# 8. Transactions in Nonfinancial Assets

This chapter describes transactions in nonfinancial assets and their classification.

## A. Introduction

- **8.1** Chapter 7 describes the balance sheet and the assets and liabilities recorded on it. As an integrated system, the GFS system also includes the flows necessary to explain all changes between the balance sheet at the end of one period and the balance sheet at the end of the next period. As described in paragraph 3.4 of Chapter 3, there are two types of flows—transactions and other economic flows—both of which can affect stocks of assets and liabilities. This chapter describes the transactions that affect holdings of nonfinancial assets. Chapter 9 describes the transactions that affect holdings of financial assets and liabilities, and Chapter 10 describes other economic flows, all of which affect assets and liabilities.
- **8.2** For each category of nonfinancial assets, there is an accounting identity linking successive balance sheets. It states that

The value of a category of nonfinancial assets on the balance sheet at the beginning of an accounting period.

plus

The total value of that category of assets acquired in transactions during the accounting period.

minus

The total value of that category of assets disposed of in transactions during the accounting period (including consumption of fixed capital).

plus

The net value of other economic flows that affect that category of assets.

equals

The value of the category of assets on the balance sheet at the end of the accounting period.

This identity requires that transactions, other economic flows, and stocks be recorded consistently with regard to time of recording and valuation. The accounting rules governing these factors are described in Chapter 3.

- **8.3** Transactions can change stocks of nonfinancial assets in different ways and all must be accounted for. The more important types of transactions follow:
- Existing assets of all types can be acquired from other units by purchase, barter, payment in kind, or transfer. The same transaction is a disposal of an asset from the viewpoint of the other unit.
- Newly produced fixed assets, inventories, and valuables can be sold or otherwise disposed of by their producers in the same manner as existing assets, or the producers can retain them for their own use.
- Renovations, reconstructions, or enlargements that significantly increase the productive capacity or extend the service life of an existing fixed asset are treated as acquisitions of fixed assets even though physically they function as part of the existing asset. Major improvements to land are treated as acquisitions of land.
- Consumption of fixed capital is an internal transaction that records the decrease in the value of fixed assets and certain other nonfinancial assets because they have been used repeatedly or continuously in production.
- Inventories can be acquired or disposed of through internal transactions as well as transactions with other units. For example, withdrawals from the inventory of materials and supplies for use in the production of general government services and transfers of completed production from the work-in-progress inventory to the finished-goods inventory are internal transactions. Recurrent losses and spoilage of goods held in inventories are also treated as internal transactions.

- **8.4** All transactions that increase a unit's holdings of assets are labeled *acquisitions*. With the exception of consumption of fixed capital, all transactions that decrease a unit's holdings of assets are labeled *disposals*. Thus, the results of transactions in a particular category of assets can be presented either as total acquisitions and total disposals or as net acquisitions.<sup>1</sup>
- **8.5** The remainder of this chapter describes first the valuation, time of recording, consumption of fixed capital, and netting of transactions that affect nonfinancial assets and then provides details on transactions that affect specific categories of nonfinancial assets.

#### **B.** Valuation

- **8.6** Acquisitions of nonfinancial assets other than inventories are valued at their exchange price plus all transport and installation charges and all costs incurred in the transfer of ownership, such as fees paid to lawyers and taxes payable on the transfer. Interest and other financing charges incurred in connection with a transaction are not a cost of ownership transfer. Assets produced on own account are valued at their cost of production.<sup>2</sup> Sales and other disposals of existing nonfinancial assets are valued at their exchange value less any costs of ownership transfer incurred by the disposing unit.
- **8.7** Additions to and withdrawals from inventories are valued at the prices applicable at the time of the addition or withdrawal, which in the case of withdrawals may be quite different from their value when acquired. No costs for installation or ownership transfer are added or subtracted for transactions in inventories.
- **8.8** The value of a transaction expressed in a foreign currency is converted to the domestic currency using the midpoint of the buying and selling exchange rates at the time of the transaction.
- **8.9** General government units may acquire or dispose of nonfinancial assets on a nonmarket basis as an ele-

<sup>1</sup>The net acquisition of inventories is referred to as "changes in inven-

tories." Transactions in fixed assets, valuables, and nonproduced assets would be summarized as acquisitions, disposals, and consumption of fixed capital. Net acquisitions of assets can, of course, be negative.

