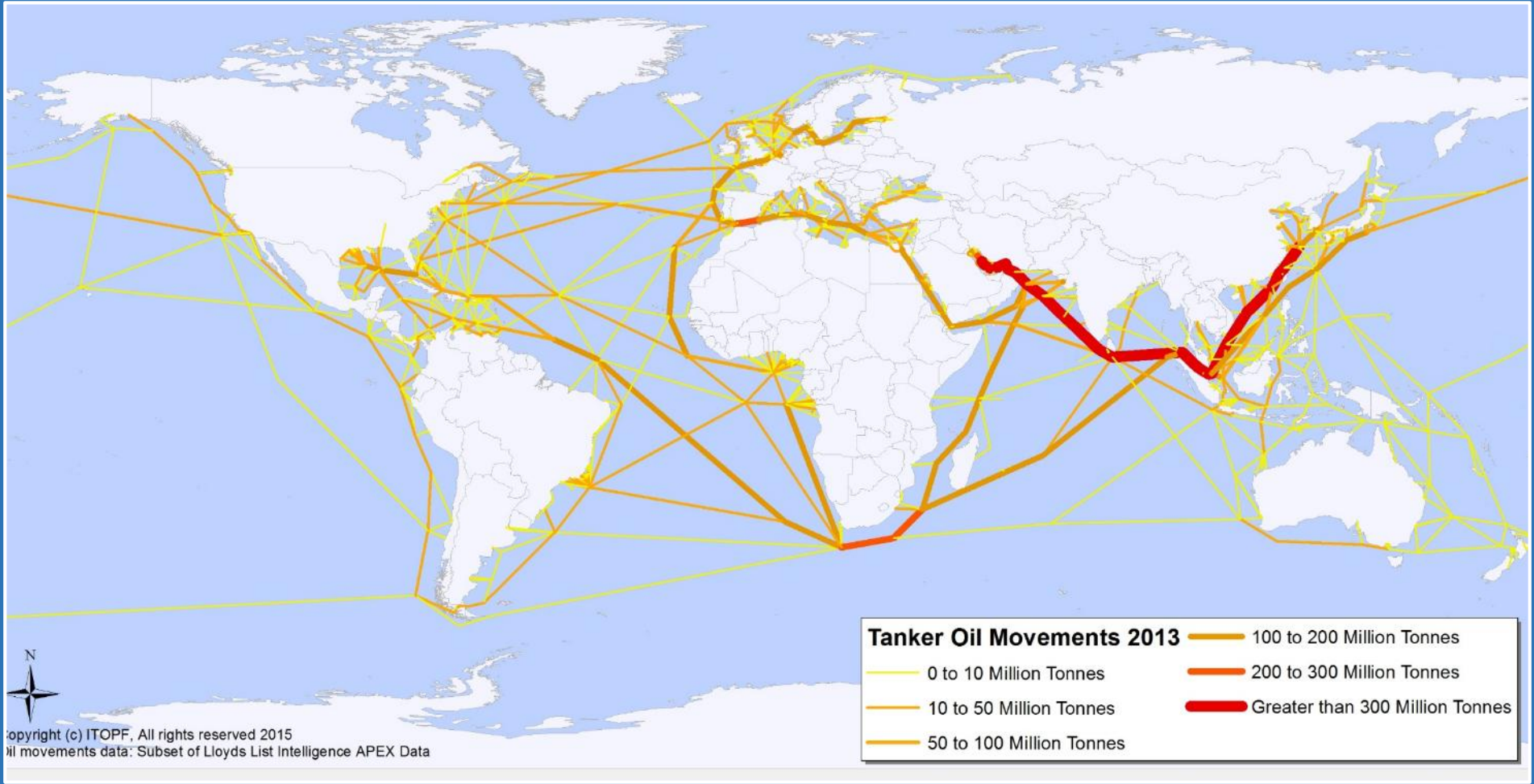




FUTURE RESPONSE ISSUES IN BRAZIL

