

International Experience Compiling Natural Resource Asset Accounts

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**Training on application of UNFC
for sustainable resources
management**

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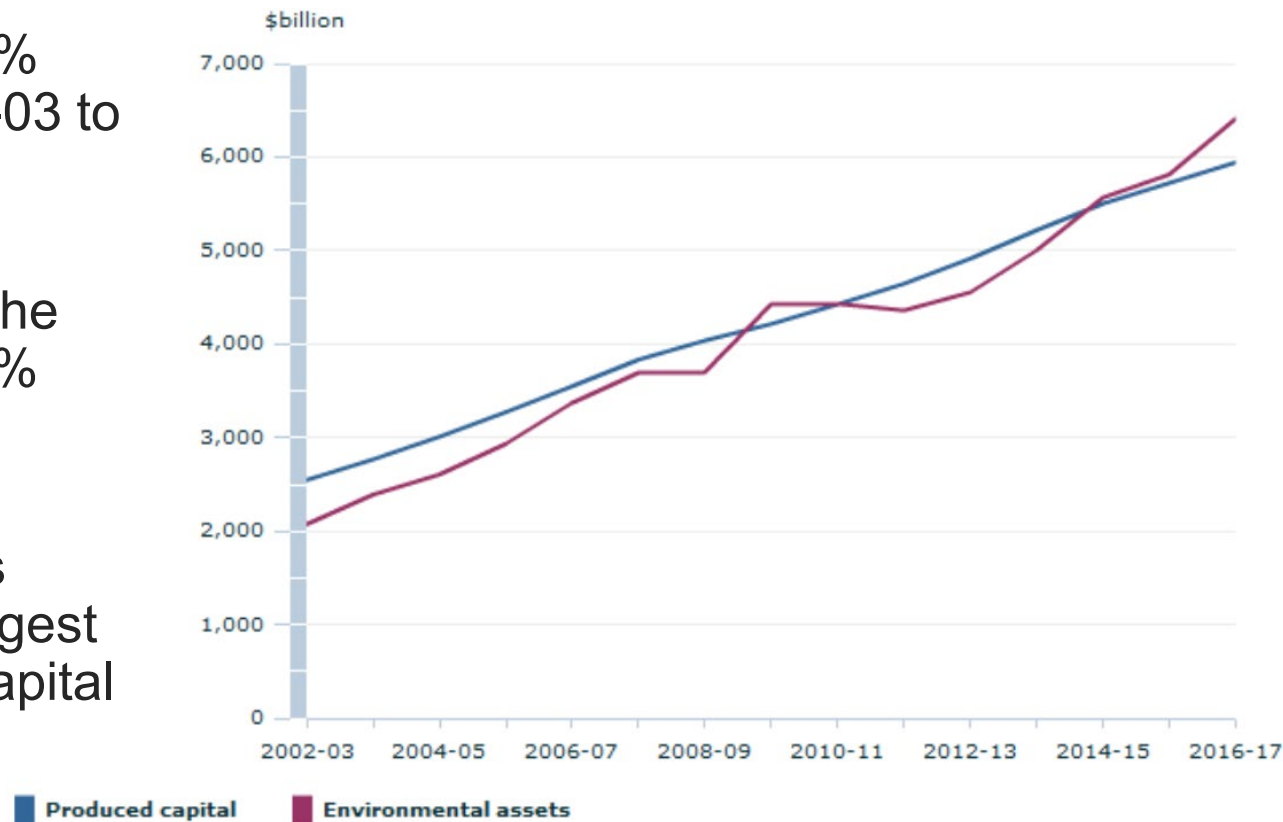
Australia - Mineral and Energy Asset Accounts



- Both mineral and energy accounts are compiled
 - Land and timber are also compiled
- Physical and monetary accounts
- Time series: 1995 – 2016
- National level only
- Annual release
- Annual staff cost: \$AUD100,000 (\$US75,000)
- Follows SEEA methodology
- Figures are added to the National Balance Sheet
- For more information:
<http://www.abs.gov.au/ausstats%5Cabs@.nsf/0/9EF05B385442E385CA257CAE000ED150?OpenDocument>