In the 1993 SNA, assets produced on own account should be valued at their basic price, which is the amount that would be received by the producer from a purchaser minus any tax payable plus any subsidy receivable. If this price is not known, then the assets should be valued by their total costs of production plus a markup for the operating surplus. In the GFS system, it is assumed that market prices of fixed assets constructed by general government units will not be known and that the operating surplus of a general government unit is zero.

ment of their fiscal policy, either by purchasing an asset for more than its market value or by selling an asset for less than its market value. By their nature, such transactions involve a transfer component. If the asset's market value can be determined, then the transaction should be valued at that amount and a second transaction should be recorded as an expense to account for the transfer.<sup>3</sup> Usually, however, there is not an active market for the assets and it is difficult to estimate a market value. In this case, the value of the acquisition or disposal should be the amount of funds exchanged.

## C. Time of recording

- **8.10** As described in paragraph 3.41 of Chapter 3, under the accrual basis, transactions are recorded at the time economic value is created, transformed, exchanged, transferred, or extinguished. For transactions in non-financial assets, this time is when the ownership of the nonfinancial assets is obtained or relinquished.
- **8.11** The acquisition or disposal of an existing non-financial asset by purchase or sale is recorded according to the terms of the contract. For movable assets, this moment is usually the time when the asset is shipped from the seller to the purchaser or when the purchaser receives it. For an immovable asset, the moment is usually the time of the formal settlement of the contract. Acquisitions and disposals by barter, payment in kind, or transfer in kind are recorded when there is a change in control of the asset.
- **8.12** The time of recording of the acquisition of a new nonfinancial asset depends on how the asset is acquired.
- If the asset is acquired from the producing unit as a
  finished good, then the timing is determined in the
  same manner as for the purchase of an existing
  asset. Typically this time is not the time at which
  the asset was produced or the time at which it is put
  to use in production.
- When another unit produces a structure under a contract of sale agreed in advance and the production extends over more than one accounting period, then ownership of the structure is deemed to be transferred as work proceeds. If the contract does not specify the time of the ownership transfer, then the time of the stage or progress payments may be used.

<sup>&</sup>lt;sup>3</sup>The expense often will be a capital transfer to a market enterprise and classified as miscellaneous other expense. It could be a capital grant if the other unit is a general government unit.

- When production is carried out on own account, there is no formal transfer of ownership. The producing unit effectively takes possession progressively as production proceeds so that the asset is acquired as each transaction involved in its production is recorded. For example, if a government unit constructs a building using its own workforce, then each use of goods and services and work performed by employees is treated as an acquisition of a fixed asset.
- **8.13** Consumption of fixed capital, in principle, should be recorded continuously throughout each accounting period. In practice, it can be computed only after the end of the accounting period because it depends on the average price of the asset over the entire period.
- **8.14** Fixed assets acquired or disposed of by means of a financial lease are deemed to be acquired or disposed of when the lease is signed or control of the asset otherwise changes hands.

## D. Consumption of fixed capital

- **8.15** Consumption of fixed capital is an internal transaction that reflects the fact that a general government unit used up a portion of each of its fixed assets through its productive activities during the accounting period and the value of those assets declined correspondingly. As a result, consumption of fixed capital, which is recorded as an expense, is also recorded as a transaction in nonfinancial assets. For convenience, paragraphs 6.33 to 6.38 of Chapter 6 describing this calculation are repeated in the following paragraphs.
- **8.16** Consumption of fixed capital is the decline during the course of an accounting period in the value of fixed assets owned and used by a general government unit as a result of physical deterioration, normal obsolescence, or normal accidental damage.<sup>4</sup> It is valued in the average prices of the period. Consumption of fixed capital may deviate considerably from depreciation as recorded in government financial records, which is normally calculated using the original costs of fixed assets.