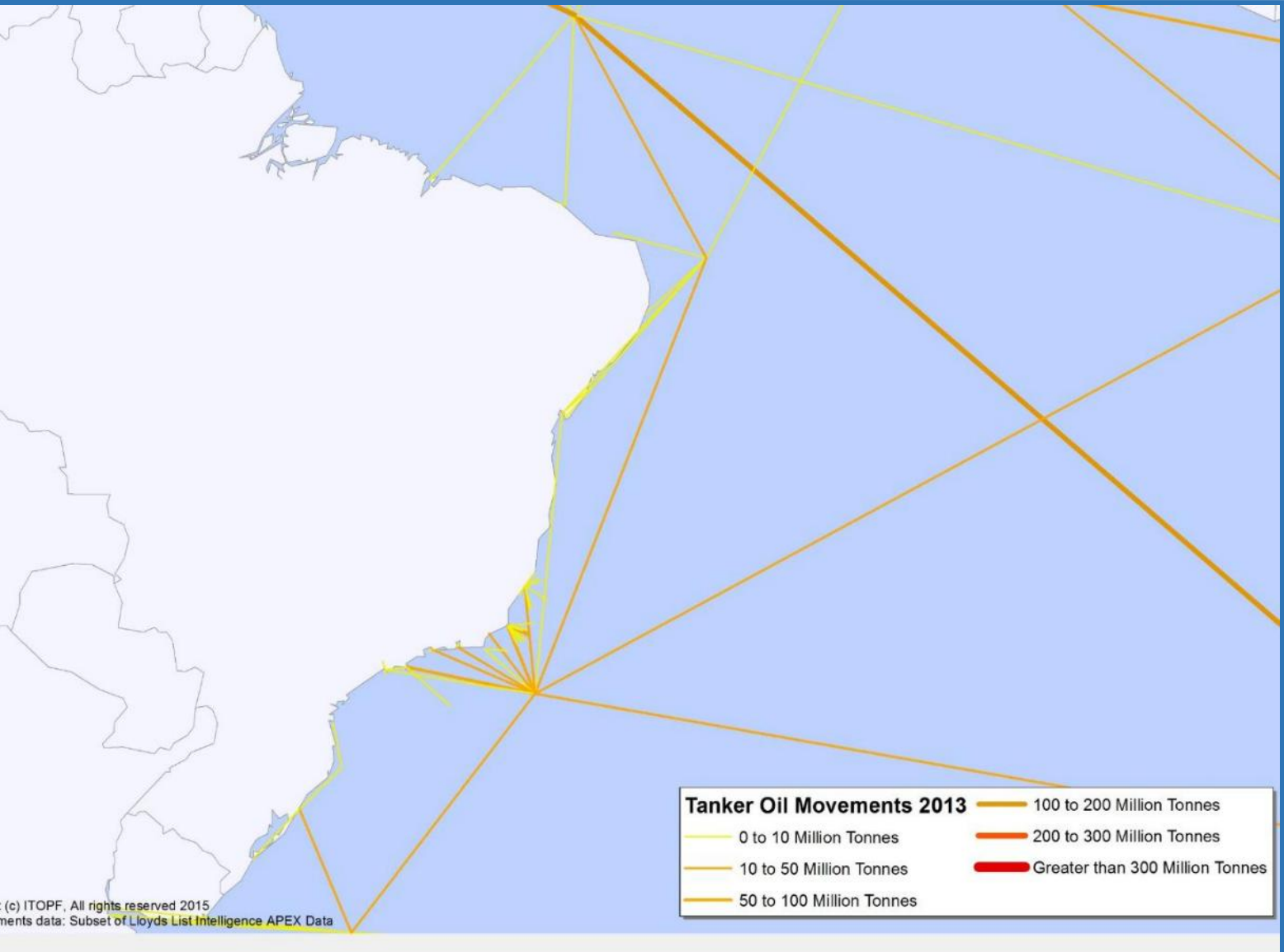
Dr Mark Whittington
Technical Team Manager