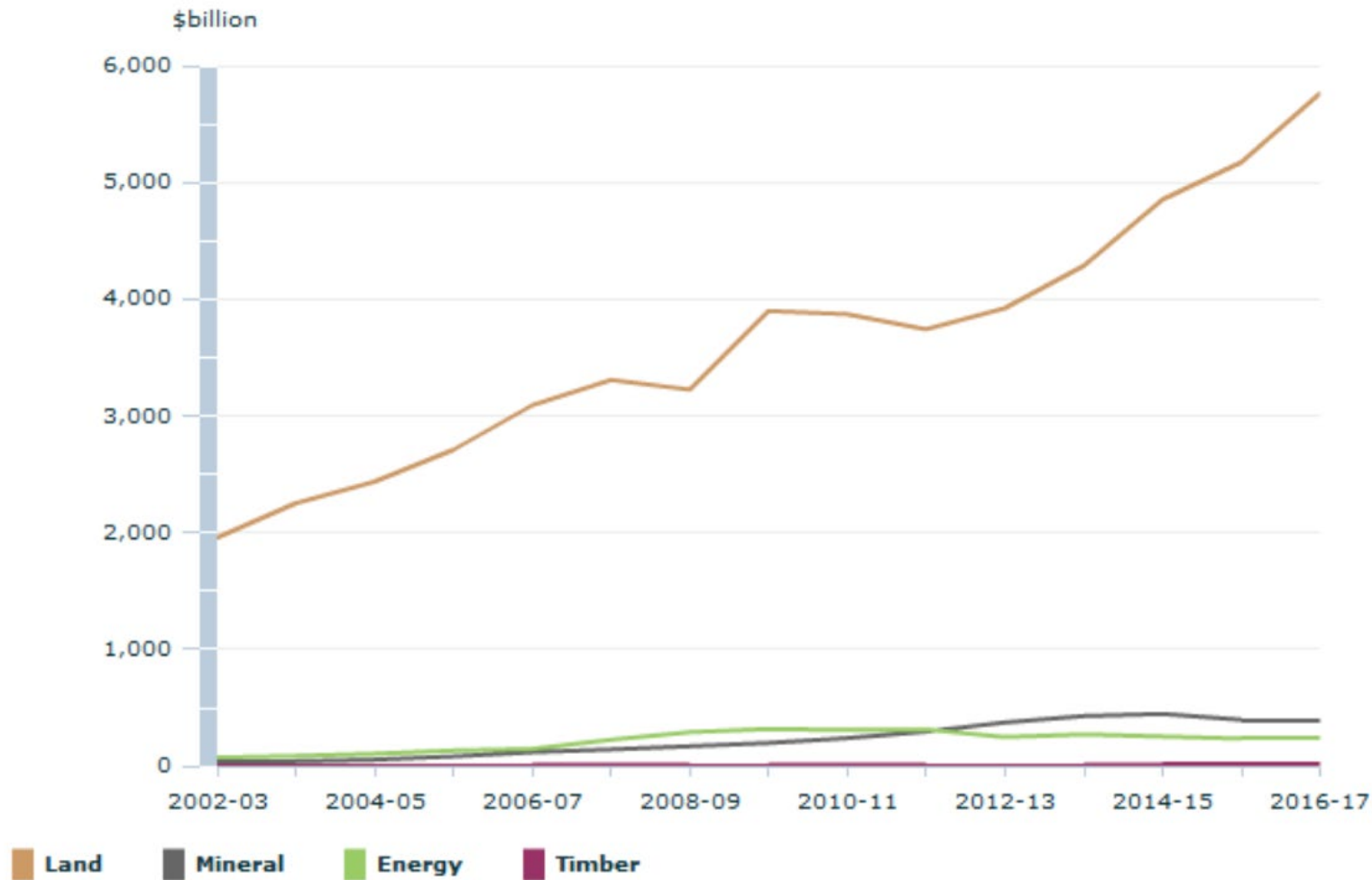
Australia - Natural assets and produced assets

- The value of Australia's environmental assets increased nearly 150% over the period 2002-03 to 2016-17
- Mineral assets were the fastest growing (17.2% annually on average)
- Environmental assets have made up the largest share of Australia's capital base since 2014-15



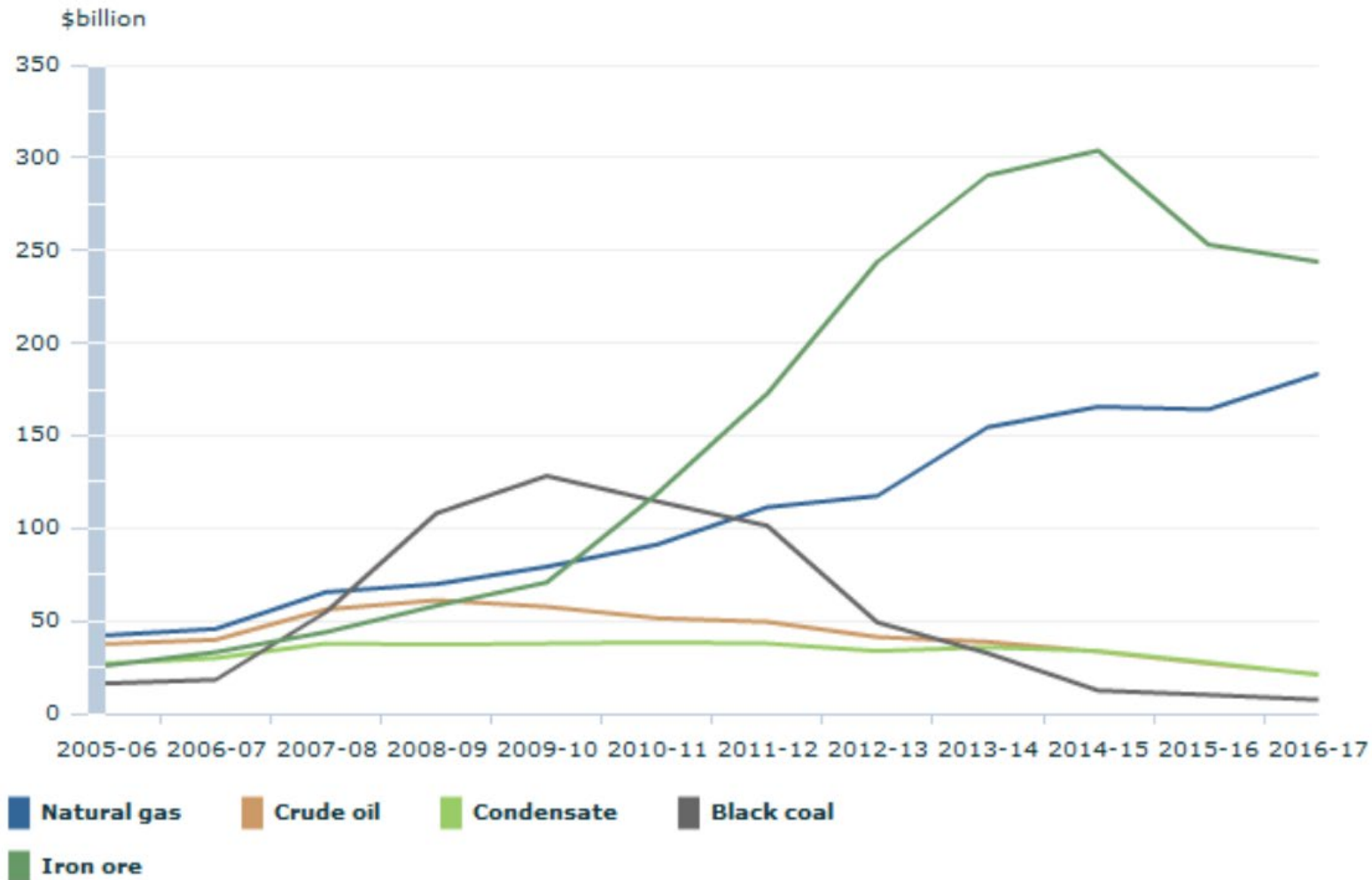
Source: Australian Bureau of Statistics, Environmental Accounts 2018