- 8.17 Consumption of fixed capital is a forward-looking measure because its value is based on future events rather than past events. The value of a fixed asset is the present discounted value of the stream of rentals that the owner of a fixed asset could expect if it were rented out over the remainder of its service life. The rentals, in turn, depend upon the benefits that units expect to derive from using the asset. Thus, consumption of fixed capital is the decrease in the present value of the remaining sequence of rentals, with the rentals valued at the average prices of the period. The extent of the decrease will be influenced not only by the decrease in the benefits derived from the asset, or its efficiency, during the current period, but also by the shortening of its service life and the rate at which its efficiency is expected to decline over its remaining service life. Furthermore, changes in the price of the asset must be excluded from consumption of fixed capital. Price changes are recorded as holding gains, as described in Chapter 10.
- **8.18** Consumption of fixed capital is estimated with respect to all tangible and intangible fixed assets, including infrastructure assets, major improvements to land, and the costs of ownership transfer incurred on the acquisition of valuables and nonproduced assets. Although some fixed assets, such as roads or railway tracks, may appear to have infinite service lives if properly maintained, their value may nevertheless decline because of a decrease in the demand for their services as a result of technical progress and the appearance of substitutes. Many fixed assets are scrapped or demolished only because they have become obsolete. Consequently, consumption of fixed capital must include an allowance for anticipated obsolescence.
- **8.19** If a general government unit engages in own-account capital formation, then this category of expense does not include the consumption of fixed capital related to the fixed assets used in that production process. As described in the previous sections on compensation of employees and use of goods and services, the costs incurred in own-account capital formation, including consumption of fixed capital, are classified as acquisitions of fixed assets.
- **8.20** Consumption of fixed capital also excludes the loss of value when fixed assets are destroyed by acts of war, natural disasters, and other exceptional events. Similarly, it excludes losses due to unexpected technological developments that may significantly shorten the service life of an existing fixed asset and the depletion or degradation of nonpro-

<sup>&</sup>lt;sup>4</sup>The concept of consumption of fixed capital is identical to the concept used in the *1993 SNA*. The coverage of consumption of fixed capital expense may differ from the amount recorded in the production account of the *1993 SNA* because of the GFS treatment of own-account capital formation. When nonfinancial assets are produced on own account, some consumption of fixed capital is recorded in the GFS system as acquisitions of fixed assets rather than expense (see paragraph 8.19). Consumption of fixed capital is described in the *1993 SNA* in paragraphs 6.179 through 6.203.

duced assets such as land and subsoil assets. These events are treated as other economic flows, as described in Chapter 10.

**8.21** To compute consumption of fixed capital, the fixed assets purchased in the past and still in use have to be revalued at the average prices of the current period and assumptions have to be made regarding the remaining service lives of each asset and the rate at which their efficiency is expected to diminish. Linear or geometric patterns of decline, or some combination of them, are the patterns most commonly assumed.<sup>5</sup> In limited cases, it may be possible to estimate consumption of fixed capital from observations of used asset prices in markets.

# E. Netting of flows

**8.22** It is recommended that transactions in nonfinancial assets other than inventories be presented as acquisitions, disposals, and consumption of fixed capital, as indicated in Table 8.1. The net acquisition of a category of assets then could easily be computed as acquisitions less disposals. The total change in the holding of the category of assets is the net acquisitions of that category less consumption of fixed capital.

**8.23** In general, changes in inventories should be netted because the separate data for acquisitions and disposals are not economically meaningful. In addition, as a matter of practice, it is often impossible to estimate individual transactions in inventories. Consumption of fixed capital does not apply to inventories.

