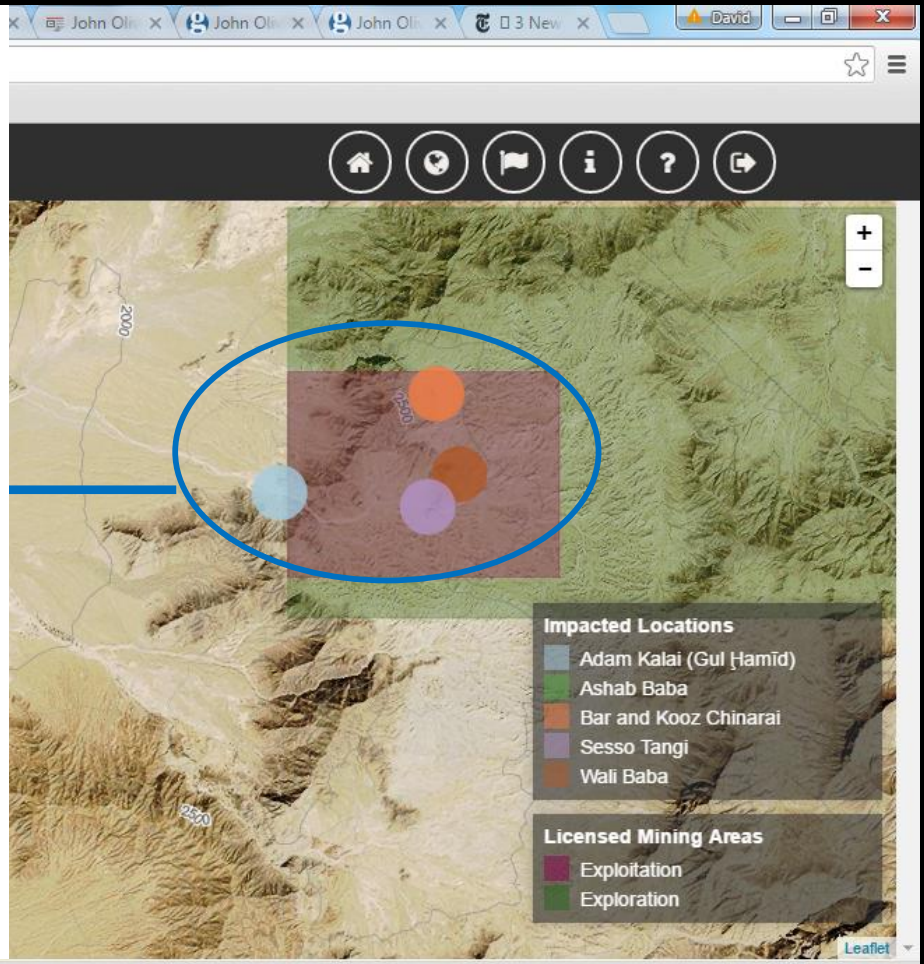
Mapping Conflict Drivers

MAP-X



Intensity levels of conflict drivers in Aynak

© Data by ATR-Consulting; Plot by UNEP, 2016



Who benefits from MAP-X?

Private sector
(Companies / Investors)

Land use and risk assessment

Demonstration of good practice / compliance

Improved communication of positive impact to support social licence

Governments
(National / Local)

Improved coordination and strategic planning

Reputation management / investor confidence

Better local dialogue & management of public expectations

Citizens
(Communities / Civil Society)

Improved identification & sharing of risks / benefits

Strengthened participation in consultation / dialogue

Monitor company and government compliance / performance

Who benefits from MAP-X?

