



Global Tanker Casualties since 1989 and the transportation of Canadian Oil Sands

IMSF Conference, 15th to 17th April 2013

London, United Kingdom



The Canadian Oil Sands Dialogue

- The Canadian Oil Sands Dialogue is a collaboration between IHS Maritime and IHS CERA and consists of three elements of research:
 - Assessing Marine Transport for Canadian Oil Sands
 - Economic and Energy Security Benefits, with or without Oil Sands growth
 - Moving Oil Sands to Market by Pipeline and Rail
- IHS Maritime were asked to look at tanker casualties statistics since 1989, the profile of the tanker fleet and tanker movements in similar regions around the world.
- For those who are interested, the full research papers will be made available for free at www.ihs.com.

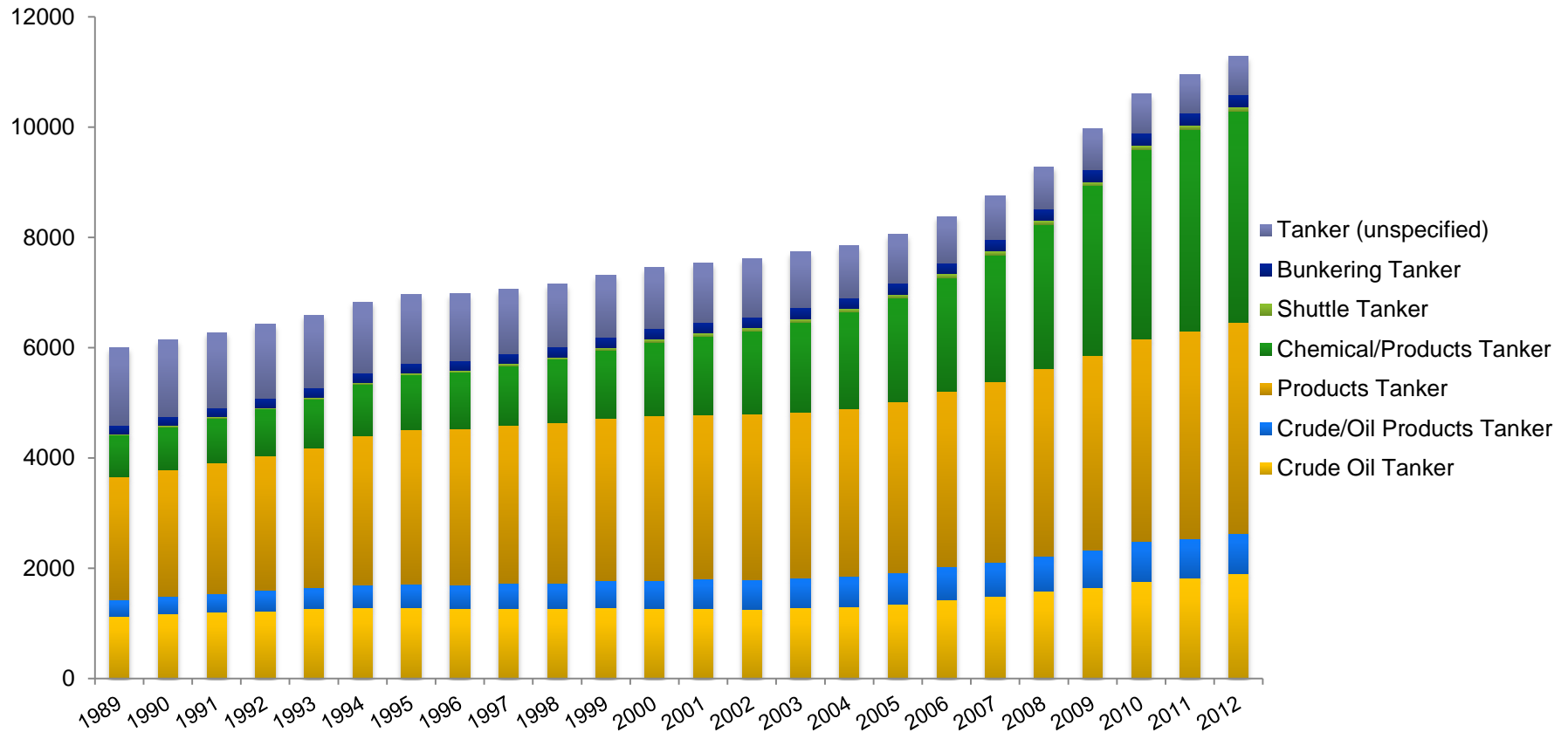
The Canadian Oil Sands Dialogue



Source: The Canadian Press Files

Tanker Fleet 1989 - 2012

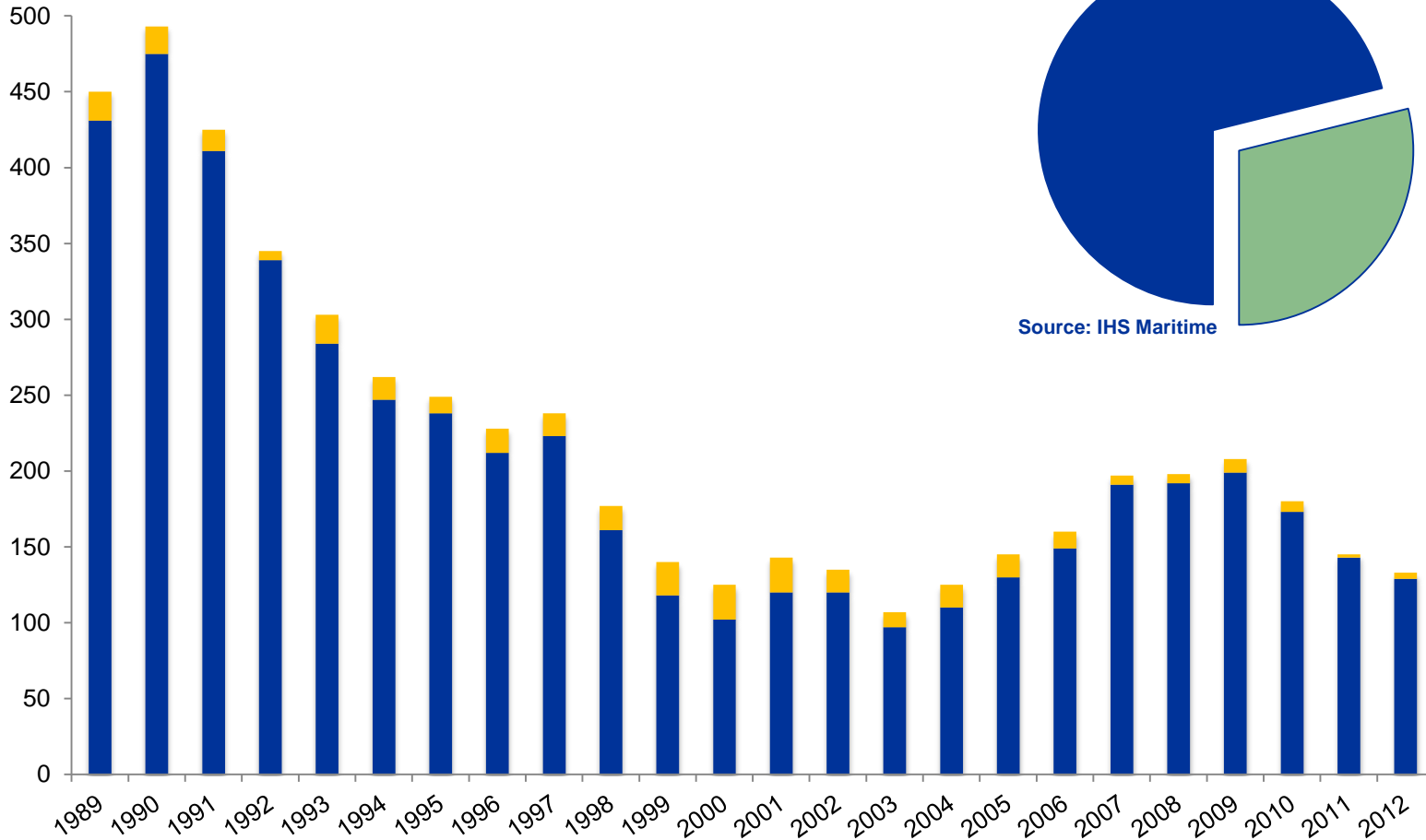
Tanker fleet by number of vessels, 1989 - 2012