# F. Classification of transactions in nonfinancial assets

**8.24** The classification of transactions in nonfinancial assets is shown in Table 8.1. The table summarizes transactions in nonfinancial assets as acquisitions, disposals, and consumption of fixed capital. The three amounts can be combined into the total change in a category of nonfinancial assets resulting from transactions.

**8.25** The classification of nonfinancial assets is identical to the classification of the same assets employed in Chapter 7 (Table 7.2). Chapter 7 also provides full definitions of the assets included in each category, and those definitions are not repeated here. The immediately preceding sections of this chapter provide guidance applicable to transactions affecting all or most categories of nonfinancial assets. The remainder of this section provides guidance only on those transactions for which the general guidance may not be sufficient.

**8.26** In addition to the classification of transactions in nonfinancial assets described in this chapter, the Classification of Functions of Government (COFOG) can also be applied to the acquisitions less disposals of these assets. COFOG is described in the annex to Chapter 6 and that description is not repeated here.

## I. Fixed assets (311)<sup>6</sup>

**8.27** As explained in paragraph 7.34 of Chapter 7, the production of some types of fixed assets, especially structures, transport equipment, and cultivated assets, extends over more than one accounting period. When production on own account or production of a structure taking place under a contract of sale agreed in advance is incomplete at the end of an accounting period, then the amount that has been completed is considered an acquisition of a fixed asset. When there is a contract with another producer, stage or progress payments are usually required and the amounts paid may approximate the value of the production accomplished at each stage. If the payments are made in advance or in arrears of completion of the relevant work, then short-term credits have implicitly been extended by the purchaser to the construction enterprise, or vice versa, and the stage payments should be adjusted by the amount of these credits.

**8.28** When the production of fixed assets is carried out on own account, the value of all of the production taking place during the accounting period should be recorded as the acquisition of a fixed asset. Each transaction that otherwise would be recorded as compensation of employees, use of goods and services, and consumption of fixed capital should be recorded as acquisitions of the relevant

<sup>&</sup>lt;sup>5</sup>Organisation for Economic Co-operation and Development, Measuring Capital—OECD Manual: Measurement of Capital Stocks, Consumption of Fixed Capital and Capital Services (Paris, 2001) contains an extensive discussion of the methods for estimating consumption of fixed capital.

<sup>&</sup>lt;sup>6</sup>The numbers in parentheses after each classification category are the GFS classification codes. Appendix 4 provides all classification codes used in the GFS system.

Table 8.1: Classification of Transactions in Nonfinancial Assets

		Acquisitions	Disposals	Consumption of fixed capital 1
31	Nonfinancial assets			
311	Fixed assets			
3111	Buildings and structures			
31111	Dwellings			
31112	Nonresidential buildings			
31113	Other structures			
3112	Machinery and equipment			
31121	Transport equipment			
31122	Other machinery and equipment			
3113	Other fixed assets			
31131	Cultivated assets			
31132	Intangible fixed assets			
312	Inventories <sup>2</sup>			
3121	Strategic stocks			
3122	Other inventories			
31221	Materials and supplies			
31222	Work in progress			
31223	Finished goods			
31224	Goods for resale [GFS]			
313	Valuables			
314	Nonproduced assets			
3141	Land			
3142	Subsoil assets			
3143	Other naturally occurring assets			
3144	Intangible nonproduced assets			
	Memorandum items			
3MI	Own-account capital formation			
3M11	Compensation of employees			
3M12	Use of goods and services			
3M13	Consumption of fixed capital			
3M14	Other taxes on production minus			
	other subsidies on production			

<sup>&</sup>lt;sup>1</sup>Consumption of fixed capital is not recorded for inventories. It is recorded with respect to valuables and nonproduced assets only to the extent of costs of ownership transfer and major improvements to nonproduced assets.

category of fixed assets when they relate to own-account capital formation.<sup>7</sup>

**8.29** Major improvements to existing assets that increase their productive capacity, extend their service lives, or both are treated as acquisitions of fixed assets, while the use of goods and services for the maintenance and repair of fixed assets constitute an expense. By definition, however, major improvements do not lead to the creation of new assets that can be separately identified and valued. Instead, the value of such an improvement is added to the existing value of the underlying asset.