Australia – Land is the most valuable natural asset



Source: Australian Bureau of Statistics, Environmental Accounts 2018

Australia – Iron ore is the most valuable sub-soil asset



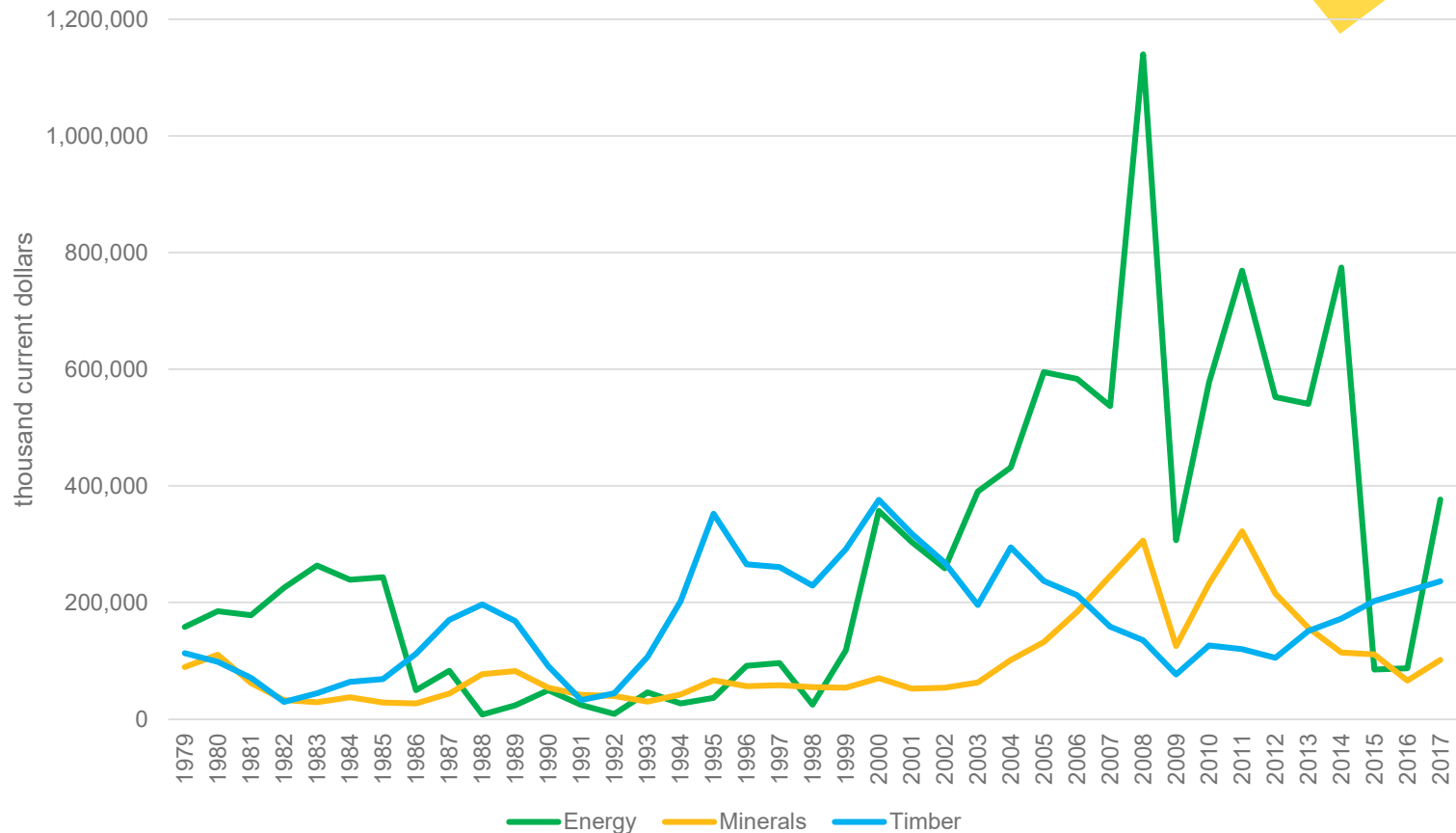
Source: Australian Bureau of Statistics, Environmental Accounts 2018