Demonstrate compliance with:

- IFC standards and guidelines
- EITI requirement 7.2 and open data policy
- SDG goal 16 on transparency (16.6), participation (16.7), and information access (16.10)
- ILO guidelines (Free prior and informed consent)
- UN Guiding principles on business and human rights
- Open government partnership

IFC

EITI

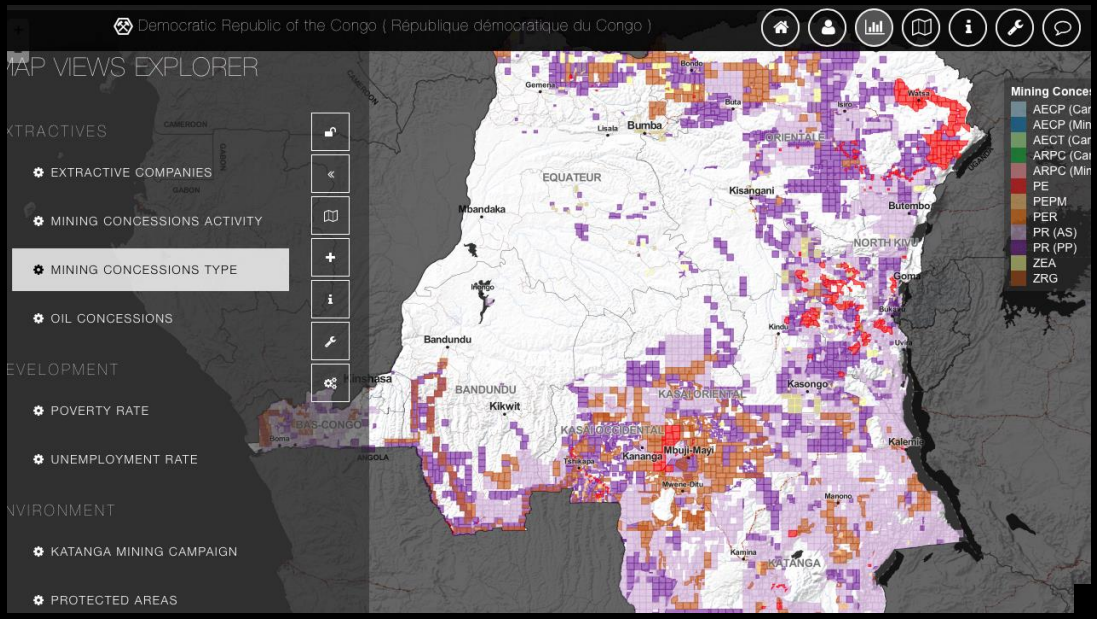
THE GLOBAL GOALS
For Sustainable Development

ILO

United Nations

Open Government Partnership

MAP-X



www.mapx.io

UNEP

David Jensen,
David.Jensen@unep.org

WORLD BANK

Ousmane Deme,
odeme@worldbank.org

UNEP WCMC

Proteus Annual Meeting

28th - 29th June 2016

David Attenborough Building, Cambridge, UK

BARRICK

bp

Chevron

eni

ExxonMobil

REPSOL

RioTinto

Statoil

TOTAL

woodside

KPIs for avoiding and minimizing potential impacts before, during and after seismic activities

Repsol E&P – Oriol López

ÍNDICE

1. Effectiveness Assessment of Mitigation Measures in Sensitive Biological Areas During 3D Seismic Survey in Tropical Forests – SPE-174151

2. Innovative Measures for Mitigating Potential Impacts on Sea Turtles during Seismic Surveys – SPE-179215

Effectiveness Assessment of Mitigation Measures in Sensitive Biological Areas During 3D Seismic Survey in Tropical Forests – SPE-174151

Introduction

Biologically sensitive areas (BSA) are areas of intensive resource/use for animals.


Reproductive areas(AR)


Clay licks(COL)


Pathway(CA)


Anthill(HO)


Feeder(CO)

