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STATISTICS DIRECTORATE  
COMMITTEE ON STATISTICS

## Working Party on National Accounts

### LAND VALUATION IN THE NATIONAL ACCOUNTS

To be held on 25-27 October 2011  
OECD Conference Centre  
Beginning at 2:30 p.m. on the first day

*This document has been prepared by Nadim Ahmad and will be presented under item 2.b of the draft agenda*

*At its June 2011 meeting the OECD's Committee on Statistics endorsed the development and circulation of a survey on methods countries use to estimate land in the national accounts. This document explains the motivation for the survey, and indeed the session on land being discussed at this year's joint meeting of the WPFS and WPNA. The results from that survey are expected the week before the working party meetings, during which a synthesis of the returns will be presented.*

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## LAND VALUATION IN THE NATIONAL ACCOUNTS

### 1. Introduction

1. The repercussions of the recent financial crisis have acted as a spur to improve the quality of statistical information in a number of areas; notably in the area of position and flow data, and has led to a number of initiatives to deal with the information gaps exposed by the crisis. One of the most important of these initiatives relates to the 20 recommendations included in the joint IMF and Financial Stability Board report *The Financial Crisis and Information Gaps*, the [www.imf.org/external/np/g20/pdf/102909.pdf](http://www.imf.org/external/np/g20/pdf/102909.pdf).

2. Recommendation 15 of this report calls for the development of “a strategy to promote the compilation and dissemination of the balance sheet approach (BSA), flow of funds, and sectoral data more generally, starting with the G-20 economies.” This strategy is guided by a working group that has been created under the auspices of the Inter Agency Group on Economic and Financial Statistics (IAG) and in March 2011 the OECD and IMF jointly organised a conference to tackle this issue “Strengthening Sectoral Position and Flow Data in the Macroeconomic Accounts”.

3. The conference led to a number of recommendations on the information set that should be encouraged across countries, many of these related to the need to better measure financial assets and flows. One important outcome and conclusion of the conference was a repeated call for better estimates of land on the balance sheets; reflecting the current limited availability of information across countries and a recognition that a key catalyst of the crisis related to residential property valuations. The following is an extract of the Summary Conclusions of the Conference:

*The Conference discussed the progress in compiling sectoral stocks and flow data for non-financial assets with recognition that the issue of valuation of land and dwellings is a central issue not only for compiling the non-financial assets, but also to ensure links with financial sectoral data. Most countries experience difficulties in separating land and structures (land underlying dwellings and land underlying non-residential buildings) in the balance sheets. Problems also arise in valuing agricultural land, estimating other volume changes, and the treatment of catastrophic losses to fixed assets. Some participants expressed the view that the value of structures derived with the Perpetual Inventory Method (PIM) do not necessarily represent reality, and may need to be adjusted. To some extent, the holding gains should be allocated to the value of the structure, not only to the value of land. Besides, in applying the PIM there is a need to review the asset life almost continuously, which is resource intensive.*

### 2. A Special Session (Workshop) on Land Valuation

4. This is of course not the first time that difficulties in estimating the value of land have been aired. The topic of land valuation regularly appears in discussions on the measurement of non-financial assets, growth accounting, and increasingly in discussions on Green Growth and household well-being, as a simple trawl of papers presented over the years at the OECD National Accounts Working Party meetings

can testify.<sup>1</sup> Moreover, it is important to note that improvements in the measurement of the value of land are not just of concern to the national accounts, they are central to a number of parts of the SEEA too.

5. But with the exception of a few attempts<sup>2</sup>, there has been little in the way of systematic and intensive attempts at improving the approaches used to value land across countries. This is despite the fact that it is regularly recognised in many fora as a problem area, both in terms of how it is measured in practice and indeed, perhaps surprisingly so, in concept (as will be highlighted below).

6. In response to this, at the June 2011 meeting of the OECD's Statistics Committee the Statistics Directorate proposed and received approval from delegates for:

- a special session to discuss land valuation, during the 2011 joint-meeting of the Financial Statistics and National Accounts Working Parties, as part of the broader workshop on 2008 SNA Implementation issues; and
- and the development and transmission of a survey on land valuation prior to the meeting.

7. The survey was circulated to countries in early September and results are expected before the special workshop on the SNA, where a synthesis of the results will be presented and a discussion held on whether further coordinated action is necessary, for example via the establishment of a dedicated Task Force or workshop on land measurement in 2012.

