Republic of Kenya

PSASB
PUBLIC SECTOR ACCOUNTING STANDARDS BOARD (KENYA)

IPSAS 12 -Inventories Guideline

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PUBLIC SECTOR ACCOUNTING STANDARDS BOARD

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1. Introduction

The International Public Sector Accounting Standards Board (IPSASB) issued International Public Sector Accounting Standard (IPSAS) 12, *Inventories,* in July 2001, and has issued numerous amendments up to 31st January 2025.

2. Objective

The objective of this Standard is to prescribe the accounting treatment for inventories. It covers recognition as assets, subsequent expense recognition, cost formulas (FIFO/Weighted Average), valuation adjustments for damage or obsolescence, and disclosures.

3. Scope

An entity that prepares and presents financial statements under the accrual basis of accounting shall apply this Standard in accounting for all inventories **except:**

- Financial instruments (see IPSAS 28, *Financial Instruments: Presentation* and IPSAS 41, *Financial Instruments*);
- Biological assets related to agricultural activity and agricultural produce at the point of harvest (see IPSAS 27, *Agriculture*); and
- Work-in-progress of services to be provided for no or nominal consideration directly from the recipients.

4. Definitions

- **Current replacement cost** is the cost the entity would incur to acquire the asset at the reporting date.

- **Exchange transactions** are transactions in which one entity receives assets or services, or has liabilities extinguished, and directly gives approximately equal value (primarily in the form of cash, goods, services, or use of assets) to another entity in exchange.

- **Non-exchange transactions** are transactions where an entity either receives value from another entity without directly giving approximately equal value in exchange or gives value to another entity without directly receiving approximately equal value in exchange.

- **Inventories** are assets:

    - In the form of materials or supplies to be consumed in the production process;
    - In the form of materials or supplies to be consumed or distributed in the rendering of services;
    - Held for sale or distribution in the ordinary course of operations; or
    - In the process of production for sale or distribution.

- **Net realizable value** refers to the net amount that an entity expects to realize from the sale of inventory in the ordinary course of operations.

- **Fair value** refers to the measurement of inventory at the current market value, rather than historical cost. It is the price to sell an inventory between market participants on the measurement date and reflects real-time economic conditions.

5. Examples of Inventories in the Public Sector

- Military inventories (example missiles, rockets, and bombs delivered by weapons or weapons systems);
- Consumable stores;
- Maintenance materials;
- Spare parts for plant and equipment, other than those dealt with in IPSAS 45, *Property, Plant, and Equipment*;
- Strategic stockpiles (for example, energy reserves);
- Stocks of unissued currency, which are not reported at face value, but are measured at their printing or minting cost;
- Postal service supplies held for sale (for example, stamps);
- Work-in-progress, including:
    - Educational/training course materials; and
    - Client services (for example, auditing services), where those services are sold at arm's length prices; and
- Land/property held for sale.
- Health Products & Technologies

6. Measurement of Inventories

The measurement of inventories shall be at:

i. The lower of cost and net realizable value.
ii. The fair value as at the date of acquisition, where inventories are acquired through a non-exchange transaction.
iii. The lower of cost and current replacement cost, where they are held for:
- Distribution at no charge (a transfer expense) or for a nominal charge; or
- Consumption in the production process of goods to be distributed at no charge (a transfer expense) or for a nominal charge.

7. Cost of Inventories

a) Costs of Purchase

These costs are directly related to acquiring goods and include the purchase price, import duties and other non-recoverable taxes, and logistics costs like transport and handling. Trade discounts and rebates are deducted.

b) Costs of Conversion

Relevant in manufacturing, these costs transform raw materials into finished products. They include direct costs like direct labor and production overheads (fixed and variable). Fixed production overheads are allocated based on normal capacity.

c) Other Costs

Other costs are included only if they are essential to bring the inventory to its current location and condition. Examples include specific design costs for customers and certain public-sector costs, such as developing land held for sale. Non-production overheads are included only if they contribute to the inventory's current state.

Key Exclusions (Expensed as Incurred)

The following costs are recognized as expenses and are not included in inventory valuation:
- Abnormal waste costs;
- Storage costs (unless necessary for a production stage);
- Administrative overheads not contributing to the inventory's condition; and
- Selling and distribution costs.

Under-Capacity Overheads

Fixed production overheads must be allocated based on normal capacity. Costs associated with idle plants or low production levels must be expensed immediately rather than added to the cost per unit.

Foreign Exchange Differences

Gains or losses arising from the purchase of inventory in a foreign currency are generally excluded (IPSAS 4).