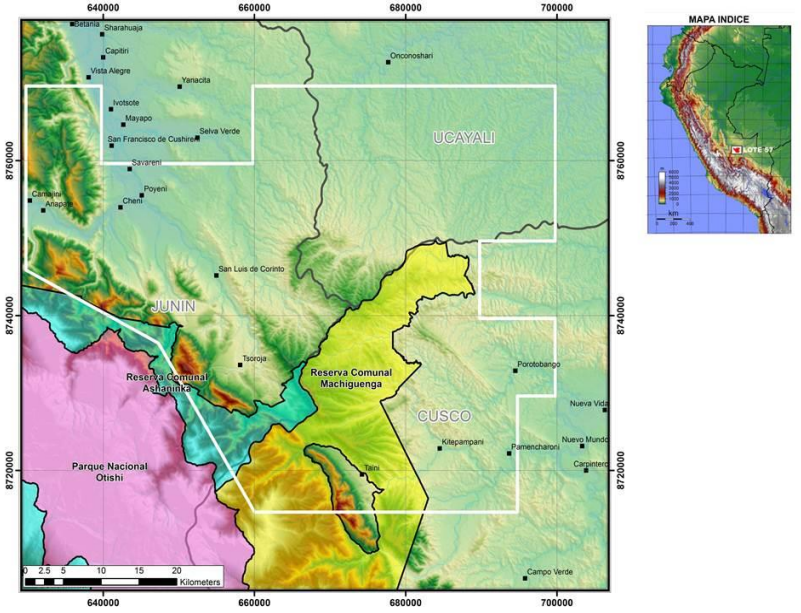

Drinking areas(BE)

Introduction

During 3D seismic campaign, mitigation measures were established such as relocate energy sources close to BSAs.

However, information regarding the effectiveness of this measure was limited.

BSA of high significance	Displacement
Salt or clay lick	150 m
Baths	100-150 m
Watering hole	100-150m
Feeder	100m
Complex BSA	150m
Reproduction Areas	150m
Roads	50 m
Anthill	15 m



Objective

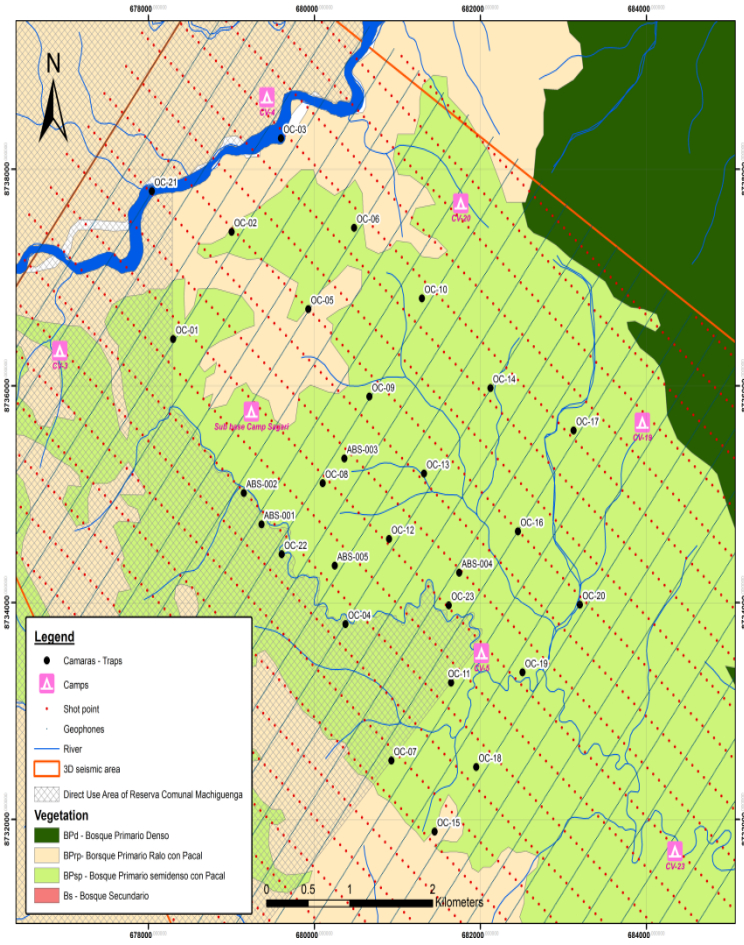
→ Assess the effectiveness of mitigation measures:

- ✓ Changes in abundance of the *Leopardus pardalis* (ocelot) population.
- ✓ Frequency of use of 05 ABS by mammals.

The study had 28 monitoring stations:

- ✓ 23 corresponded to the population study of *Leopardus pardalis*
- ✓ 5 stations corresponding to the study of the frequency of use in biologically sensitive areas (BSA).

Covered an approximate area of 35,84 km^2 and data was taken before, during and after seismic activities.