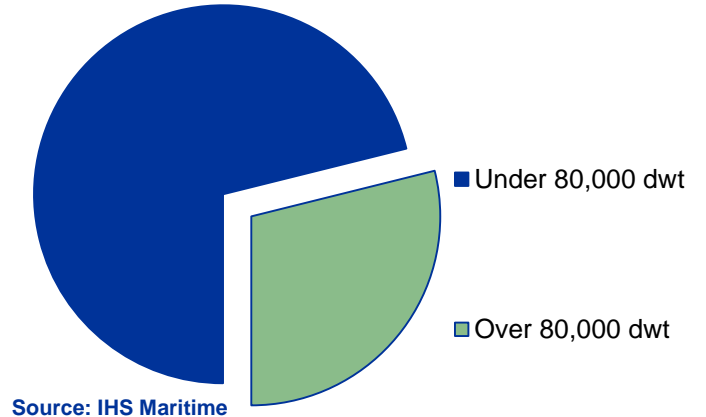
Source: IHS Maritime

Incidents involving Tankers, 1989 - 2012

Incidents involving tankers globally, 1989 - 2012



Division of incidents by size.



Source: IHS Maritime

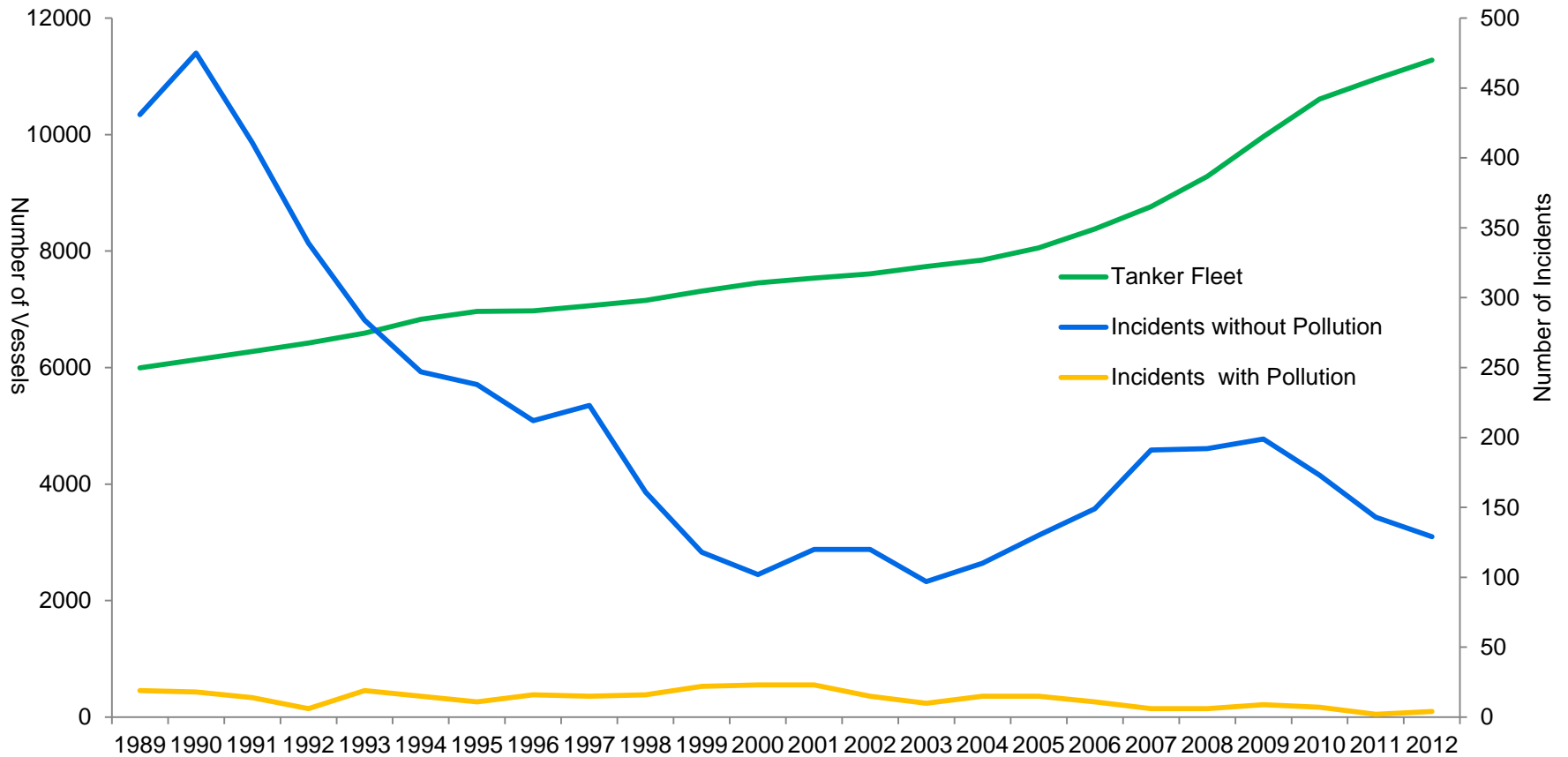
- Pollution
- No Pollution

Source: IHS Maritime

Comparison of the Tanker Fleet and its Casualties 1989 to 2012 by number of vessels