Borrowing Costs

Under IPSAS 5, borrowing costs are included in the cost of inventory if the inventory qualifies as a qualifying asset. A qualifying asset is one that necessarily takes a substantial period of time to get ready for its intended use or sale.

An entity may purchase inventories on deferred settlement terms. When the arrangement effectively contains a financing element, that element, for example, the difference between the purchase price for normal credit terms and the amount paid, is recognized as interest expense over the period of the financing.

Agricultural Produce (Post-Harvest)

Agricultural produce harvested from an entity's biological assets shall be recognized as inventory at the point of harvest.
The initial measurement of the inventory from the biological assets is measured at fair value less estimated costs to sell.

Example 1: Agricultural Produce

A regional Department of Forestry manages government-owned commercial timber plantations (the biological assets). On harvest day, they cut down a significant volume of timber as follows:

Valuation at Harvest:

- Volume harvested: 500 cubic meters (m^3) of raw logs.
- Market Fair Value of raw logs: Kshs 150 per m^3.
- Costs to sell (transportation to market, broker fees): Kshs 10 per m^3.
- Fair Value Less Costs to Sell (FVLCTS) at Harvest: Kshs 140 per m^3
- Assume the trees were in the balance sheet as biological assets valued at Kshs 50,000 before the sale.

What are the journal entries?

Solution

Valuation at Harvest
FVLCTS per m³ = 150 – 10 = **Kshs 140**
Total value = 500 × 140 = **Kshs 70,000**
Journal Entries:

Post Harvest :

Dr.Inventory (Harvested Timber)	Kshs 70,000	
Cr: Biological Assets (trees)		Kshs 50,000
Cr. Gain from Fair Value Adjustment		Kshs 20,000

Example 2: Medical Supplies

An aid agency donates medical supplies to the ABC public hospital, valued at Ksh 100,000, following a natural disaster. What are the Journal entries to record this donation within the public hospital's books?

Solution:
The cost of inventory is its fair value as of the date it is acquired.

To receive the donation

Dr. Inventory Kshs 100,000 (to record increase in inventory)
Cr. Revenue Kshs 100,000 (To record donation as revenue)

Once the medical supply is issued for consumption within the hospital

Dr. Medical Expense Ksh. 100,000
Cr. Inventory Ksh. 100,000 (to record a decrease in inventory)

8. Cost Formulas.

IPSAS 12 establishes that for inventories that are not unique (i.e., interchangeable), public sector entities must choose between **FIFO** or **Weighted Average** cost formulas.

Interchangeable inventory refers to items that can be substituted for one another without significant loss of value or functionality. This concept is especially relevant in industries where multiple suppliers provide similar products. Commodities like steel, water pipes, or grain are

often interchangeable; a buyer can purchase from different suppliers without worrying about quality differences.

1. FIFO (First-In, First-Out)

This method assumes the oldest items are issued first. Ending inventory values reflect the most recent purchase prices.

Example 3: FIFO Computation

Entity ABC purchases standard medical gloves in two batches as follows:

Batch 1: 100 boxes at Kshs 10 per box, totalling to Kshs 1,000

Batch 2: 100 boxes at Kshs 12 per box, totalling to Kshs 1,200

The entity then sells (issues) 150 boxes to counties.

Required:

Calculate the cost of goods issued using the FIFO method.

Prepare the journal entry for the purchase.

Solution

FIFO Cost Calculation

Under the **First-In, First-Out (FIFO)** method, the earliest purchases are issued first:

100 boxes @ Kshs 10 = Kshs 1,000

50 boxes @ Kshs 12 = Kshs 600

Total cost of 150 boxes issued = Kshs 1,600

Journal Entry on Purchase (Combined)

Dr. Inventory — Kshs 2,200

Cr. Accounts Payable / Cash — Kshs 2,200

Journal Entry on Issuance (Sale of 150 Boxes)

On Issuance:

Dr. Expense/Cost of Sales — Kshs 1,600
Cr. Inventory—Kshs 1,600
Ending Inventory remains at Kshs 600, representing the 50 newest boxes at Kshs 12 each.

2. Weighted Average Cost

Example 4: Weighted Average Computation

A Department of Public Works maintains a fleet fuel tank with the following details:

Opening Stock: 1,000 liters at Kshs 100 per litre

New Purchase: 2,000 liters at Kshs 130 per litre

During the period, the fleet consumes 500 litres of fuel.

Required:

Compute the weighted average cost per litre

Determine the cost of fuel issued.