TRANSPETRO August 2015

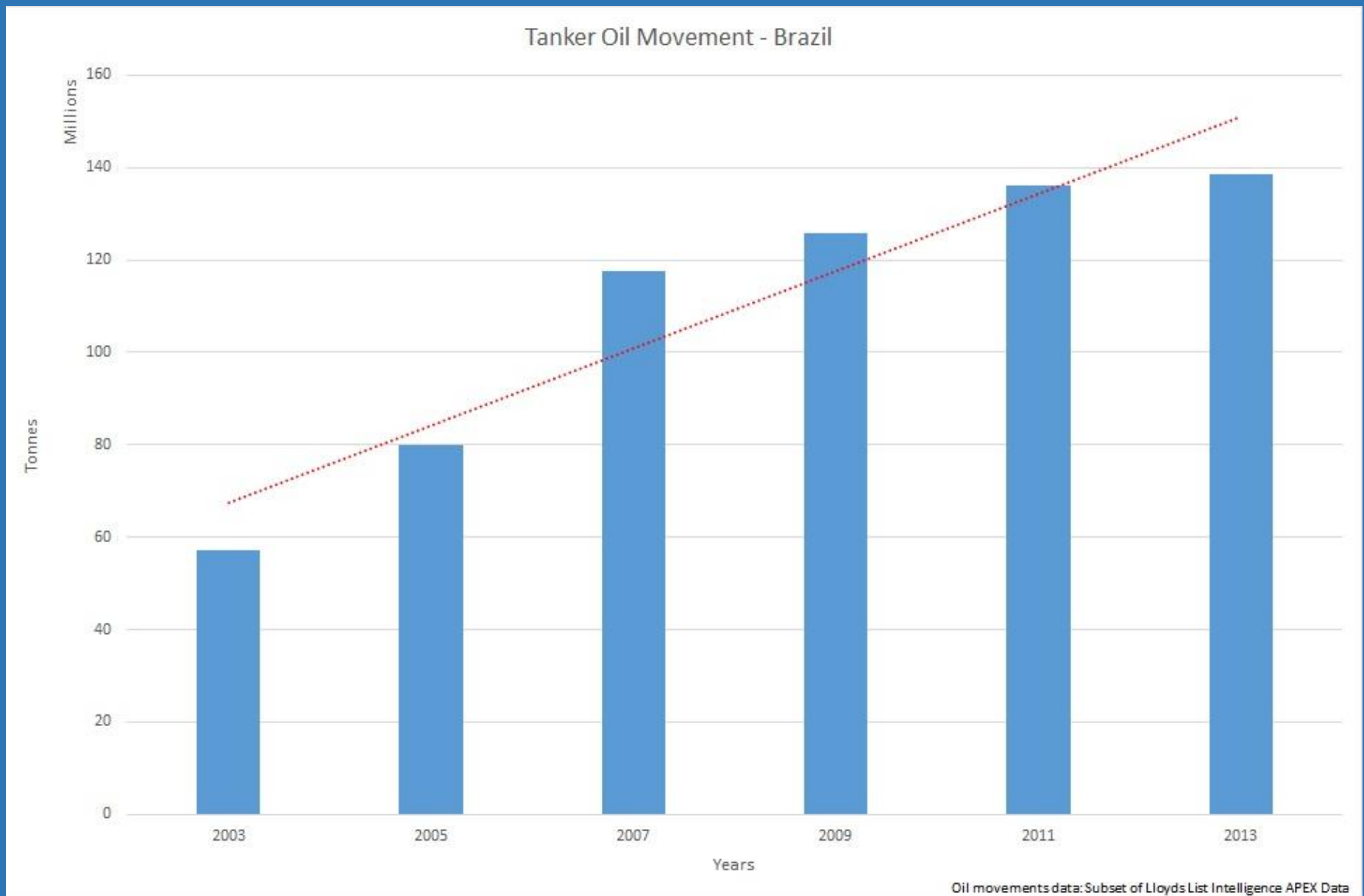


Tanker Oil Movements 2013