Canada Mineral, Energy and Timber Assets – Overview



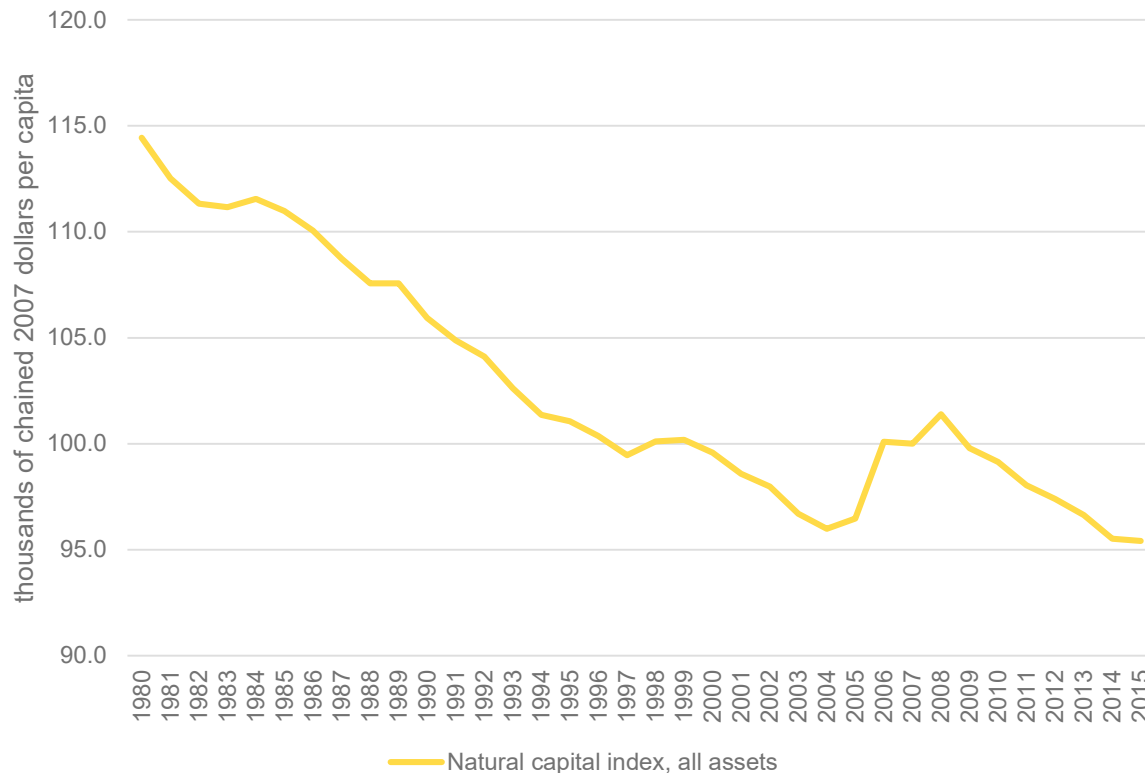
- Physical and monetary accounts (current prices plus a volume index)
- Time series: 1961 – 2017
- National and provincial levels
- Annual release
- Annual staff cost: \$CAD200,000 (\$US150,000)
- Follows SEEA methodology
- Figures are added to the National Balance Sheet
- For more information:
www5.statcan.gc.ca/subject-sujet/theme-theme.action?pid=1762&lang=eng&more=0&MM

Canada – Mineral, energy and timber assets, 1979-2017



Source: Statistics Canada, Table 38-10-0006-01

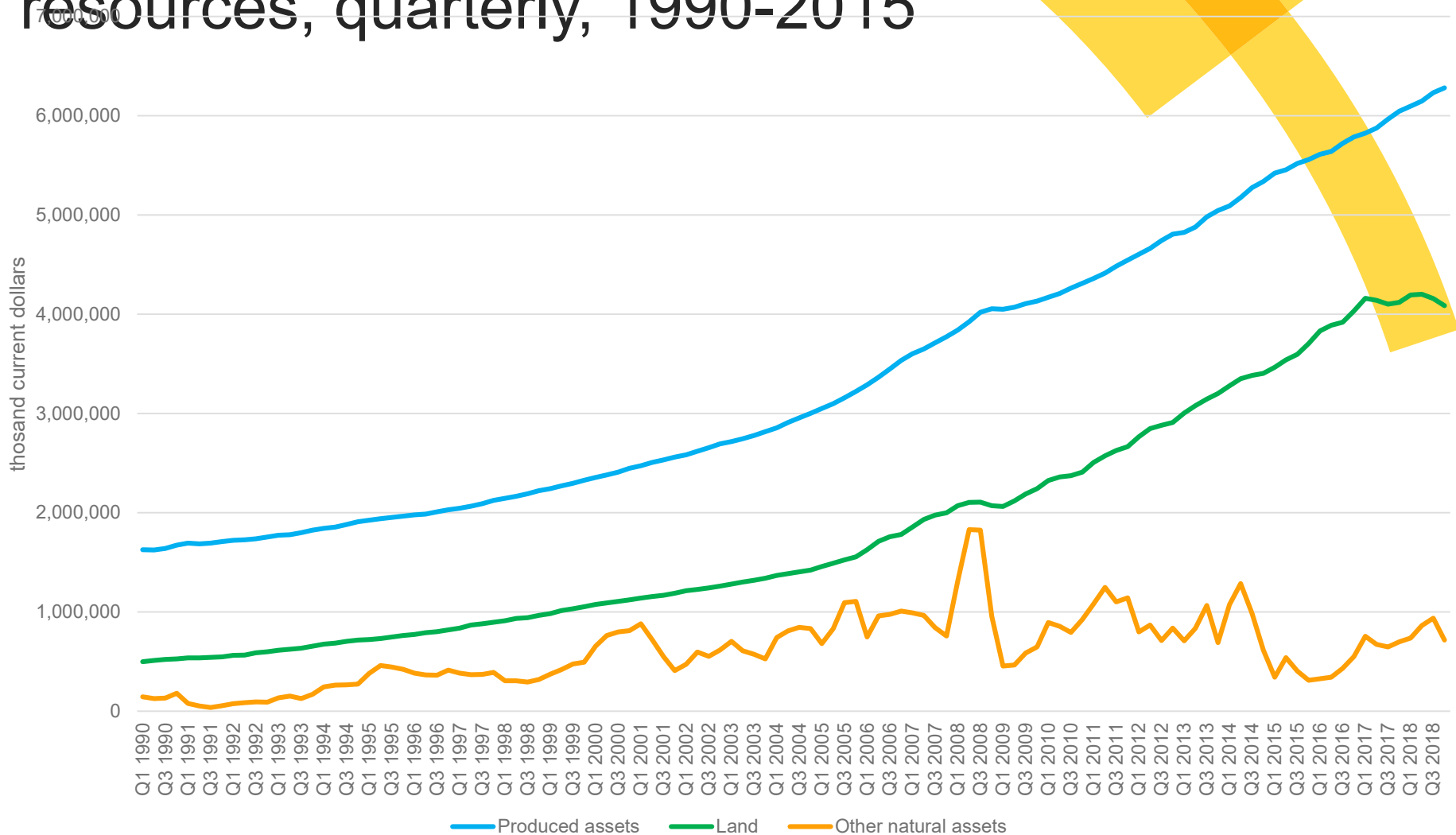
Canada – Mineral, energy and timber assets, 1980-2015 (volume index)