8.30 The distinction between maintenance and repair and a major improvement is not clear-cut. Major improvements to assets are distinguished by the following features: (a) the decision to renovate, reconstruct, or enlarge an asset is a deliberate investment decision that may be undertaken at any time and is not dictated by the condition of the asset and (b) the renovations or enlargements increase the performance or capacity of existing assets or significantly extend their previously expected service lives. Maintenance and repairs are distinguished by two features: (a) they are activities that owners or users of assets are obliged to undertake periodically in order to be able to utilize such assets over their expected service lives and (b) they do not change the asset or its performance, but simply maintain it

<sup>&</sup>lt;sup>2</sup>Only the net change in inventories resulting from transactions is recorded, not gross acquisitions and disposals.

 $<sup>\</sup>overline{\ }^{7}$  This treatment also applies to the production of valuables and major improvements to land when carried out on own account.

in good working order or restore it to its previous condition in the event of a breakdown.

**8.31** As explained in Chapters 6 and 7, purchases by the military of weapons and equipment used to deliver those weapons are treated as use of goods and services expense rather than acquisitions of fixed assets. Weapons or armored vehicles acquired by the police and internal security services are treated as acquisitions of fixed assets, even though expenditures on the same kind of equipment by the military would be treated as use of goods and services expense.

#### a. Buildings and structures (3111)

- **8.32** In addition to the transactions reflecting the acquisition of newly constructed buildings and structures, acquisitions of buildings and structures include site clearance and preparation expenses and the cost of all fixtures, facilities, and equipment that are integral parts of buildings and structures.
- **8.33** Certain structures, such as buildings, roads, and bridges, may be produced for communal use by groups of households. After they are finished, the ownership of such structures may then be transferred to a general government unit that will assume responsibility for their maintenance. When the transfer occurs, an acquisition of a structure is recorded together with the receipt of a capital transfer in kind.

## b. Machinery and equipment (3112)

**8.34** The determination of which goods should be classified as machinery and equipment is normally straightforward. Some goods, however, such as hand tools, may be used repeatedly, or continuously, in production over many years but may nevertheless be small, inexpensive, and used to perform relatively simple operations. If expenditures on such goods take place at a fairly steady rate and if their value is small compared with expenditures on more complex machinery and equipment, it may be appropriate to treat the acquisition of the tools as use of goods and services expense rather than acquisitions of nonfinancial assets.

## c. Other fixed assets (3113)

**8.35** Acquisitions of cultivated assets (31131) include acquisitions from other units of plants and animals that are cultivated for the products they yield

year after year and the value of similar plants and animals produced on own account. Disposals consist of animals and plants sold or otherwise disposed of, including animals sold for slaughter or slaughtered by their owners and plants cut down before the end of their service lives. Disposals do not include exceptional losses of animals and plants due to major outbreaks of disease, contamination, drought, famine, or other natural disasters. Consumption of fixed capital includes incidental losses of animals and plants from natural causes as well as the decline in an animal's or plant's value as it gets older.