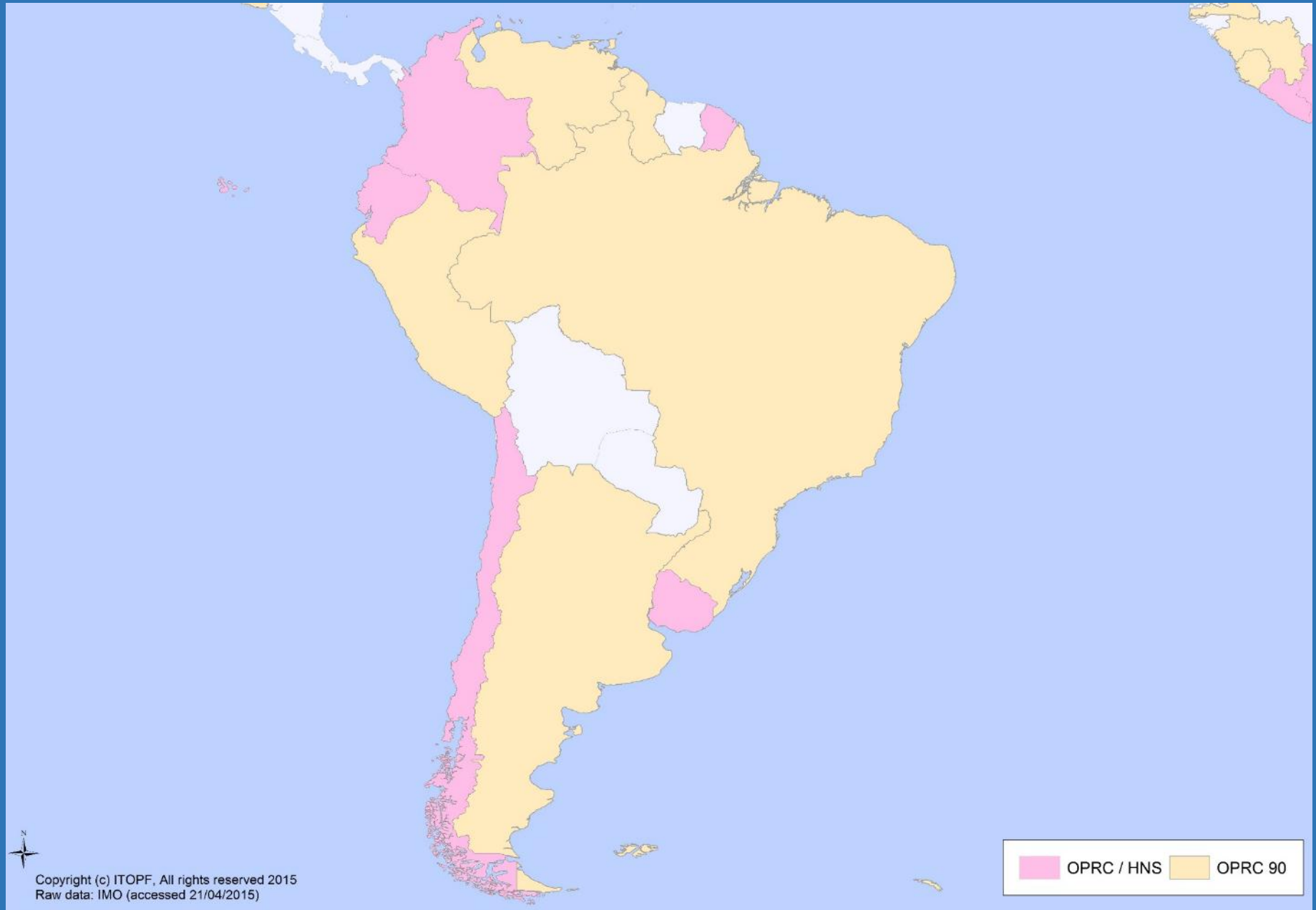
Tanker voyages reflect worldwide trade between producers and major consumers