- The trend is very different when measured as a volume index
- Rather than appearing to increase for much of the time (as in current prices), it is clear that there is a steady downward trend in the volume of natural assets

Source: Author's calculations based on Statistics Canada data

Canada – Produced capital, land and energy/mineral resources, quarterly, 1990-2015



Source: Statistics Canada, National Balance Sheet Accounts, Table 36-10-0580-01

Netherlands Energy Asset Accounts – Overview



- Only energy (natural gas and oil) accounts are compiled
- Physical and monetary accounts
- Time series: 1990 – 2017
- National
- Annual release
- Annual staff cost: Euro10,000 (\$US11,500)
- Follows SEEA methodology
- For more information: <https://www.cbs.nl/en-gb/publication/2014/46/environmental-accounts-of-the-netherlands>

Netherlands – Physical account of natural gas and oil assets

		1987	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017*
Natural gas reserves																							
Opening stock	bn Sm ³	1,955	1,930	1,947	1,893	1,836	1,777	1,738	1,689	1,615	1,572	1,510	1,439	1,390	1,364	1,390	1,304	1,230	1,130	1,044	932	940	882
New discoveries	bn Sm ³	30.0	41.0	32.0	22.0	25.0	39.0	23.4	13.0	10.0	15.0	9.0	4.7	2.8	3.1	5.2	6.0	3.5	0.2	1.7	0.8	1.1	5.2
Extraction and other changes	bn Sm ³	-75.0	-24.0	-86.0	-79.0	-84.0	-78.0	-72.4	-87.0	-53.0	-77.0	-80.0	-53.7	-28.8	22.9	-91.2	-80.0	-103.5	-86.2	-113.7	7.6	-59.2	-51.8
Closing stock	bn Sm ³	1,910	1,947	1,893	1,836	1,777	1,738	1,689	1,615	1,572	1,510	1,439	1,390	1,364	1,390	1,304	1,230	1,130	1,044	932	940	882	836
Oil reserves																							
Opening stock	mIn Sm ³	75.0	55.0	37.0	34.0	32.0	30.0	28.0	26.0	38.0	34.0	35.9	38.1	36.6	34.3	50.0	45.7	40.4	48.1	47.1	34.8	31.5	31.3
New discoveries	mIn Sm ³	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extraction and other changes	mIn Sm ³	-1.0	-18.0	-3.0	-2.0	-2.0	-2.0	-2.0	12.0	-4.0	1.9	2.2	-1.5	-2.3	15.7	-4.3	-5.3	7.7	-1.0	-12.3	-3.3	-0.2	-2.7
Closing stock	mIn Sm ³	74.0	37.0	34.0	32.0	30.0	28.0	26.0	38.0	34.0	35.9	38.1	36.6	34.3	50.0	45.7	40.4	48.1	47.1	34.8	31.5	31.3	28.6