8. The following paragraph provides additional information on the some of the key challenges that the survey (included as an annex) is designed to address.

9. A number of issues that have been raised in recent years, without resolution, include:

- The need for practical guidelines on the measurement of produced land (introduced as an asset in the 2008 SNA) – including how it can be practically differentiated from non-produced land and how it should be depreciated.
- The valuation of land owned by government. Some countries prefer not to include some land owned by governments (for example land under roads or parks) on the basis that it implies double counting; as the value of land adjacent to the road or park is correspondingly affected when the road is built. An alternative view is that valuing this land on government balance sheets does not lead to double counting; witnessed by the fact that government can sell the land. The confusion appears to arise in cases where land is sold and its classification also changes. In these cases an “other change in volume” occurs in the reclassified land but also in surrounding land where the quality of the land has changed.

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<sup>1</sup> See for example category 20 in the following link  
[http://www.oecd.org/document/16/0,3746,en\\_2649\\_34245\\_2494416\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/16/0,3746,en_2649_34245_2494416_1_1_1_1,00.html)

<sup>2</sup> For example the OECD itself conducted a survey on the methods used to measure land across countries in 2007; to which only 9 countries responded with information on land valuation methods, and 5 countries responded that they had no estimates. See STD/CSTAT/WPNA(2007)8.

- Differentiating between value changes driven by ‘*revaluation*’ (price) and ‘*other changes in volume*’ (quality/quantity). The SNA recognises that any change in value that arises from a change in the classification of a building, for example from residential to commercial, should be reflected as a volume and not price change; implicitly this means a change in the volume of land. There are many possibilities by which these volume changes can appear in the accounts however, some less straightforward than others. For example a reclassification of land from agricultural to urban should in theory appear as a volume change. But an appreciation in the value of land because an industrial complex adjacent to dwellings is replaced by a park say is arguably less clear, at least in terms of what countries do in practice, even if, in theory, the arguments that this should be reflected as a quality change seem relatively clear. The central point here is that more guidance may be needed in identifying or articulating how quality changes can be captured in land valuation, when the driver for this change is improvements or changes in surrounding land, for example, the building of a school, train station, nuclear power plant etc. Being able to find appropriate and comprehensible mechanisms to explain to users why the volume of land changes will also form an important part of the special session.
- Other conceptual challenges present themselves too. For example, when a government considers a number of routes for the introduction of a high-speed rail link, the value of land changes in all the considered routes. Should these changes be revaluation or ‘other changes in volume’; recognising that when the route is built the adjacent and neighbouring areas will be affected by quality changes.
- The need to develop a classification of land by land use type that provides the basis for international comparability complementary/consistent to that used in the SEEA.

10. These give some flavour of some of the conceptual and empirical challenges. But the ability to provide sound guidance on volume/price changes for land should not be seen as purely conceptual. The distinction between the two matters in a number of areas, particularly in a growth accounting context, which requires robust measures of volume growth.

11. That said, notwithstanding these conceptual issues, the importance of a special session can be justified on its own if one considers that, at the time of writing, it appears that many countries are not currently able to provide estimates on the value of land at any point in time. A seemingly perpetual challenge for national accountants for example has been in estimating the value of land under buildings, where a number of approaches are used across countries, with varying degrees of complexity and indeed reliability. In some countries for example the PIM approach to valuing buildings has resulted in negative land-values, which, in turn, raises questions about the depreciation methods used for buildings.

## **SURVEY ON LAND VALUATION IN THE NATIONAL ACCOUNTS**

At its June 2011 meeting the OECD's Committee on Statistics endorsed the development and circulation of a survey on methods countries use to estimate land in the national accounts.

This survey reflects the outcome of that agreement. Its primary purpose is to provide a better understanding of what countries are currently able to do in estimating land values and to share this information as a way of identifying best practice(s). It also seeks to raise views on a number of conceptual issues that have hitherto not had the benefit of widespread international discussion.

It is hoped that returns to this survey can be provided by no later than **20 October 2011** such that the OECD will be able to develop an issues paper for discussion at the OECD's forthcoming Working Party meetings on National Accounts and Financial Statistics, as part of a Workshop on 2008 SNA implementation.

For any assistance in completing the survey please contact Dong Won Lee at [DongWon.Lee@oecd.org](mailto:DongWon.Lee@oecd.org) to whom completed forms should also be returned.