- **8.36** The information obtained from mineral exploration influences the production activities of those who obtain it over a number of years. The expenditures incurred on exploration are therefore treated as expenditures on the acquisition of an intangible fixed asset (31132). Mineral exploration expenditures include the costs of actual test drillings and borings and all other costs incurred to make it possible to carry out the tests, such as aerial or other surveys and transportation costs. The value of the resulting asset is not measured by the value of new deposits discovered by the exploration but by the value of the resources allocated to exploration during the accounting period. Consumption of fixed capital may be calculated for such assets by using average service lives similar to those used by mining or oil corporations in their own accounts.
- **8.37** Acquisitions of computer software includes programs, program descriptions, and supporting materials for both systems and applications software that are expected to be used for more than one year. It also includes the purchase or development of large databases that the unit expects to use for more than one year. Software developed in-house is valued at its cost of production.
- **8.38** The production of new entertainment, literary, and artistic originals is often undertaken on own account. In such cases, it may be difficult to establish their value, which depends on the present value of the future benefits the owner expects to derive from their use. In the absence of other information it may be necessary to value the acquisition of the original by its cost of production.
- **8.39** Expenditures for research and development, staff training, market research, and similar activities are

<sup>&</sup>lt;sup>8</sup>Plants and animals grown for a single use, such as animals grown for slaughter and trees grown for timber, are treated as inventories rather than fixed assets.

treated as use of goods and services expense rather than acquisitions of intangible fixed assets even though some of them may bring benefits for more than one year.

#### 2. Changes in inventories (312)

- **8.40** In general, acquisitions and disposals of inventories are recorded according to the same principles used for recording transactions in other nonfinancial assets. Acquisitions of (or additions to) inventories are recorded when products are purchased, produced, or otherwise acquired, and disposals of (or withdrawals from) inventories are recorded when products are sold, used up in production, transferred to a different category of inventories, or otherwise relinquished. Both additions and withdrawals are valued at the current market prices prevailing at the time of the transaction.
- **8.41** As opposed to nonfinancial assets, however, no costs of ownership transfer are included in the values of acquisitions or disposals of inventories, and no consumption of fixed capital is attributed to inventories, which is indicated by a shaded area in Table 8.1. Also different from other nonfinancial assets, only the net value of additions less withdrawals is estimated rather than separate values for additions and withdrawals.
- **8.42** Many acquisitions and disposals of inventories are purchases from or distributions to other units, but other acquisitions and disposals reflect internal transactions.
- When materials and supplies (31221) are transferred to a production process, a transaction is recorded for the withdrawal from inventories, which is balanced by an addition either to work-in-progress inventories (31222) or to use of goods and services (22), depending on the nature of the production process.
- If work-in-progress inventories (31222) exist, then transactions are, in principle, recorded continuously as production takes place to reflect the value of materials and supplies, other goods and services, labor, and other inputs consumed. When production is completed, a transaction is recorded to decrease work-in-progress inventories and either increase *finished-goods inventories* (31223) or sales of goods and services (142).
- When goods acquired for resale (31224) are sold or otherwise disposed of, their cost is recorded as use of goods and services expense. Thus, a transaction must be recorded to reduce inventories of goods for resale and increase *use of goods and services* (22).

- Losses of inventories resulting from physical deterioration, normal accidental damage, or pilfering should be treated as disposals in the same way as inventories disposed of on purpose. In practice, determining the time of recording may be difficult because the time at which the inventories were stolen or spoiled may be unknown.
- **8.43** All acquisitions and disposals of inventories should be valued at current market prices. Because of the continuous or frequent withdrawals from materials and supplies inventories and the additions to and withdrawals from work-in-progress inventories, it is unlikely that information will be available to record these internal transactions accurately, and estimates may be necessary.
- **8.44** Withdrawals of work-in-progress inventories should be valued at their cost of production, where all inputs are valued at their current market prices at the time of withdrawal rather then the prices paid for them. Goods for resale added to inventories are valued at their purchase prices, including any transportation charges paid to other units. Goods for resale withdrawn from inventories are valued similarly at the purchase prices at which they can be replaced when they are withdrawn, which may differ from the prices that were paid to acquire them and the prices for which they were sold.