Source: Statistics Netherlands, Environmental Accounts

Netherlands – Government revenue from natural gas exploitation



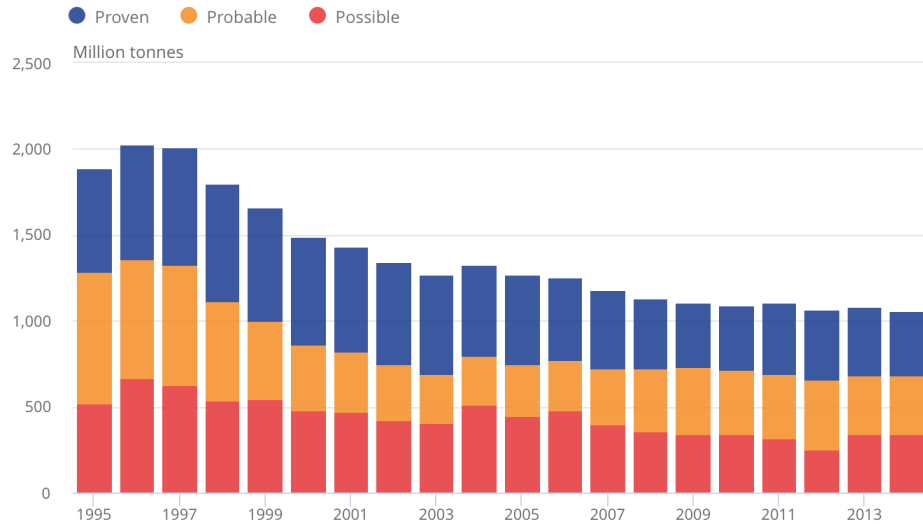
Source: Statistics Netherlands, Environmental Accounts 2013

United Kingdom Energy Asset Accounts – Overview

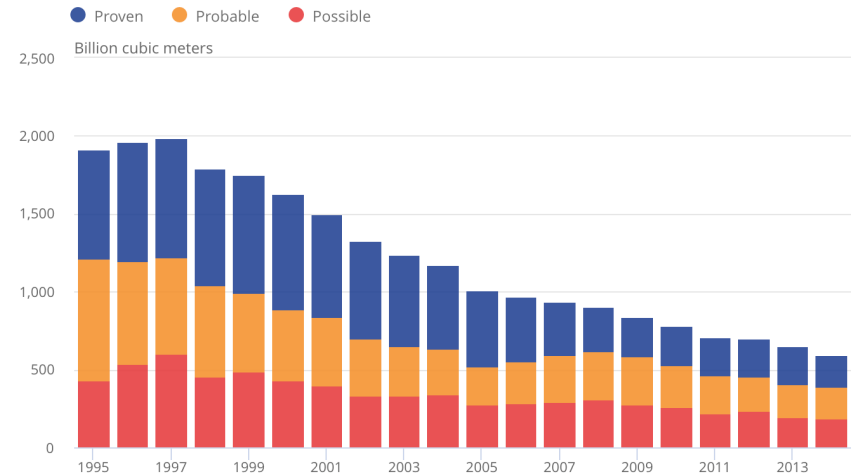


- Only energy (natural gas and oil) accounts are compiled
 - Timber and fish accounts are also compiled
- Physical and monetary accounts
- Time series: 1989-2016 - physical
2011-2014 - monetary
- National level
- Annual release
- Annual staff cost: n/a
- Follows SEEA methodology
- For more information:
<https://www.ons.gov.uk/economy/environmentalaccounts>