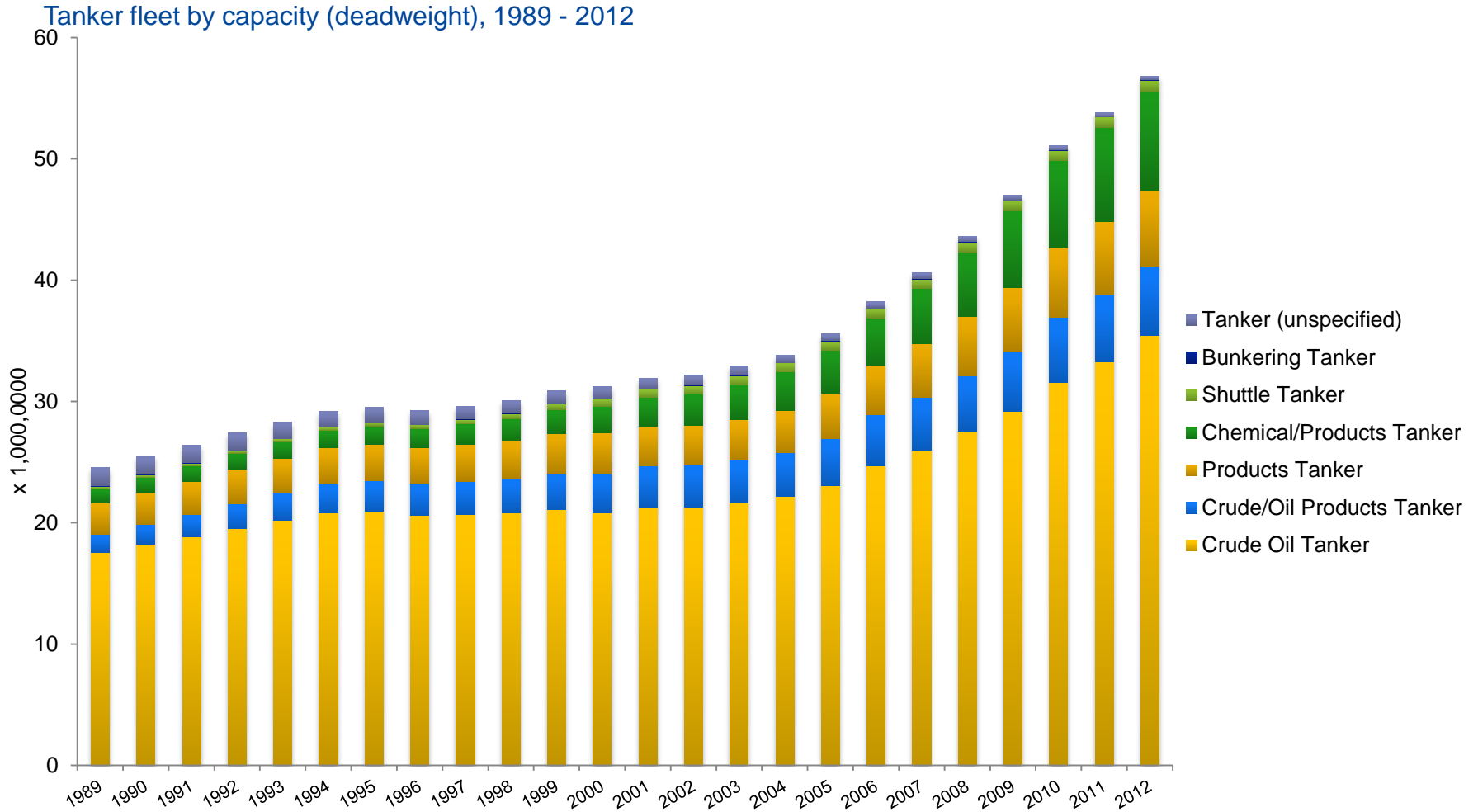


Tanker Casualties Compared to the Tanker Fleet size



Source: IHS Maritime

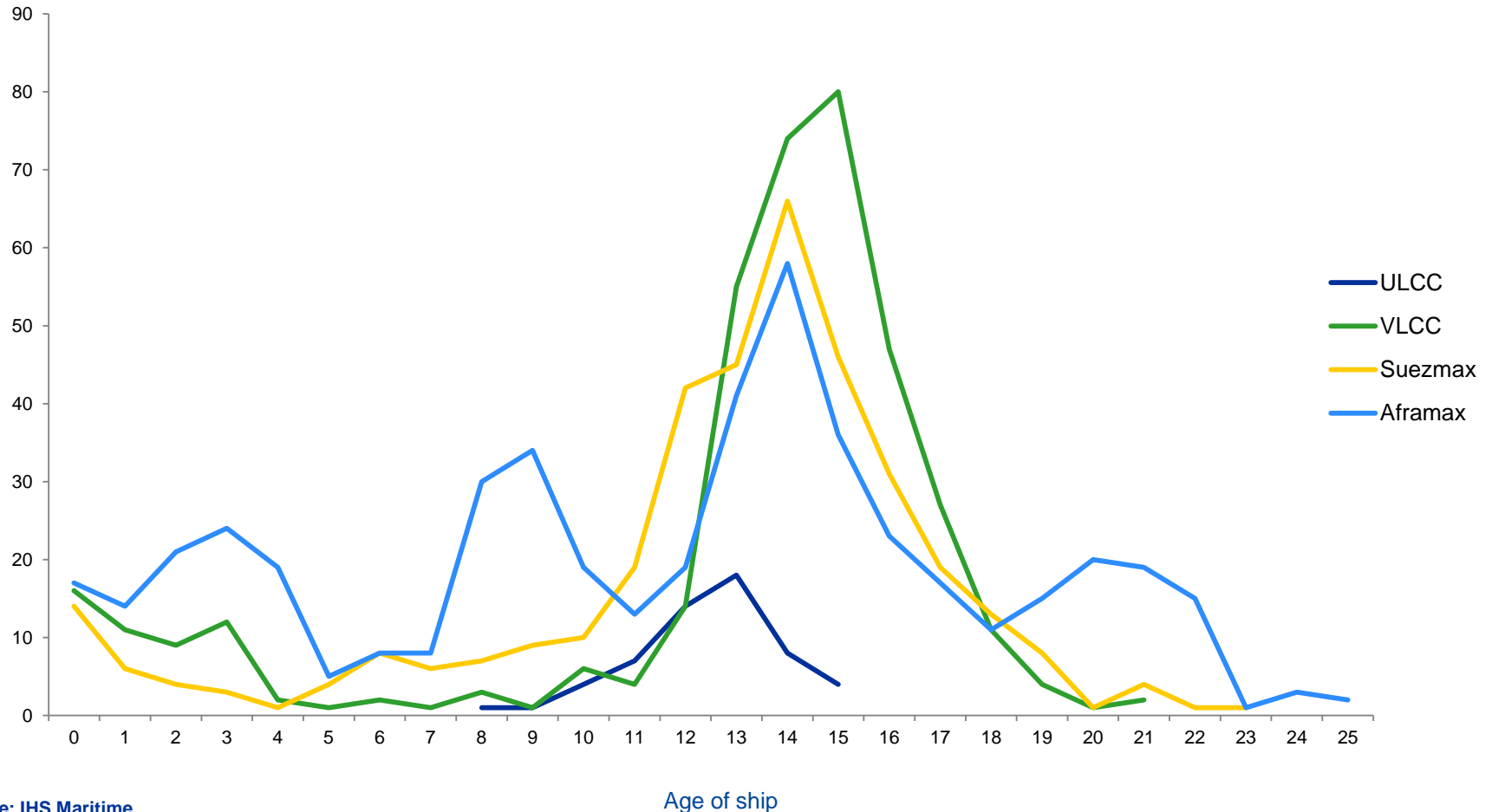
Tankers from 1989 to present day – Capacity