Methods
KPIs

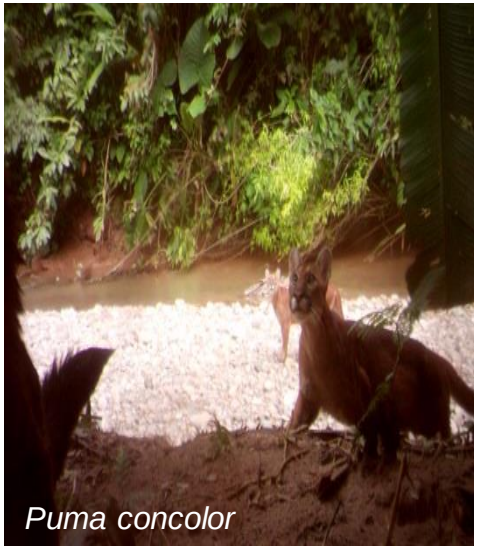
Relative abundance of mammals captured in the trap cameras was calculated to assess the influence the seismic activities on the ***frequency of use*** of the biological sensitive areas.

The BSA's ***frequency of use*** was expressed as the quantity of time a specie in particular visited the BSA each 7 days (Tatum-Hume, 2003).

Results
Species richness and composition

At the assessed BSAs we identified a total of 9 orders, 18 families and 24 species of non-flying mammals.

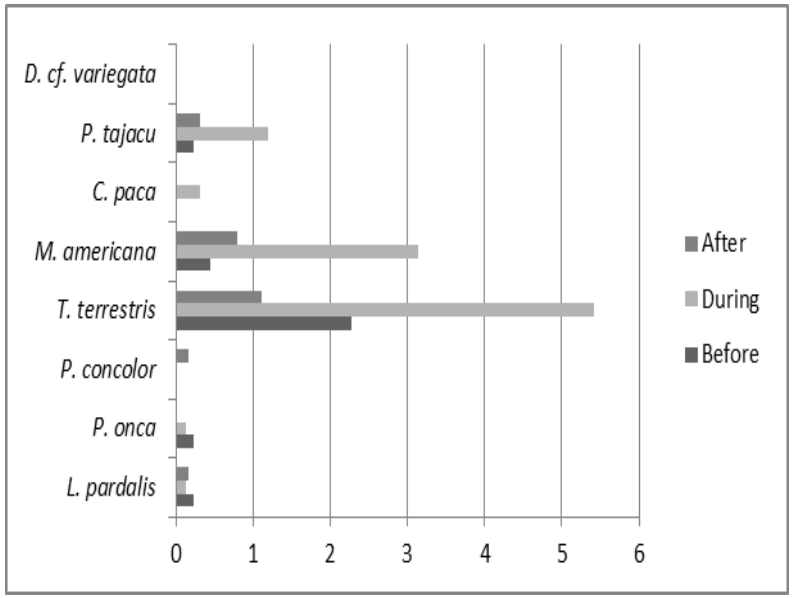
The species *Cuniculus paca, Puma concolor, Tapirus terrestris, Mazama americana, Pecari tajacu and Leopardus pardalis* were captured in photo in all.



Results
Frequency of use – Example

In BSA-001, the larger visiting rate were reported for the species *Tapirus terrestris* and *Mazama americana* in the during phase with values of 3,1 visits/week and 2,8 visits/week respectively.

Were not seen any significant differences among the rates of visit observed in each assessed phase (p = 0,304; α = 0,05).



Visit rate per species for BSA-001

Conclusions

- ✓ Biologically sensitive areas are present at Block 57.
- ✓ Because of the importance of these microhabitats, specific practices to avoid and minimize biodiversity impacts are implemented.
- ✓ The indices of relative abundance and frequency of use observed indicate that there are no significant differences between before, during and after seismic activities.

SPE Latin American and Caribbean Health, Safety, Environment, and Sustainability Conference