United Kingdom – Physical accounts for oil and natural gas assets

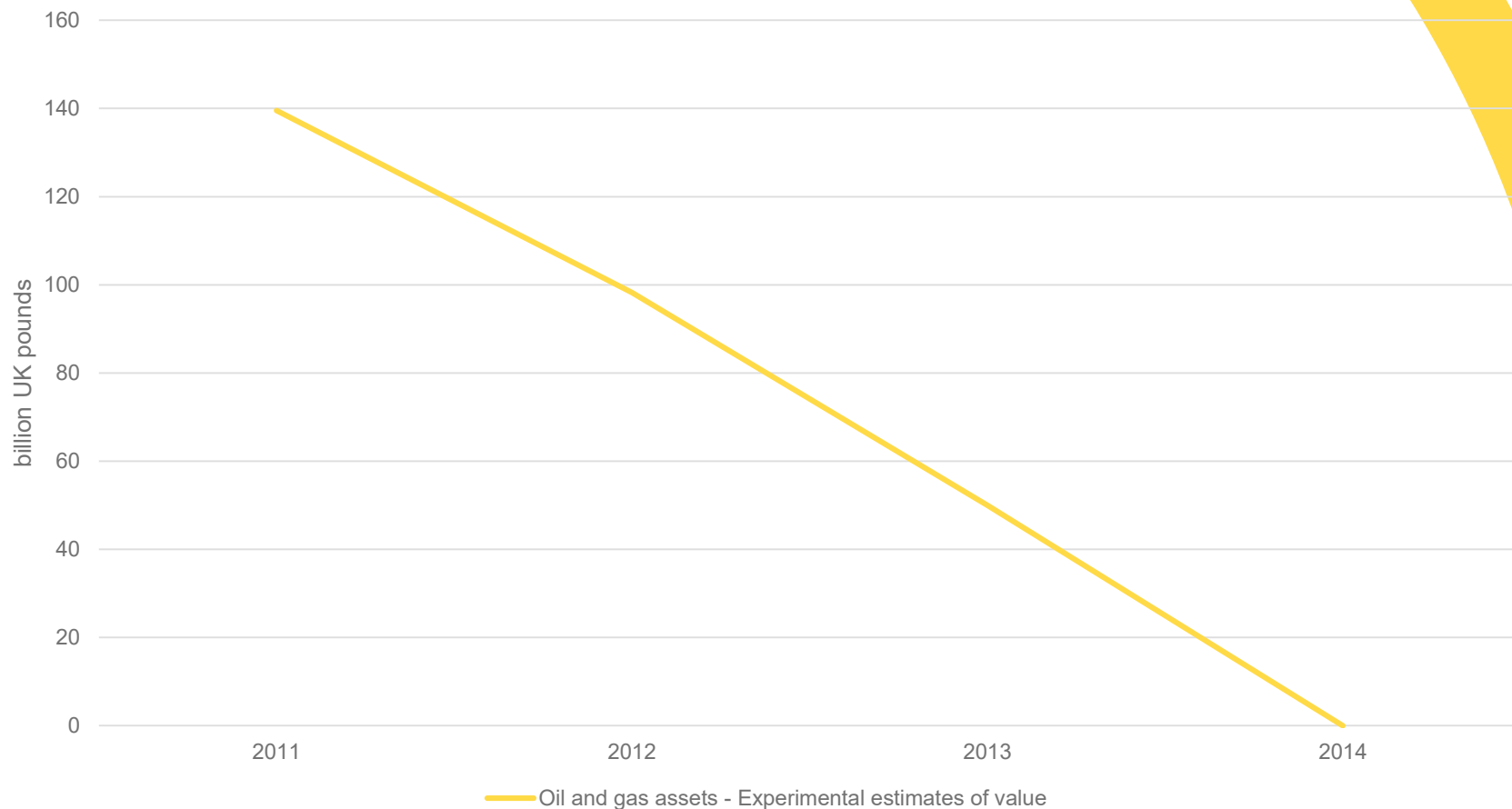


Oil



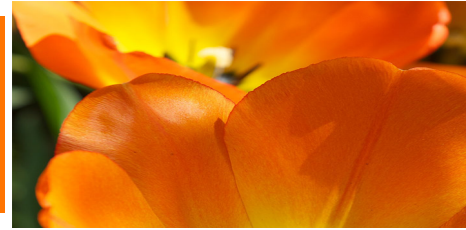
Natural gas

UK – Experimental monetary asset accounts for oil and gas



Source: UK Office for National Statistics, Environmental Accounts 2016

Philippines – Mineral and Energy Asset Accounts - Overview

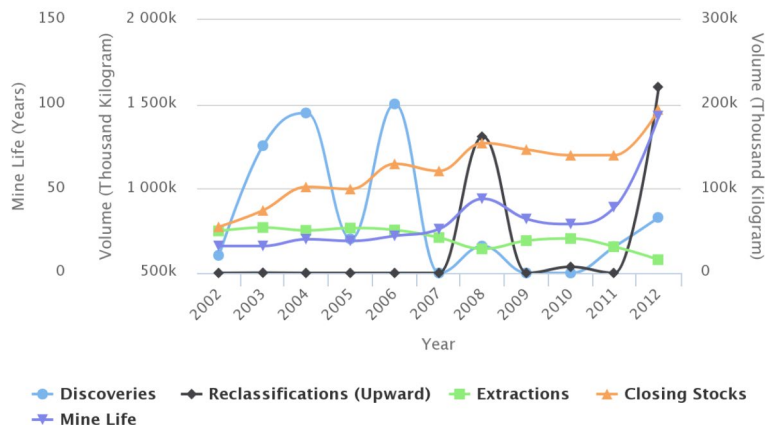


- Selected mineral (gold, copper, chromium and nickel) and energy (coal, oil and natural gas) are compiled
- Physical accounts only for energy; both physical and monetary for minerals
- Time series: 2002-2013 for minerals; 2000 – 2017 for energy
- National level
- Periodic release
- Annual staff cost: unknown (partial support provided by World Bank)
- Follows SEEA methodology
- For more information: <http://www.psa.gov.ph/phil-waves> and <http://www.psa.gov.ph/content/other-environment-and-natural-resources>

Philippines – Class A, B and C Gold Reserve Accounts (physical and monetary)