Source: IHS Maritime

Tankers from 1989 to present day – Age profile 1989

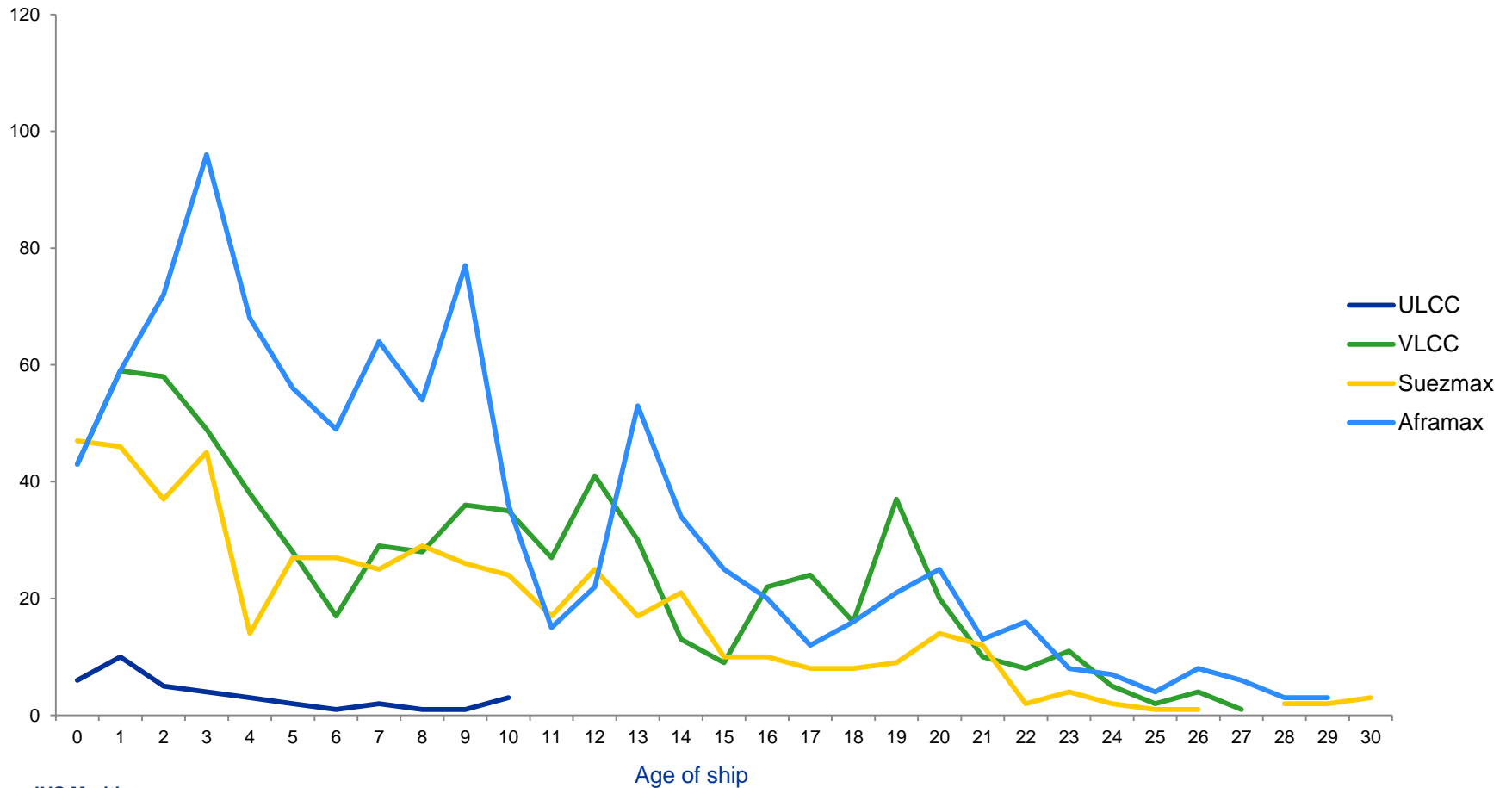
Age profile of larger tankers (80,000 DWT +) as at 31st December 1989



