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Comment on AEG Recommendations Regarding Mineral Exploration

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In December 2004, the AEG adopted four recommendations regarding mineral exploration and deferred final decisions on two other issues. As a member of the Canberra II group that submitted the recommendations to the AEG, I fully agree and support the four recommendations adopted. With this comment, I wish only to raise an additional issue for which I believe guidance should be included in the revised SNA.

The issue is the methodology for computing consumption of fixed capital and revaluations of the mineral exploration fixed asset. The issue exists in the current SNA, but the revision process offers an opportunity to apply the research underlying the SEEA manual and the current revision of the SNA to provide the guidance that is now missing.

The difficulty arises because the asset consists of the knowledge gained from the exploration activity. It never suffers physical deterioration, presumably it has an infinite service life, and it does not provide any inputs to current production. Under normal conditions there is no market for the asset because other units have no incentive to purchase it or pay for its temporary use. As a result, the general guidance on how to compute consumption of fixed capital—the decrease in the present value of future rentals—cannot be applied.

In addition to the general problem, it is not clear when the asset has been placed in service, which implies that it is not clear when consumption of fixed capital should begin. Mineral exploration is often undertaken with the goal of finding resources that will be extracted several years in the future. If the deposit is known, but no extraction is occurring, should consumption of fixed capital be charged?

One possibility is to charge consumption of fixed capital only during those periods that extraction takes place and set the amount of consumption of fixed capital in each period to be the same percentage of the beginning of year total as the percentage of known resources extracted during the period. While having a reasonably logical basis, the methodology could lead to fluctuating amounts as extraction rates may increase or decrease greatly in response to market changes. Such a methodology, however, would not be applicable to unsuccessful exploration and the current SNA is clear that unsuccessful exploration expenditures are to be capitalized.

A second possibility would be to abandon any attempt to link mineral exploration assets with the mineral deposits that they discover. One could simply aggregate all expenditures on mineral exploration and then allocate consumption of fixed capital of each year's expenditures over the average length of time that a mineral deposit is exploited. If the average deposit is not exploited for several years, consumption of fixed capital could begin only after that number of years, although such a convention conflicts with the notion that a fixed asset in service must general consumption of fixed capital and if the asset is not in service it should be classified differently.

In the current chapter XII, Other Changes in Assets Account, prominence is given to the necessity of recording flows for other changes in the volume of assets when the price of a mineral deposit changes from a positive value to zero or from zero to a positive value and the deposit is either removed from or added to the balance sheet (paragraphs 12.15, 12.16, and 12.31). If a mineral resource deposit is removed from the balance sheet, is the associated exploration asset also removed? The inclusion of unsuccessful exploration as an asset implies that it should not be removed.

Consumption of fixed capital is to be estimated in the average prices of the current period, which requires mineral exploration assets to be revalued each period. What should be the basis for these revaluations? Should it be the change in the current price of carrying out the same exploration that originally took place? Alternatively, should it be the price of current exploration activities to find an equivalent quantity or value of new deposits? Should a change in the proportions of successful and unsuccessful exploration affect the revaluation?

As indicated above, these are not new issues, but are more important given the advances made since 1993 in the general area of natural resources and environmental accounting. The questions arise because of the unusual nature of the asset. Providing guidance for these questions would substantially improve the revised SNA.