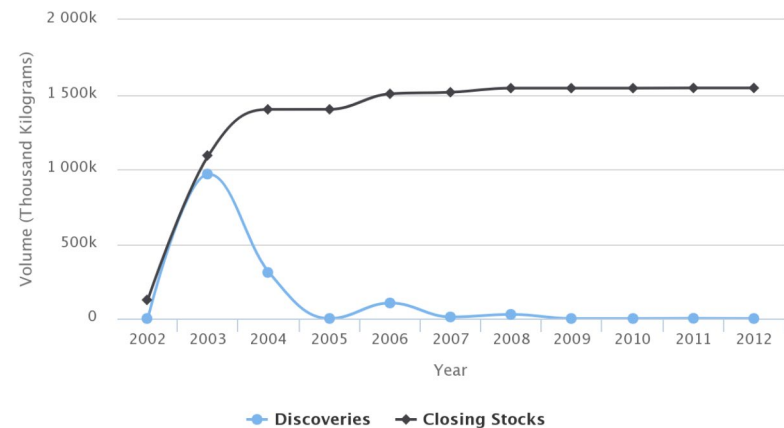
Gold Class A

Philippine Statistics Authority



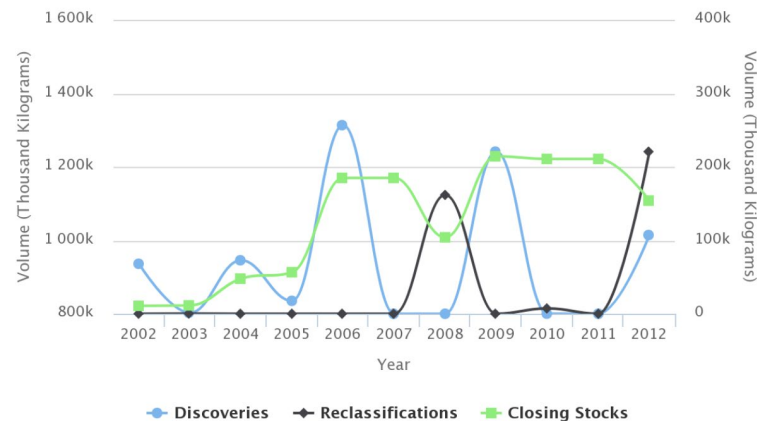
Gold Class C

Philippine Statistics Authority



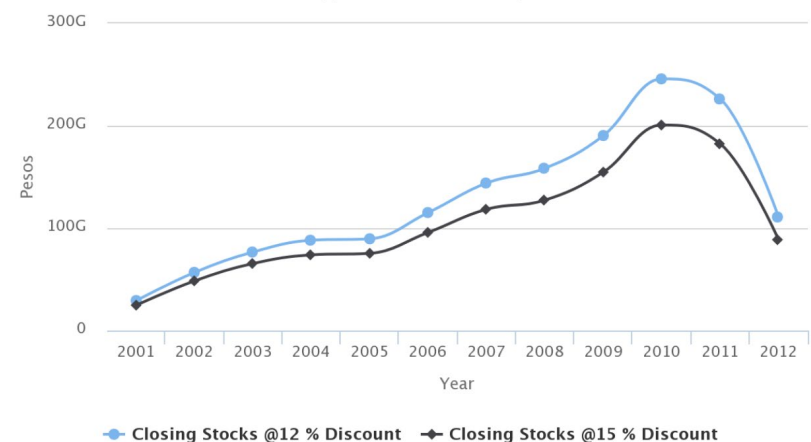
Gold Class B

Philippine Statistics Authority



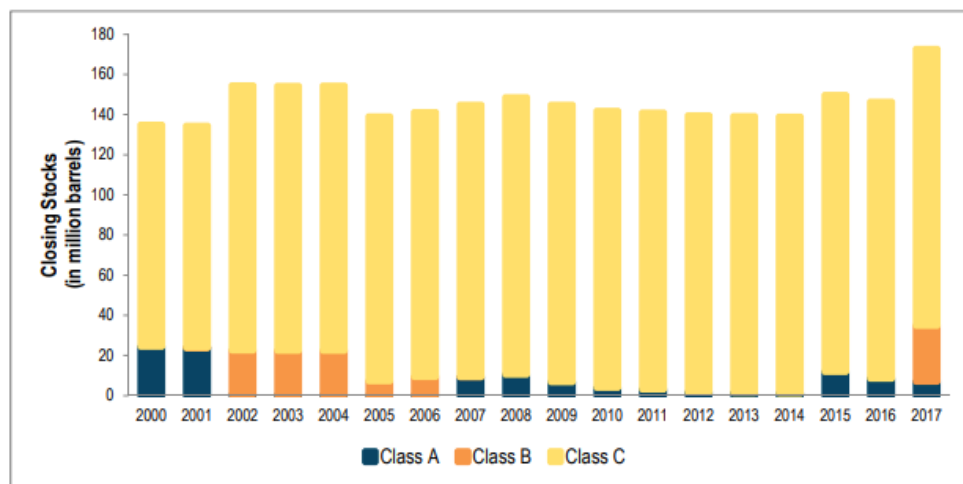
Gold Monetary Value

Philippine Statistics Authority



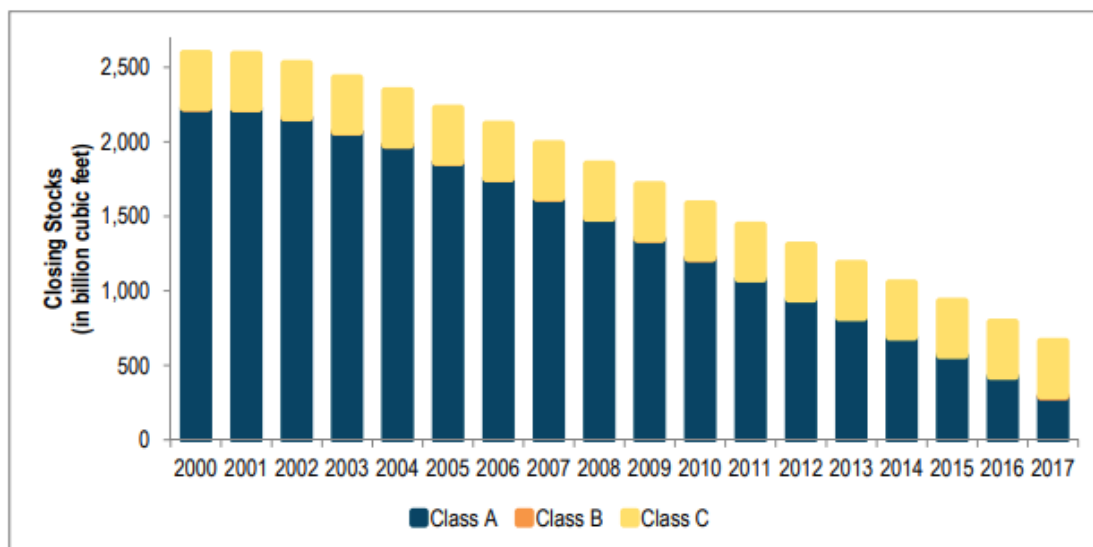
Source: Phil-WAVES project with World Bank

Philippines – Oil and Natural gas stock accounts (physical only)



Oil

Natural gas



Thank you

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