2025 SNA Update

Recording depletion of natural resources and introducing the split ownership approach

Presenter: Joe Whelan

AUSTRALIAN BUREAU OF STATISTICS
Informing Australia's important decisions

Economic ownership and depletion of natural resources

- Two key updates:
  - Split-asset ownership
  - Depletion as a cost of production
- Not just accounting tweaks:
  - Reflects how natural resources are used
  - Shifts thinking around ownership, production, and costs

Two Key Changes Introduced

- Under the 2008 SNA:
  - Natural assets (e.g. coal, gas) recorded only by legal owner (usually government)
  - Extractors earned income but held no asset share
  - Depletion reflected through other volume changes
- The 2025 SNA introduces two changes:
  - **Split-asset ownership**:
    1. Ownership now divided between legal owner and extractor
    2. Extractors record a share if they control, benefit from, and bear risks
  - **Depletion as a cost of production**:
    1. Now treated like depreciation
    2. Recognised directly in the production and income accounts

Impacts

Impacts to Accounts of Proposed Recording of Natural Assets & Depletion for Extractor

Vs

Impacts to Accounts of Proposed Recording of Natural Assets & Depletion: for Government

Production and Generation of Income Account

Debit	($)	Credit	($)
Compensation of employees	35	Output	100
Consumption of fixed capital	20		
Depletion/degradation of natural resources	45		
Net Operating Surplus	*0*		

Production and Generation of Income Account

Debit	$	Credit	$
Compensation of employees	0	Output	0
Consumption of fixed capital	0		
Net Operating Surplus	*0*		

Distribution of Income Account

Debit	($)	Credit	($)
Rent on natural resources	30		
Depletion/degradation borne by extractor	-30		
Net Savings	*0*	*Net operating surplus*	*0*

Distribution of Income Account

Debit	$	Credit	$
		Net operating surplus	0
		Rent on Natural Resources	30
		Depletion/degradation borne by government	-30
Net Savings	*0*		

Capital Account

Changes in assets	($)	Changes in liabilities	($)
Acquisition of assets	0	Net saving	
Consumption of fixed capital	-20	Net captial transfer received	0
Depletion/degradation of natural resources	-15		
Net lending/borrowing	*35*	*Changes in NW due to saving and C*	*0*

Capital Account

Changes in assets	($)	Changes in liabilities	($)
Acquisition of assets	0	Net saving	0
Consumption of fixed capital	0	Net captial transfer received	0
Depletion/degradation of natural resources	-30		
Net lending/borrowing	*30*	*Changes in NW due to saving and CT*	*0*

Financial Account

Changes in assets	($)	Changes in liabilities	($)
Cash	35		
		Net lending/borrowing	*35*

Financial Account

Changes in assets	($)	Changes in liabilities	($)
Cash	30		
		Net lending/borrowing	*30*

Other Changes in the Volume of Assets Account

Changes in assets	($)	Changes in liabilities	($)
Depletion/Degrading of Natural Resources	0		
Economic (dis)apperarence of assets	250		
Changes in NW due to other changes in assets	*250*		

Other Changes in the Volume of Assets Account

Changes in assets	($)	Changes in liabilities	($)
Depletion/Degrading of Natural Resources	0		
Economic (dis)apperarence of assets	-250		
Changes in NW due to other changes in asse	*-250*		

Balance Sheets

Opening	$	hange	Closing	$
Cash	**0**	**35**		**35**
Fixed assets	200	-20		180
Natural resources (or permits)	0	235		235
Total	200	250		450

Balance Sheet

Opening	$	Changes		Closing	$
Cash	0	30	Net worth		30
Fixed assets	0	0			0
Natural resources	750	-280			470
Total	*750*	*500*	*Total*	*750*	*500*

Diagram of Impacts

Splitting of natural resource assets between government and the extractor & accounting for depletion in cost of production

2025 SNA change

Production and generation of earned income (formerly generation of income) accounts	All of the depletion is recorded as a production cost of the extractor	No impact on GDP. NDP is lower due to the inclusion of depletion as a cost of production
Allocation of earned income (formerly allocation of primary income) account	Depletion borne by government which represents a transfer to the producer will be visible for the first time	Rent paid by extractors to the Gov will not change Net National Income (NNI) will decrease
Use of income (formerly use of disposable income) account	Net saving will decrease for non-financial corporations	Net saving will decrease for general government
Accumulation accounts	**Capital account:** Depletion is recorded against government and extractors reflecting their risk and reward	**Financial account:** No impact on net lending/ borrowing or transactions in financial assets **Other changes in the volume of assets account:** Excludes depletion but will include transfers from Gov to extractor/producer of the producer's share of the split assets, currently the asset value presents under GG
Balance sheet	Total net worth will not change but non-financial corporations (extractor) will have larger net worth while GG will have lower net worth	

Valuation Method (NPV)

- Net Present Value (NPV) is the preferred valuation method
- Key steps:
  - Estimate total reserves and extraction schedule
  - Forecast prices and gross revenue
  - Subtract costs incl. normal return on capital
  - Derive resource rent
  - Discount future rents to get present value
- Asset value is shared based on rent vs. royalty proportions
- Depletion is annual drawdown of that asset, split accordingly

Valuation Method (NPV)

$$NPV = \frac{(\$P - \$C) * N}{r / (1-((1+r)^{-RL}))}$$

Where:

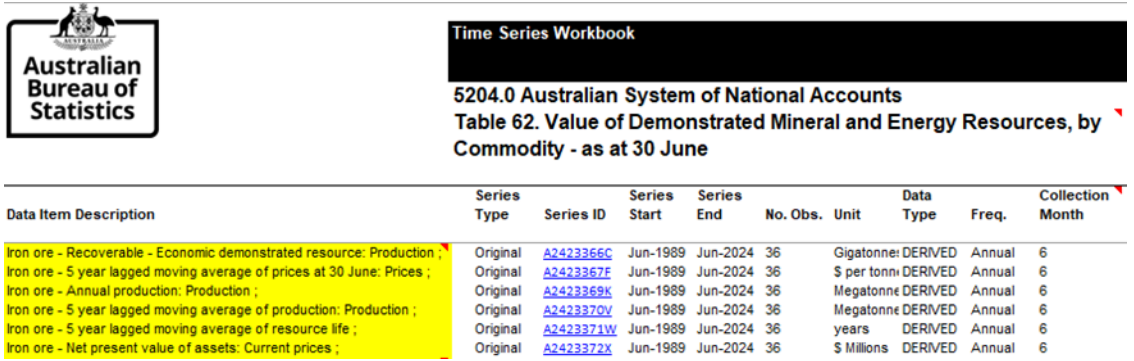
$P = price/unit
$C = cost/unit (incl. normal return to capital)
N = production
r = discount rate
RL = resource life = (Economically Demonstrated Resources / N)

Current measurement of Australian Coal

- Coal: publicly owned, privately extracted
- Australia uses bottom-up NPV
- Key data sources:
  - Licencing, Royalties and tax information – State and Commonwealth departments.
  - EDRs & production – Geoscience Australia
  - Costs – Commodity level provided periodically by a private consulting firm
  - Prices – AFR, Resources & Energy Quarterly

Current measurement of Australian Coal

- For each individual commodity or grouping (18 in total), ABS publishes data on:
  - Economic Demonstrated Resources (EDR)
  - Prices*
  - Annual production
  - Production*
  - Resource life*
  - Net Present Value (NPV)



Time Series Workbook

5204.0 Australian System of National Accounts
Table 62. Value of Demonstrated Mineral and Energy Resources, by Commodity - as at 30 June

Data Item Description	Series Type	Series ID	Series Start	Series End	No. Obs.	Unit	Data Type	Freq.	Collection Month
Iron ore - Recoverable - Economic demonstrated resource: Production ;	Original	A2423366C	Jun-1989	Jun-2024	36	Gigatonnes	DERIVED	Annual	6
Iron ore - 5 year lagged moving average of prices at 30 June: Prices ;	Original	A2423367F	Jun-1989	Jun-2024	36	$ per tonne	DERIVED	Annual	6
Iron ore - Annual production: Production ;	Original	A2423369K	Jun-1989	Jun-2024	36	Megatonnes	DERIVED	Annual	6
Iron ore - 5 year lagged moving average of production: Production ;	Original	A2423370V	Jun-1989	Jun-2024	36	Megatonnes	DERIVED	Annual	6
Iron ore - 5 year lagged moving average of resource life ;	Original	A2423371W	Jun-1989	Jun-2024	36	years	DERIVED	Annual	6
Iron ore - Net present value of assets: Current prices ;	Original	A2423372X	Jun-1989	Jun-2024	36	$ Millions	DERIVED	Annual	6

- **5-year lagged moving average*

- Currently, economic ownership of all Australian mineral resources are allocated to the General Government sector

Proof of concept: Depletion and economic ownership of natural resources

Australian Bureau of Statistics

Australia Total All: apportioning the resource rent between the government and the extractor, $m					
Accounting unit: (in millions of Australian dollars)	**2016**	**2017**	**2018**	**2019**	**2020**
1. Resource rent	53,324	54,464	56,317	67,760	81,933
2.a Specific taxes (minus subsidies) on extraction	795	942	993	923	923
2.b Royalty payments	10,083	10,750	12,031	13,363	13,889
2.c Specific corporate taxes					
2.d Rent Payments					
2.e Resource lease payments					
3. Government share: ∑(2.a - 2..)	11,381	11,820	12,755	14,453	15,211
4. non-financial corporations share: 1 – 3	41,943	42,644	43,562	53,306	66,722

1.9 Please complete the following table. This table follows the monetary asset accounts (SEEA-CF, Table 5.9) for the natural resource(s)?

Total All Commodities for 2020, Accounting unit: (AUD)

	Government sector S.13	Non-financial corporations sector S.11	Total
Opening value of stock of resources	290,397	582,396	**872,793**
Total additions to stock	2,978	7,573	**10,551**
Discoveries	2,978	7,573	**10,551**
Upward reappraisals	0	0	**0**
Reclassifications	0	0	**0**
Total reductions in stock	-941	-2,797	**-3,738**
Extractions	-941	-2,797	**-3,738**
Catastrophic losses	0	0	**0**
Downward reappraisals	0	0	**0**
Reclassifications	0	0	**0**
Revaluations	44,119	129,824	**173,943**
Closing value of stock of resources	336,553	716,995	**1,053,549**

Preparing for the update

- Reviewing existing data sources
- Assessing system changes
- Consulting with users
- Evaluating costs and benefits

Wrap-Up

- Two key changes in the 2025 SNA:
  - Shared ownership between legal owner and extractor
  - Depletion recorded as a cost of production
- Better reflects how natural resources are:
  - Owned
  - Valued
  - Used over time

- **Thank you.**