Source: IHS Maritime

Tankers from 1989 to present day – Age profile 2012

Age profile of larger tankers (80,000 DWT +) as at 31st December 2012

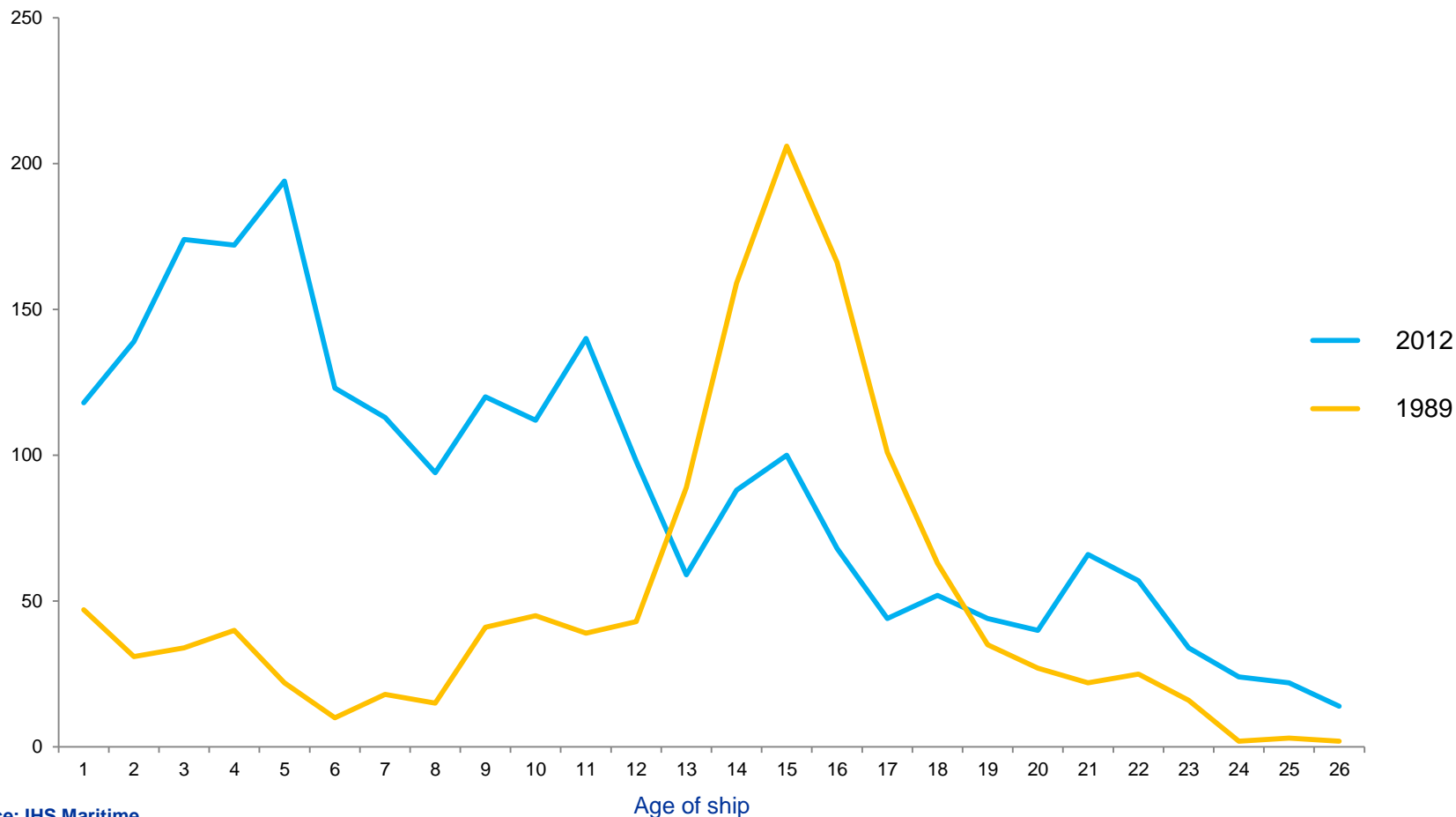


Source: IHS Maritime

Tankers from 1989 to present day – Age Profile comparison

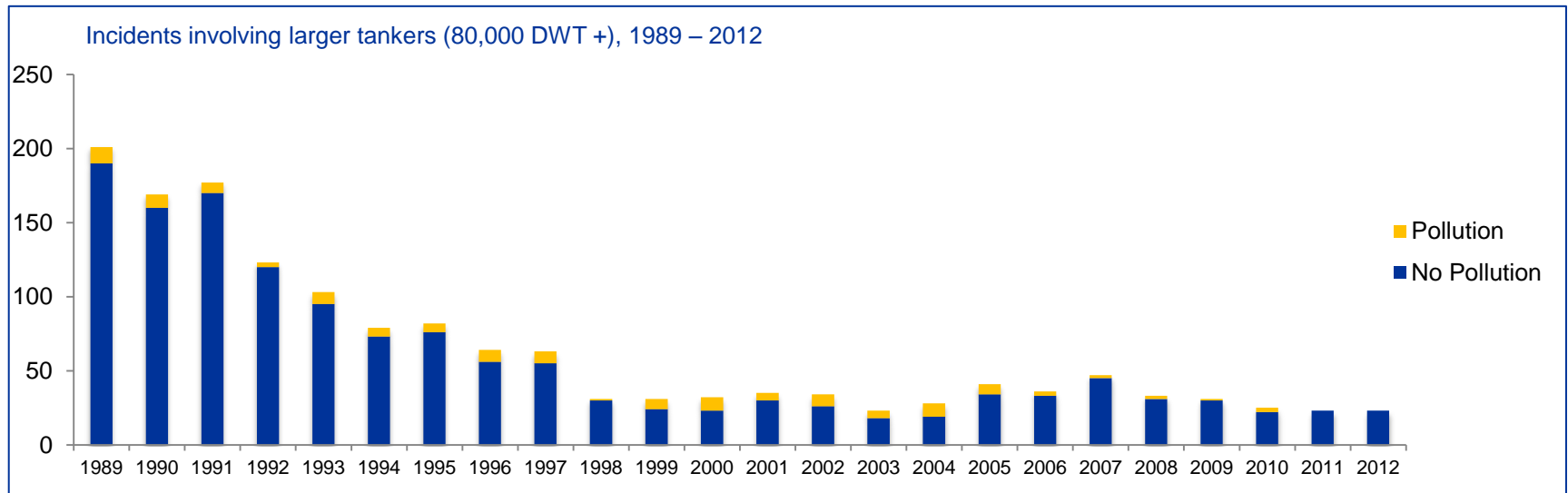
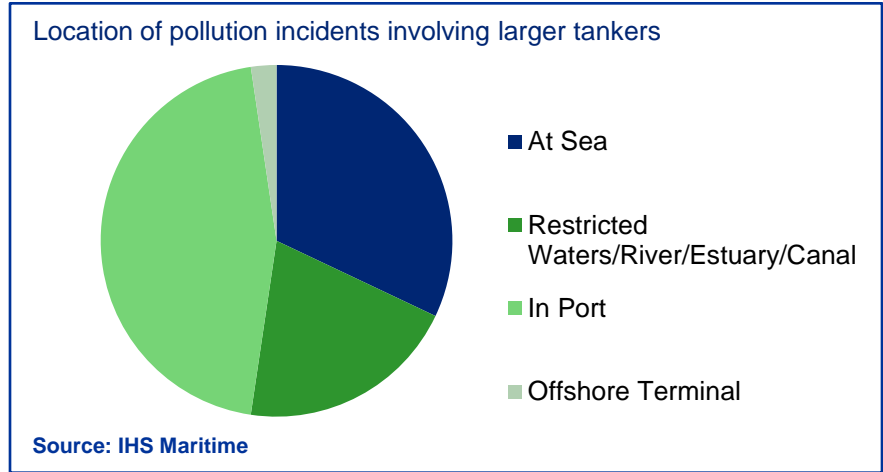
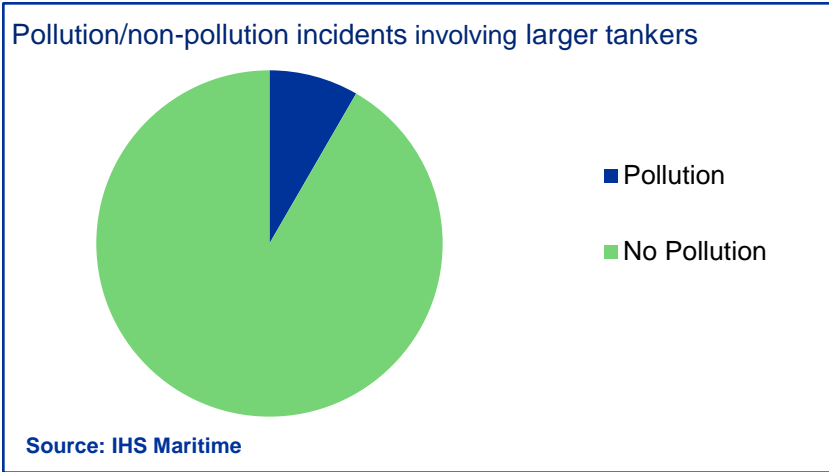