7-8 July 2015
BOGOTÁ, COLOMBIA

SPE-174151-MS

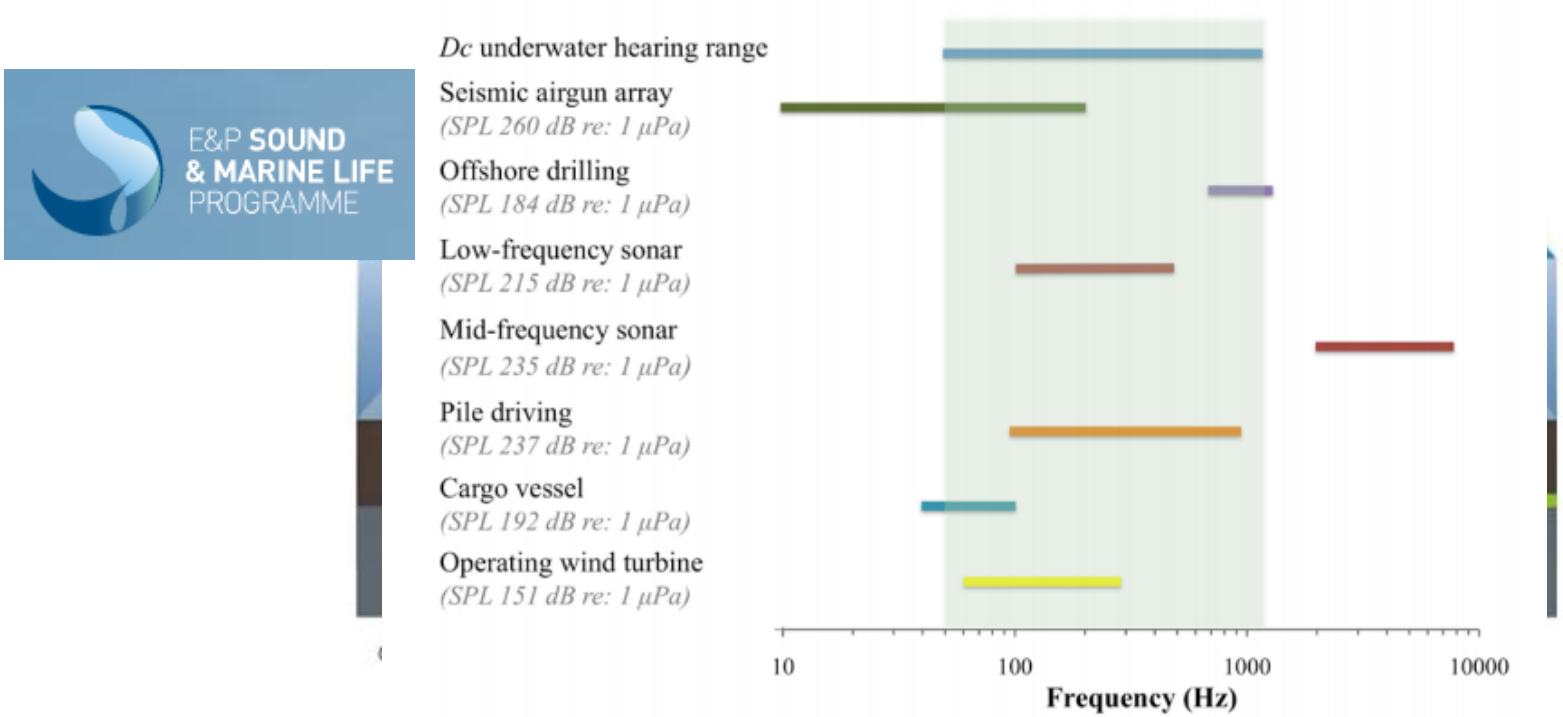
Effectiveness Assessment of Mitigation Measures in Sensitive Biological Areas During 3D Seismic Survey in Tropical Forests

K. Caro, Knight Piésold; A. Watson, Repsol E&P Peru; O. Centty, A. Alvarez, Knight Piésold; M. Vasquez, A. Garcia, C. Ahumada, C. Videla, Repsol E&P Peru

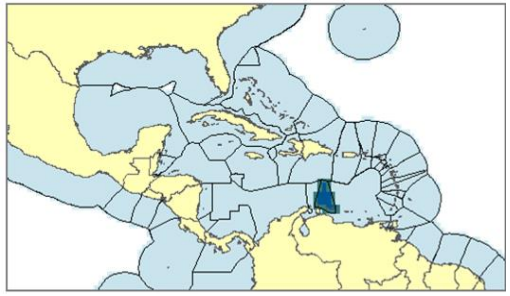
SPE International
Society of Petroleum Engineers

Innovative Measures for Mitigating Potential Impacts on Sea Turtles during Seismic Surveys – SPE-179215