#### 3. Valuables (313)

**8.45** As with all nonfinancial assets other than inventories, acquisitions of valuables are valued at the prices paid plus any associated costs of ownership transfer incurred by the general government units acquiring the assets. Disposals are valued at the sales price less any associated costs of ownership transfer incurred by the general government units disposing of the assets. Costs of ownership transfer may be significant for the services of appraisers, auctioneers, and dealers. Government units fulfilling some functions of the monetary authority may have transactions in both monetary and nonmonetary gold, and care needs to be taken to classify them correctly and to record the other economic flows needed to transfer gold from one category to the other.

## 4. Nonproduced assets (314)

**8.46** Nonproduced assets either are naturally occurring or come into existence through legal or accounting actions. As a result, they normally enter the GFS

system through other economic flows rather than transactions. Once in the system, however, transactions reflecting a change in their ownership should be recorded in the same manner as transactions in existing fixed assets. One exception regarding the appearance of nonproduced assets occurs when a government unit acquires land that is physically located in a foreign country. The transaction converts the land into part of the economic territory of the country of the acquiring government and therefore it enters the system by means of a transaction (acquisition of a nonproduced asset) rather than an other economic flow.

**8.47** Productive activities may be undertaken to improve the quantity, quality, or productivity of land or prevent its deterioration. These activities may lead to the creation of substantial new structures, but they are not used directly to produce other goods and services in the way that most structures are used. Instead, the result is more or better land, and it is the land that is used for production. Major improvements to land are treated in the same way as major improvements to fixed assets. That is, a transaction is first recorded to increase the balance sheet value of the land by the cost of the improvement, and then consumption of fixed capital is recorded over the service life of the improvement. Examples of major improvements to land are reclaiming land from the sea by the construction of dikes, sea walls, or dams; clearing forests to enable land to be used in production for the first time; draining marshes; irrigating arid land by constructing irrigation channels; and preventing floods or erosion by the sea or rivers by constructing breakwaters, sea walls, or flood barriers.

**8.48** Acquisitions of tunnels and other structures associated with the mining of mineral deposits are classified as acquisitions of structures and not as improvements to land. These assets are used separately from the land through which they are drilled or bored. Site clearance and preparation of land for purposes of construction also are not classified as improvements to land but as acquisitions of buildings or other structures.

**8.49** Buildings, other structures, and cultivated assets are often purchased or sold together with the land on which they are situated. If possible, separate valuations of the land and the fixed asset should be obtained. If it is not possible to obtain separate valuations, then the transaction should be classified as a transaction in the type of asset believed to have the greater value, which often will be the fixed asset. In most cases, subsoil assets may be owned separately from the land and separate valuations should be estimated if possible. On the other hand, the law may stipulate that the ownership of the subsoil assets is inseparably linked to that of the land.

**8.50** A government unit, as owner of a subsoil asset, may grant a concession or lease to another unit entitling the latter to extract the asset over a specified period of time in return for a series of payments, usually described as royalties. This arrangement is similar to a landowner conceding to a tenant the right to exploit the land in return for the payment of rents, except that subsoil assets are exhaustible. Nevertheless, the payments normally are treated as property income transactions rather than disposals of an asset.

**8.51** When a long-term contract is let by the owner of a naturally occurring nonproduced asset that gives a second unit the exclusive right to use or exploit the asset, then the contract itself could be treated as an intangible nonproduced asset. Auctions by government units of the rights to use portions of the electromagnetic spectrum are particularly likely to result in the contracts being treated as economic assets. At the time of publication of this manual, the criteria for treating a contract or lease as an asset had not been decided.

**8.52** Depletion is the decline in the value of a subsoil asset, noncultivated biological resource, or a water resource because a portion of the asset has been extracted. It is recorded as an other economic flow, as described in paragraph 10.41 of Chapter 10, and is not a transaction in nonfinancial assets. Similarly, the amortization of a patent, purchased goodwill, or other intangible nonproduced asset over its service or legal life is an other economic flow rather than a transaction.