Age profile of larger tankers (80,000 DWT +) 2012 vs 1989



Source: IHS Maritime

Incidents involving larger tankers, 1989-2012



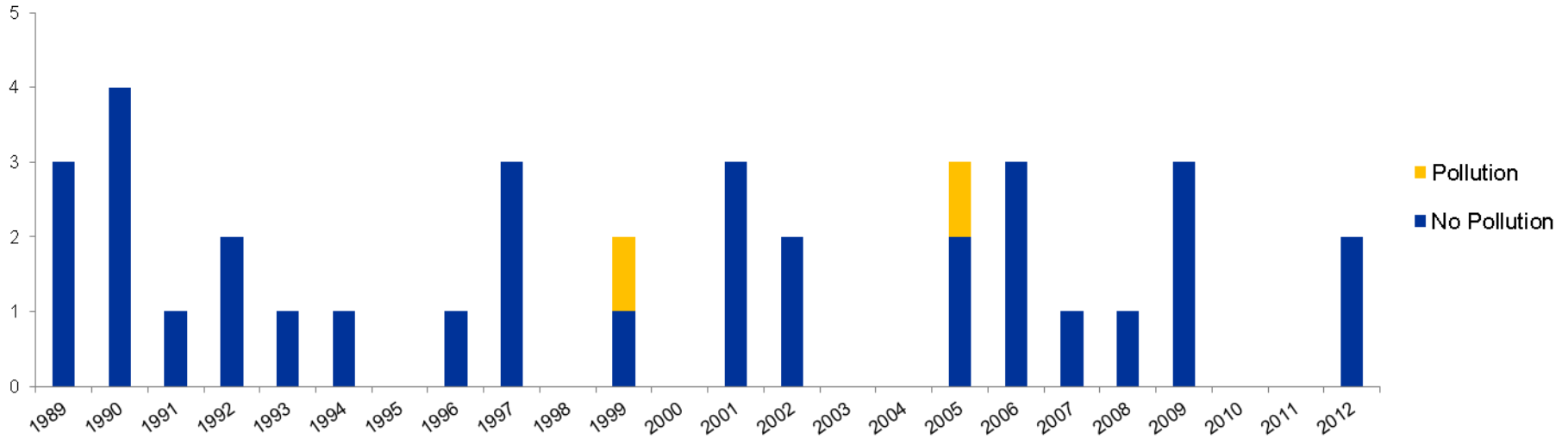


Regional Case Studies

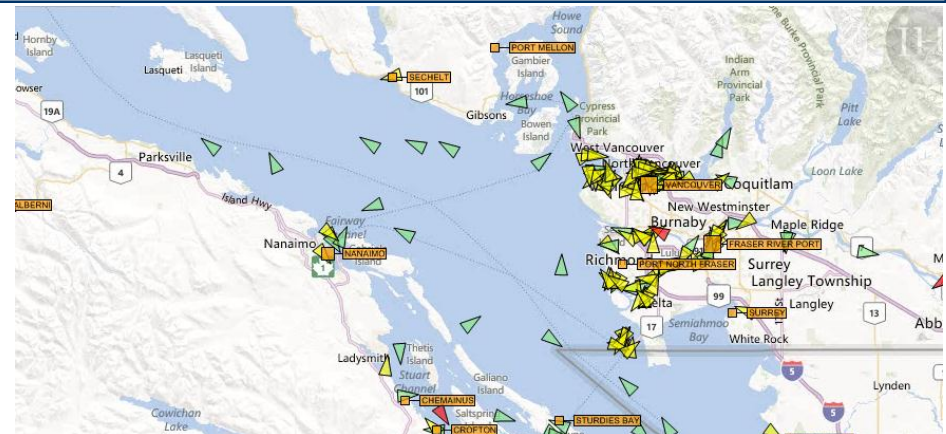
- Case studies were conducted for Vancouver, Anacortes, Cherry Point, Come By Chance, Saint John, Mongstad, Finnart, Sydney, Townsville and Rotterdam looking at:
 - Tanker movements during 2012
 - Historical Tanker Casualties
- We also focused on the forecasted tanker demand for the ports of Vancouver and Kitimat.
- Ports were chosen for a number of reasons, such as similar geography, comparable traffic and regulatory regimes.

Vancouver, BC, Canada

Tanker incidents surrounding Vancouver Island, 1989 - 2012



Tanker Type	No. of Movements during 2012
Coastal/Short Sea	14
Handy	133
MR	117
Panamax	142
Aframax	32
Suezmax	3
VLCC>	0