Introduction
Offshore seismic activity

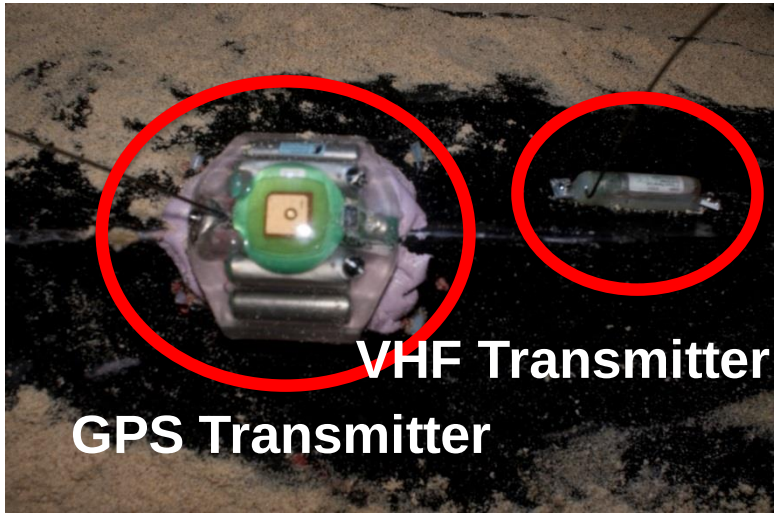


Introduction
Project's location and objectives



Source: SWOT, 2012. Adapted by WorleyParsons

Mitigation measures implemented

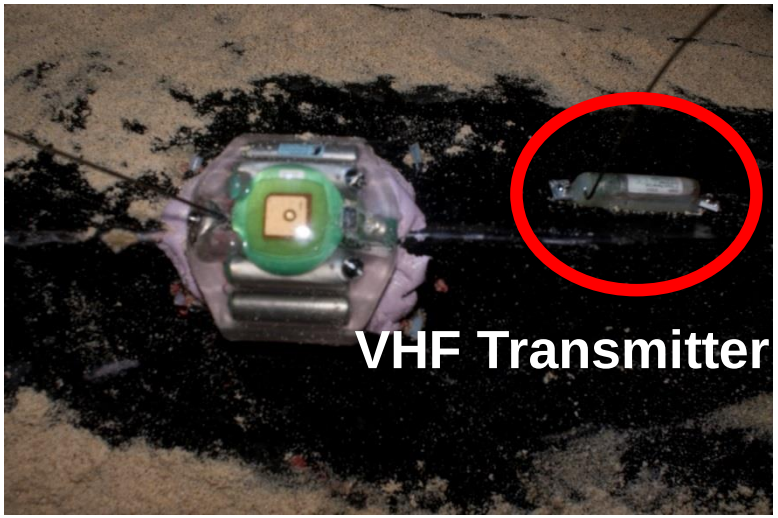


Results
VHF KPIs

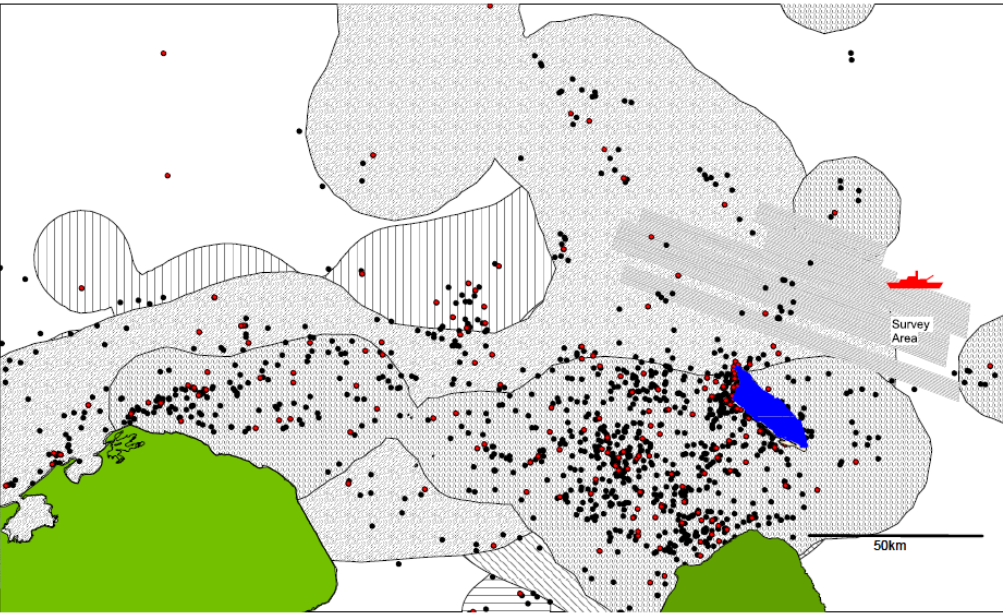
Empirical testing demonstrated detection up to 1.5 km.