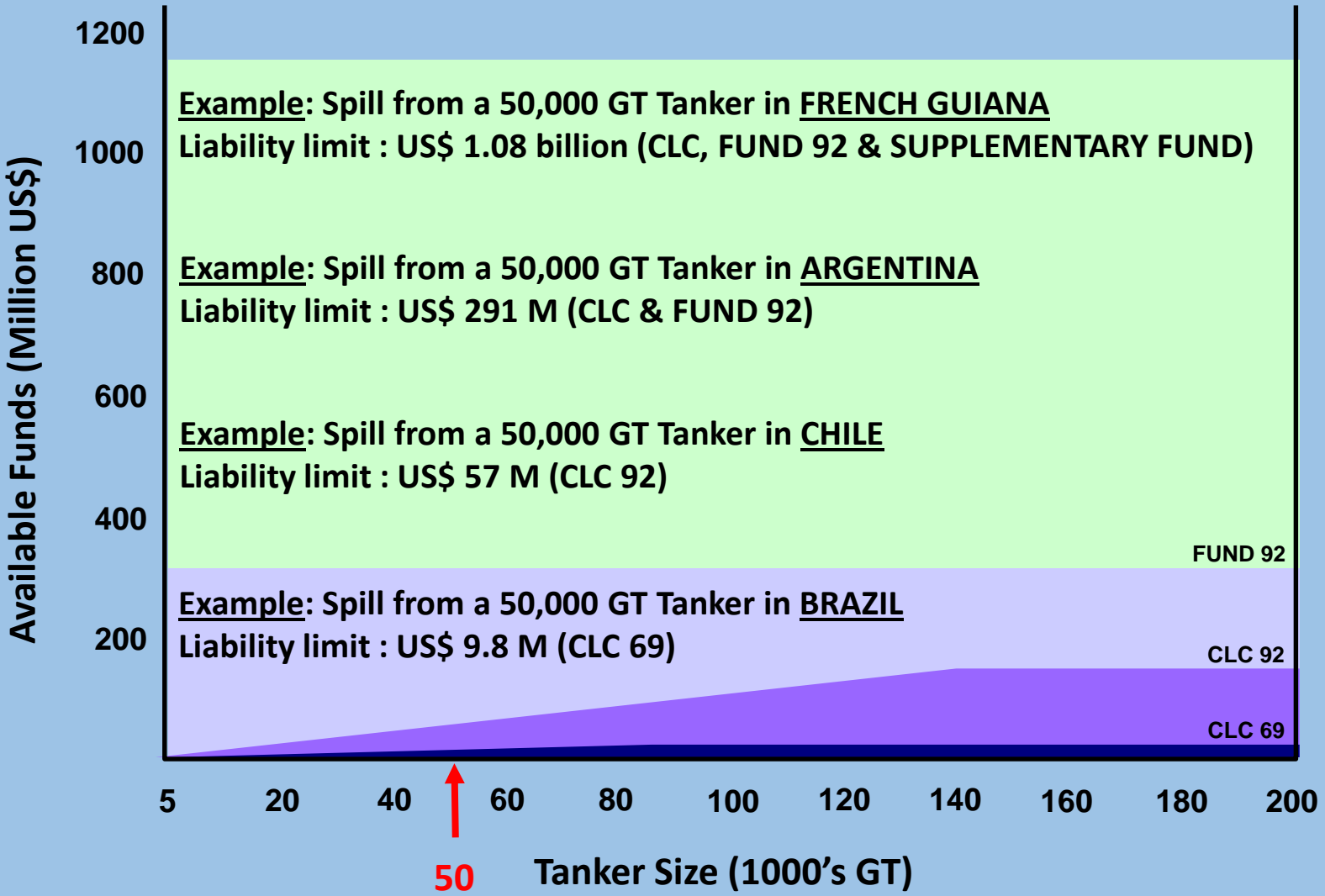
Significant tanker movements in Brazilian waters



Oil movements data: Subset of Lloyds List Intelligence APEX Data







National Oil Spill Contingency Plan

Enacted in October 2013

- General response provisions
- Organisational structure and responsibilities
- Co-operative framework to reduce response times

NCP Manual – technical document for response. Due ?

Local Contingency Plans

Rio de Janeiro, Belem, Manuas, Corumba, Rio Grande, Natal, Parmaiba, Paranagua, Sao Luis, Itajai, Vitoria, Fortaleza, Aracaju, Santos, Recife, Maceio, Salvador and Joao Pessoa are all defined as Class I ports by the Directorate and as such should possess local contingency plans.

Industry Contingency Plans

Oil industry has plans for selected facilities both onshore and offshore.