Source: IHS Maritime

Source: IHS/AISLive/Bing

Future – Increased traffic in Vancouver

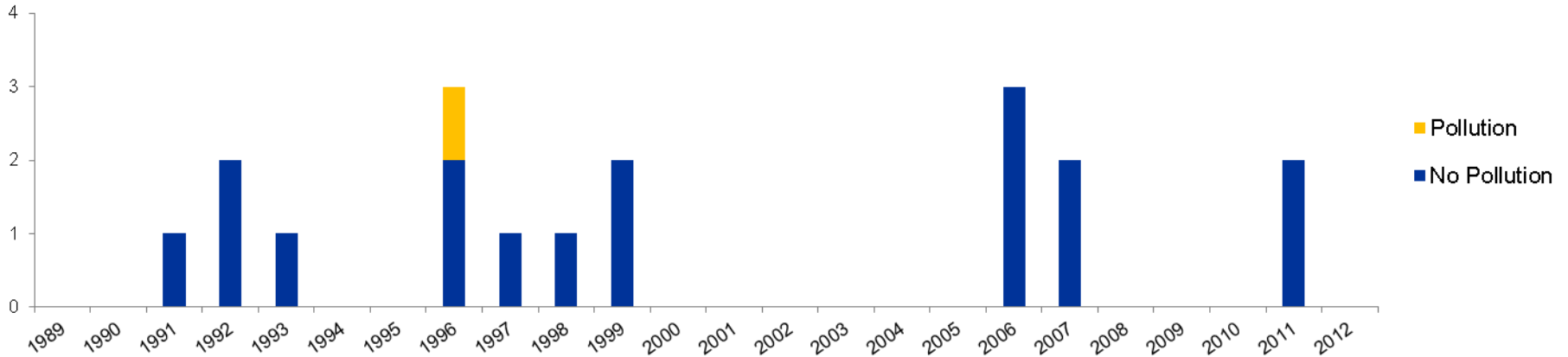
- Currently the Westridge Marine Terminal handles approximately 5 large tankers each month.
- Proposed increase in export capacity would see this number rise to 34 visits a month.
- It is estimated that by 2017, the tanker movements in the Vancouver Metropolitan area will increase by 79%

Tanker Type	No. of Movements during 2012	Estimated Movements in 2017
Coastal/Short Sea	14	
Handy	133	
MR	117	
Panamax	142	
Aframax	32	+348
Suezmax	3	
VLCC>	0	
Total	441	779

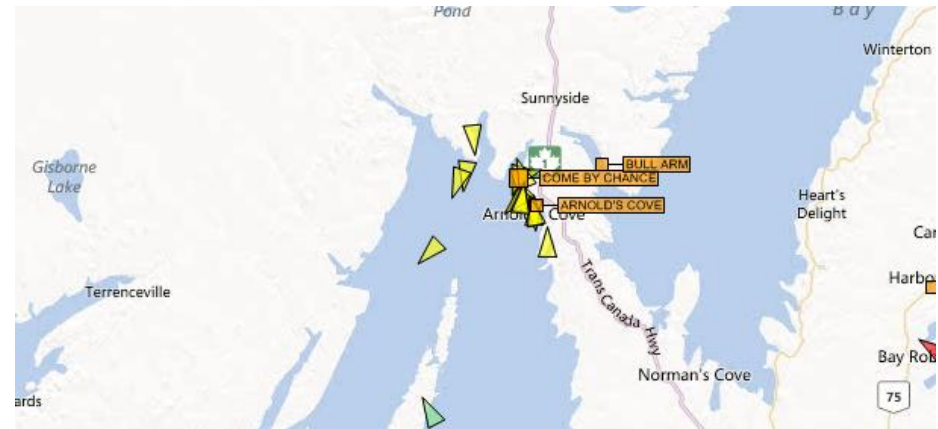
Source: IHS Maritime/Kinder Morgan

Come by Chance, NL, Canada

Tanker incidents South of Newfoundland, 1989 - 2012



Tanker Type	No. of Movements during 2012
Coastal/Short Sea	11
Handy	3
MR	115
Panamax	20
Aframax	108
Suezmax	96
VLCC>	14

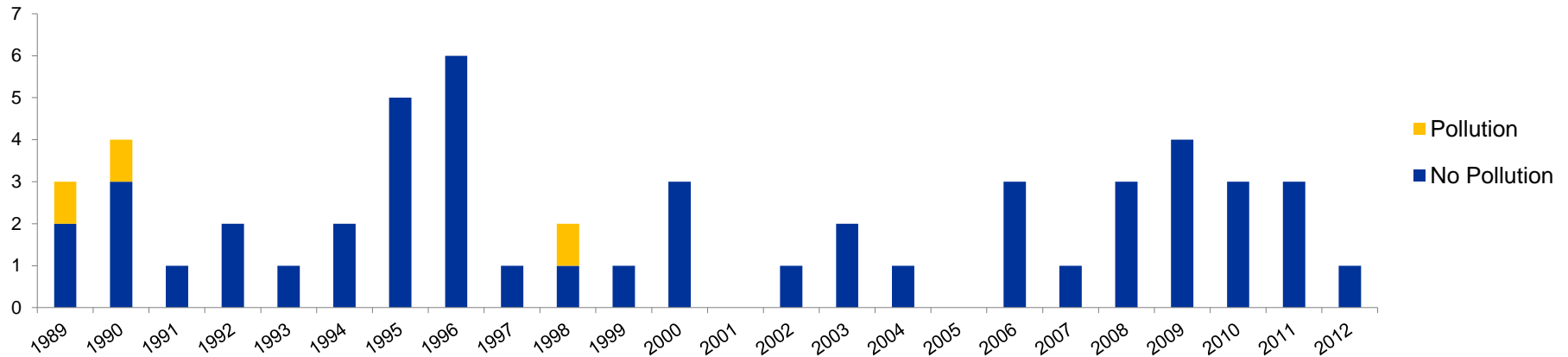


Source: IHS Maritime

Source: IHS/AISLive/Bing

Saint John, NB, Canada

Tanker incidents, coast of Canadian Maritimes & Gulf of St. Lawrence, 1989 - 2012



Tanker Type	No. of Movements during 2012
Coastal/Short Sea	8
Handy	9
MR	396
Panamax	4
Aframax	19
Suezmax	40
VLCC>	28