The survey is deliberately designed as a tool to motivate wider discussions at the international level and so in principle we hope it does not raise any issues of confidentiality. If however your response raises confidentiality issues we would ask you to please stipulate, if necessary, whether the responses provided should be considered as confidential and not to be circulated outside of the OECD or presented at the OECD's Working Party meetings.

**Respondent details**

Name of country:

Name of person who replied:

Email address:

**A. DATA COVERAGE**

- A1. Please describe below the level of detail for which you obtain valuations of land in your balance sheets (the classification follows that in the Handbook of National Accounting - Integrated Environmental and Economic Accounting (SEEA 2003)). If you have an alternative breakdown to that in the SEEA please use that as the basis of your response.

**Balance sheet information**

Asset type	Recorded Y/N
Land underlying buildings and structures (AN.2111);	
Land under cultivation (AN.2112);	
Recreational land and associated surface water (AN.2113)	
Other land and associated surface water (AN.2119	
Total	

- A2. Do you make estimates for investment of produced land in your estimates of total land? Please describe below the asset level for which estimates are made. If you have an alternative breakdown to that in the SEEA please use that as the basis of your response.

**Estimates of produced land in investment (GFCF)**

Asset type	Recorded Y/N
Land underlying buildings and structures (AN.2111);	
Land under cultivation (AN.2112);	
Recreational land and associated surface water (AN.2113)	
Other land and associated surface water (AN.2119	
Total	

- A3. Do you have estimates of land on the balance sheets and estimates of produced land in investment (GFCF) available by institutional sector. If so please describe below. If you have an alternative breakdown to that in the SEEA please use that as the basis of your response.

Asset type	Financial Corps		Non Financial Corps		Government		Households		NPISH	
	Balance Sheets (Y/N)	GFCF (Y/N)								
(AN.2111)										
(AN.2112)										
(AN.2113)										
(AN.2119										
Total										

**B. DATA SOURCES AND METHODOLOGY**

- B1. **Please describe the data sources and methodology that you use to estimate each asset-type of land listed in your response to question A1 above with reference to the institutional sector breakdown if the sources and methodologies differ depending on the institutional sector.** Please also describe the frequency with which the source data is available (quarterly, annually etc). Please also describe in detail the method you use to identify the value of land underneath buildings and structures. Please also describe in detail the information you have available on prices.
- B2. **If you are not able to separately identify the value of land underlying buildings and structures, please describe why not and whether the value of land also includes the value of the buildings and structures or whether the value of buildings and structures includes the value of land.**
- B3: **If your response to B1 does not include a description of the approach you use to value produced land, please describe below how these estimates are created. Please also describe the approach (and prices) used to derive constant price estimates of produced land.**
- B4. **If you do not currently derive estimate of land by asset type or by institutional sector or indeed you do not derive any estimates at all, please describe below why and whether you have any plans to improve this situation in the future.**

**C. CONCEPTUAL ISSUES**

C1. The valuation of land owned by government.

- (a) Some countries prefer not to include some land owned by governments (for example land under roads or parks) on the basis that it implies double counting, as the value of land adjacent to the road or park is correspondingly affected when the road is built, and so is implicitly included in the value of the surrounding land.
- (b) An alternative view is that valuing this land on government balance sheets does not lead to double counting, witnessed by the fact that government can sell the land. The confusion appears to arise in cases where land is sold and its classification also changes. In these cases an “other change in volume” occurs in the reclassified land but also in surrounding land where the quality of the land has changed.

**Please describe below whether you record values in line with (a) or (b)**

C2: Differentiating between value changes driven by ‘*revaluation*’ (price) and ‘*other changes in volume*’ (quality/quantity).

There are many possibilities by which volume changes can appear in the accounts, some less straightforward than others. For example a reclassification of land from agricultural to urban should in theory appear as a volume change. But an appreciation in the value of land because an industrial complex adjacent to dwellings is replaced by a park say is arguably less clear, at least in terms of what countries do in practice, even if, in theory, the arguments that this should be reflected as a quality change seem relatively clear. The central point here is that more guidance may be needed in identifying or articulating how quality changes can be captured in land valuation, when the driver for this change is improvements or changes in surrounding land, for example, the building of a school, train station, nuclear power plant etc.

**Please describe below the guidelines/rules of thumb/methods you use to differentiate between revaluations and other changes in volume in creating balance sheet estimates.**

**C3. Are there any other conceptual issues that you would like to raise that could form the basis of wider international discussion. Please describe these below.**