LG/14/14

14th Meeting of the London Group on
Environmental Accounting
Canberra, 27 – 30 April 2009

Volume measure of non-produced assets

Glenn Marie Lange, World Bank

Volume measure of non-produced assets

Note prepared by the World Bank

A large body of theoretical and empirical literature indicates that sustainable development depends on national wealth including non-produced capital. Wealth-based indicators are becoming increasingly important in assessing development and the sustainability of an economy, in particular, how national wealth (quantity and composition) is changing over time. This requires a volume measure of non-produced assets since figures unadjusted for price changes would give misleading signals. Calculation of the current price value of non-produced assets has been addressed by the SEEA, but not calculation of volume measures.

Two different approaches for constructing a volume measure of non-produced capital have been discussed, and can result in very different measures of non-produced capital:

- The first approach treats unit rent as the price of the asset. Volume asset accounts are then obtained by applying the price for the benchmark year in the formula for calculating asset value (Net Present Value).
- An alternative approach, obtains volume asset accounts by deflating annual unit rent using the GDP deflator. This approach results in a 'real' rather than volume measure of non-produced assets. It is similar in some respects to the difference between common-currency GDP calculated using market exchange rates *vs*. PPP

Issues:

It is important that all assets in a balance sheet are valued in a comparable manner. The first approach is consistent with the construction of volume measures for produced assets. Are volume measures of financial assets similarly valued? If so, should this method be recommended for non-produced assets in Volume I?

A practical difficulty may arise with natural resources for which unit rent is highly variable. There may be years when the price is negative or zero even with price averaging. If such a year were chosen as the benchmark year, the value of natural capital would be zero for the entire time series, effectively eliminating non-produced capital from the balance sheet until national accounts are rebased. The results may be technically correct but probably of limited use by policy makers. How can this issue be dealt with? Is there some other measure of wealth that would be more useful?