- Lead Federal Agency: IBAMA
- Pollution response typically led by the environment departments of the 17 coastal states or PETROBRAS:

Rio De Janeiro - FEEMA

Sao Paulo – CETESB

Recife – CODEMA

Fortaleza – COMDEMA

Belo Horizonte - CETEC

Cuiba - CONDEMA

Sao Luiz - SERNAT

Florianopolis – FATMA

Brasilia – SEMA

Goiania – SEMAGO

Natal – CMA

Campo Grande – INAMB

Joao Pessoa – SUDEMA

Vitoria - DAASSEES

Curibata - SUREHMA

Porto Alegre - DMA

Bahia - INEMA

Salvador - CEPRAM

Maceio - CMA/SERPLAN

Amazonas - CODEAMA

- Federal & State Government Departments
- Port Captains
- Oil & Shipping Industry Companies
- Oil Spill Response Companies

Current scenario:

- Rapid expansion of oil and gas sector
- Developing and diversifying shipping sector
- Coastline length: 7,491 km
- Recently enacted NCP
- Multiple government and industry parties involved with oil spill response
- Varying levels of response experience and training



“Brazil has an extensive coastline, a wide variety of potential sources of maritime pollution and a developing response capability. In the event of a major oil spill, the challenges are numerous and complex.”



INTERNATIONAL CONVENTION ON OIL POLLUTION PREPAREDNESS, RESPONSE AND CO-OPERATION, 1990

*“In the event of an oil pollution incident, **prompt** and **effective** action is essential in order to minimise the damage which may result from such an incident”*

RECOVERY (DECANTING)



IN-SITU BURNING



DISPERSANTS



REGULATORY PRE-APPROVAL IS NEEDED TO ENSURE PROMPT AND EFFECTIVE ACTION

Incident Management System (IMS)

Complex response environment requires clear and consistent management system

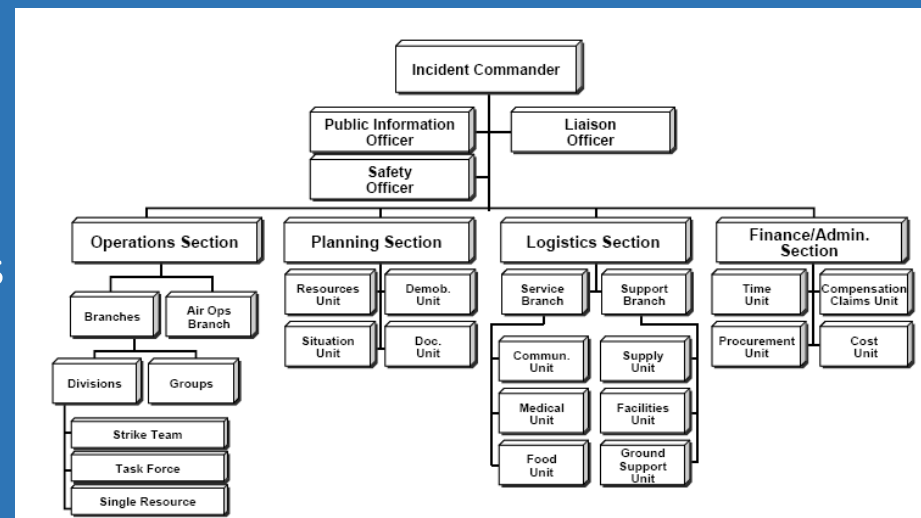
Oil Industry – I.C.S. Is this right for Brazil?

IMS must be:

- ✓ Clear and straightforward
- ✓ Defined roles and responsibilities
- ✓ Flexible
- ✓ Consistent

IMS requires:

- ✓ Trained and experienced personnel
- ✓ Regular drills and exercises
- ✓ Feedback into contingency planning



Shoreline Clean-Up

Brazil has not yet had a large-scale shoreline response

- Sorbent Use – example of inappropriate shoreline response technique
- Skilled Labour – shortage in many parts of the country
- Drills/Exercises – shoreline response not currently include in exercises

SORBENT USE



SKILLED LABOUR



DRILLS/EXERCISES



“The success of a response will largely be determined by the ability and willingness of all parties involved to work together”

- Key roles for government, industry and the wider response community
- Stakeholder engagement important

ITOPF – Preparedness & Contingency Planning

Impartial advice

Wide range of experience:

- Regional – Gulf of Thailand, Caribbean, Mediterranean
- National – UK, Singapore, Cyprus, New Zealand
- Industry – Oil and Shipping Companies Worldwide, including Brazil
- Exercises & Drills



DR MARK WHITTINGTON
Email: markwhittington@itopf.com

www.itopf.com

Muito Obrigado