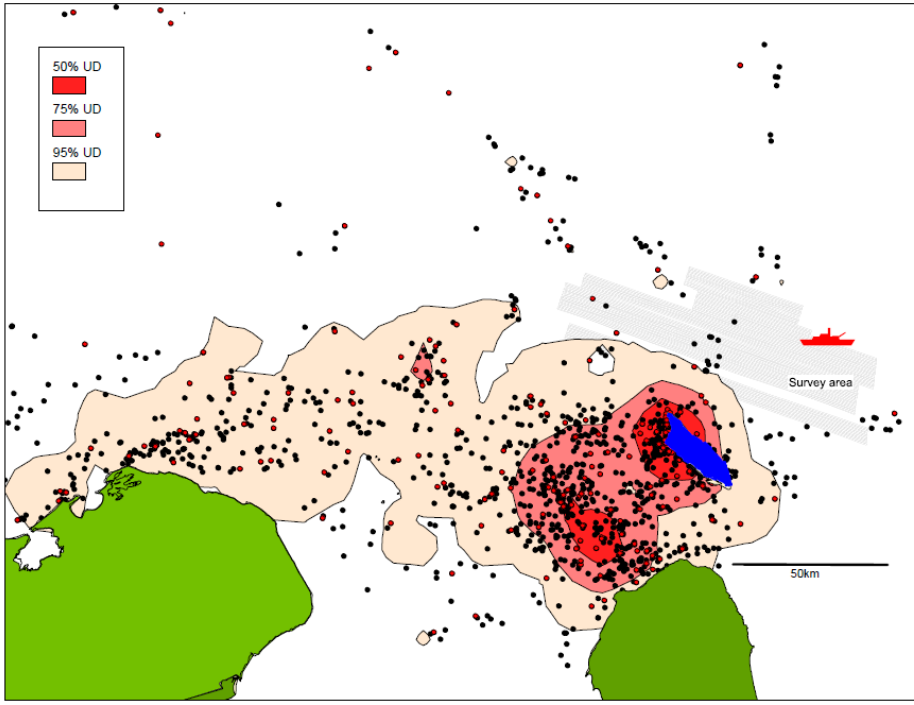
No signals received during study.

VHF-transmitters where fully functioning during renesting emergences.



Results
GPS KPIs





Leatherback Utilization Distribution areas

Conclusions

Can sea turtles be detected during seismic activity?

Could sea turtles' temporal and spatial patterns be known?

SPE International Conference and Exhibition on
Health, Safety, Security, Environment, and Social Responsibility

11–13 April 2016
STAVANGER FORUM
Stavanger, Norway

SPE-179215-MS

Innovative Measures for Mitigating Potential Impacts on Sea Turtles during Seismic Surveys

van der Wal, S. *Turtugaruba Foundation*; Eckert, S.A. *WIDECAST - Wider Caribbean Sea Turtle Conservation Network*; Lopez-Plana, J.O. *Repsol E&P*; Hernandez, W. *Repsol Aruba BV*; Eckert, K.L. *WIDECAST*

SPE International
Society of Petroleum Engineers
Statoil
Host Organisation

Transparency and conflict avoidance using spatial analysis

1. What mechanisms are currently being used by members for conflict avoidance and stakeholder engagement?
2. What more is needed, if anything, to assist in conflict avoidance?
3. What role could a tool such as Map-X serve to support companies in stakeholder engagement and conflict avoidance?