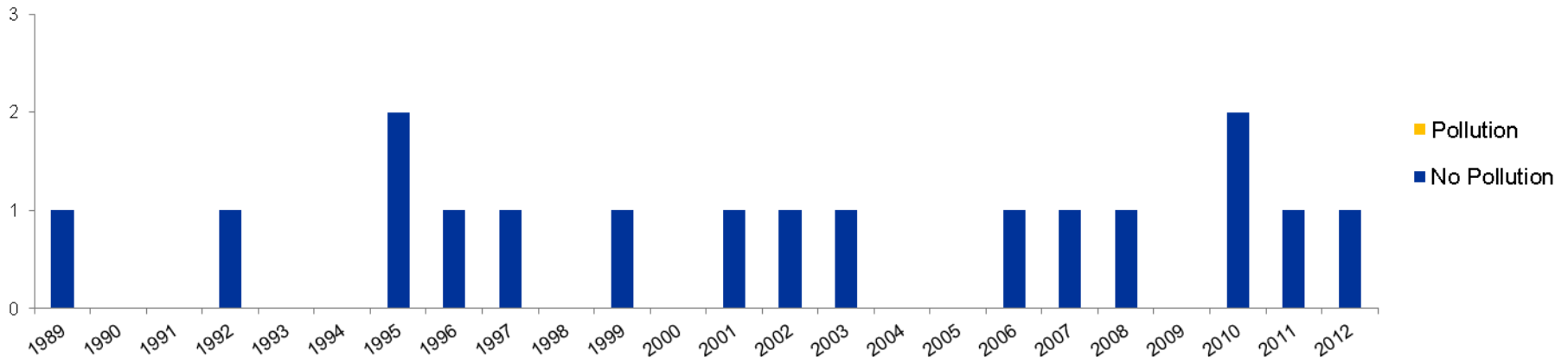


Source: IHS Maritime

Source: IHS/AISLive/Bing

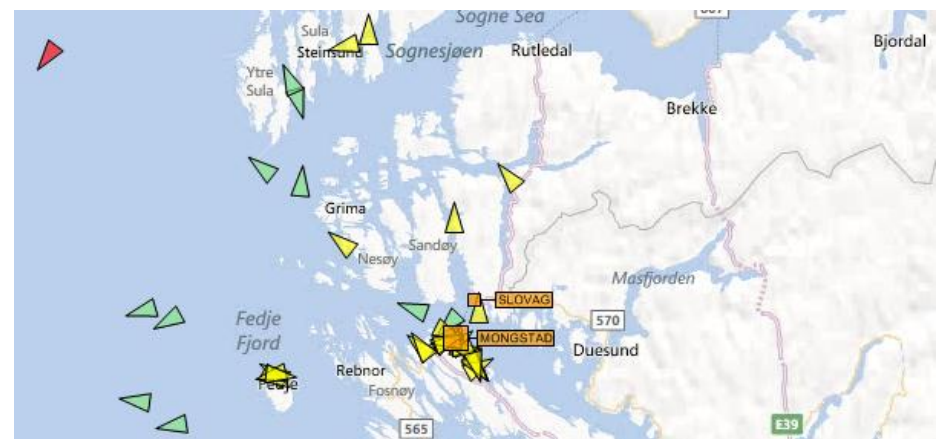
Mongstad, Norway

Tanker incidents North of Norway, 1989 - 2012



Tanker Type	No. of Movements during 2012
Coastal/Short Sea	654
Handy	387
MR	118
Panamax	21
Aframax	103
Suezmax	81
VLCC>	11

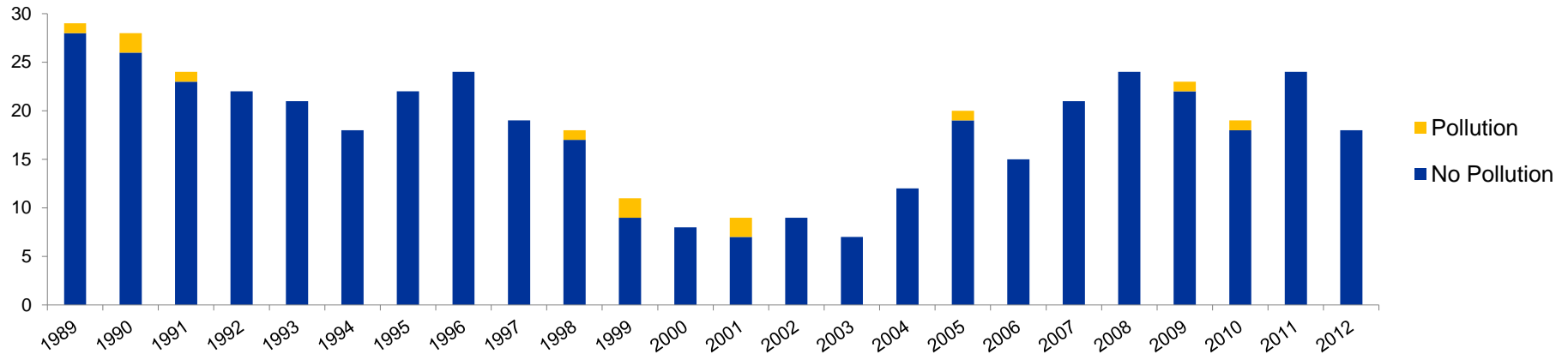
Source: IHS Maritime



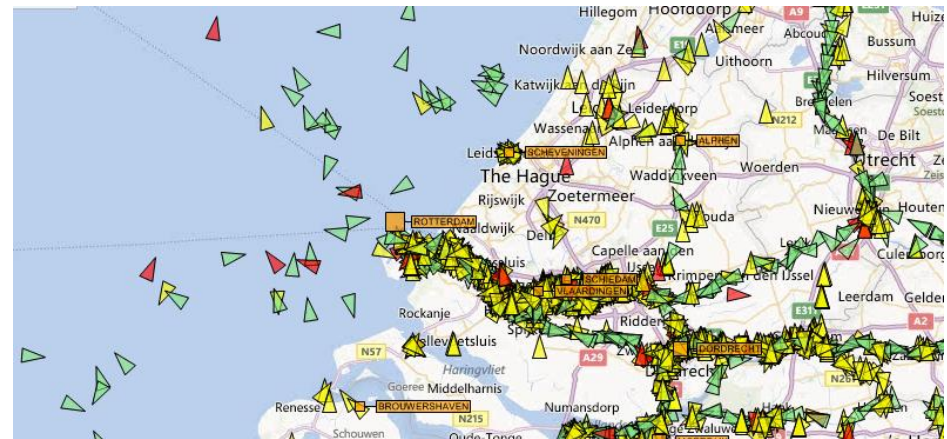
Source: IHS/AISLive/Bing

Rotterdam area, The Netherlands

Tanker incidents, North Sea and Eastern English Channel, 1989 - 2012



Tanker Type	No. of Movements during 2012
Coastal/Short Sea	5975
Handy	3427
MR	2994
Panamax	303
Aframax	1123
Suezmax	399
VLCC>	206



Source: IHS Maritime

Source: IHS/AISLive/Bing

Future – Kitimat

- Kitimat will play a major role in the export of Canadian Oil Sands.
- Geographically, Kitimat is similar to Mongstad in Norway and Finnart in UK.
- It is forecast that 220 ships per year will be required (Aframax, Suezmax and VLCC)

Tanker Type	Estimated Movements in 2017
Coastal/Short Sea	
Handy	
MR	
Panamax	
Aframax	50
Suezmax	120
VLCC>	50
Total	220

Source: IHS Maritime/Enbridge Northern Gateway



Picture: IHS/The Trade Net/Google Maps

Summary

- Overall tanker casualties have dropped 70% since 1989, during this period the tanker fleet has grown by 88%.
- Tanker casualties increased between 2004 and 2009 but pollution remained low.
- 2007 to 2012 are the best years on record with a total of 34 pollution incidents over the 6 years. 2001 to 2006 saw 89 pollution incidents.
- 71% of the total number of incidents involved tankers ***under*** 80,000DWT.
- In 1989 the majority of the tanker fleet was between 12 and 19 years old, by 2012 the majority of the fleet was under 13 years old.



Picture: Krispen Atkinson

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