

SEEA Training Seminar for the ECA (2-5 February 2015)

Exercises on Asset accounting

Answers

1. $GOS = \$ 200 * (250-140-30) = \$16,000$
2. $Costs\ of\ capital = (100,000 * 0.04 + 100,000 * 0.06) = 10,000$
3. $Resource\ rent / tonne = \$(16,000-10,000) / 200 = 30$
4. $Asset\ life = 1200 / 200 = 6\ years$
5. $Stream\ of\ income = 30 * 200 = 6,000\ per\ year$
6. Discount factors

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
@ 3%	1.03	1.0609	1.0927	1.1126	1.1592	1.1940
@11%	1.11	1.2321	1.3676	1.5181	1.6851	1.8704

7. Net present value

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	NPV
@ 3%	5,825	5,656	5,491	5,331	5,176	5,025	32,503
@11%	5,406	4,870	4,387	3,953	3,561	3,208	25,381

8. Value at end of year @ 3% = $32,503 - 5,025 = 27,478$

Value at end of year @ 11% = $25,381 - 3,208 = 22,173$

9. Depletion @ 3% discount rate

Average price at beg of year $32,503 / 1,200 = 27.085\ \$/tonne$

Average price at end of year $27,478 / 1,000 = 27.478\ \$/tonne$

Average price through the year = $(27.085 + 27.478) / 2 = 27.2815$

Depletion = Quantity (200 tonne extracted) * average price (27.2815) = 5,456.3

Change in value of stock = 5,025

Quantity * unit resource rent = $200 * 30 = 6000$

Revaluation = change in price (27.478-27.085) * average quantity ($0.5 * (1,200 + 1000)$) = $0.393 * 1,100 = 432.2$