Prepare the journal entry for the issuance.

Solution

1. Weighted Average Cost per Litre

Total Cost = (1,000 × 100) + (2,000 × 130)
= Kshs 100,000 + Kshs 260,000 = Kshs 360,000

Total Quantity = 3,000 litres

Weighted Average Cost = Kshs 360,000 ÷ 3,000 = Kshs 120 per litre

2. Cost of Fuel Issued

Fuel Issued = 500 litres

Cost per litre = Kshs 120

Total Cost = 500 × 120 = Kshs 60,000

3. Journal Entry on Issuance

Dr. Fuel Expense — Kshs 60,000

Cr. Inventory (Fuel) — Kshs 60,000

3. Consistent Application and Segments

Entities must use the same formula for inventories of a "similar nature and use." Different formulas are only allowed if the **nature or use** of the inventory differs between segments.

- **Justified Difference:** A National Print Authority uses **FIFO** for high-turnover office paper sold to the public (nature: resale). However, the same authority uses **Weighted Average** for specialized paper used in a long-term secure government ID project (nature: internal production).

- **Unjustified Difference:** A government agency cannot use **FIFO** for its headquarters' office supplies and **Weighted Average** for its regional office supplies simply because they are in different cities.

Example 5: Consistent application -Justified difference

Question
A National Print Authority has the following inventories:

Segment A (Resale – Office Paper):

Purchase 1: 100 units @ KShs 10
Purchase 2: 100 units @ KShs 12
Issued/Sold: 150 units
Cost formula used: FIFO

Segment B (Internal Use – Secure Paper):

Purchase 1: 100 units @ KShs 20
Purchase 2: 100 units @ KShs 30
Issued: 150 units
Cost formula used: Weighted Average

Required:

Compute the cost of inventory issued in each segment.
State whether the use of different cost formulas is appropriate.

Soulution

Cost of Inventory Issued
Segment A (FIFO):
100 units @ 10 = 1,000
50 units @ 12 = 600
Total Cost = KShs 1,600

Segment B (Weighted Average):
Average Cost = (100×20 + 100×30) ÷ 200 = 25 per unit
Cost of 150 units = 150 × 25
Total Cost = KShs 3,750

The difference in costing methods is justified in the Standard.

Example 6: Consistent application- unjustified difference

Entity: A Regional Health Department.

Items: Paracetamol stock in Hospital A and Paracetamol stock in Hospital B.

Context: Both are medicines used for the same purpose (treatment), and they *have to* use the same cost formula (e.g., Weighted Average Cost).

Transaction: The department purchases 1,000 units of paracetamol at Kshs 10 each in January, and 1,000 units at Kshs 12 each in March for both locations.
(12+10)/2 *(1000)=Ksh 11,000

Journal Entry (When inventory is used in service provision):

Dr. Inventory Expense (Cost of Services)- Kshs 11,000
Cr. Inventory Asset (Consumable Supplies) - Kshs 11,000

(To record consumption of paracetamol using Weighted Average Cost)

Example 7: Different Nature or Use (Different Cost Formulas)

Entity: A department in the Ministry of Education.

Item A: Textbooks held for sale to private schools (commercial purpose).

Item B: Textbooks held for free distribution to public schools (distribution purpose).

Context: Although both are textbooks, their *use*s differ. The Ministry department can use **FIFO** for commercial textbooks (to match costs with revenue) and **WAC** for freely distributed books.

Different Location, Same Formula

IPSAS 12 states that a difference in geographical location, *by itself,* is not sufficient to justify the use of different cost formulas.

Scenario: a Department of Defense has ammunition depots in the North Region and the South Region. Ammunition is of the same type.

Accounting Treatment:
If the North uses FIFO, the South *must* also use FIFO.

Journal Entry (Consolidation of Inventory Expense):

Dr. Inventory Expense (Ammunition)
Cr. Inventory Asset (Ammunition - North)
Cr. Inventory Asset (Ammunition - South)

(Both locations use the same costing formula)

Key Points Summary
Same nature and use → same cost formula
Different nature and use → different formulas allowed

4. Non-Interchangeable inventory

Items that are unique and not substitutable for one another. Each item has a distinct value and purpose.

The cost of inventories of items that are not ordinarily interchangeable, and goods or services produced and segregated for specific projects, shall be assigned by using specific identification of their individual costs.

Specific identification of costs means assigning exact costs to specific items in inventory, which is useful for items intended for a particular project.

Example 8: Non- interchangeable inventory

Question
A Government ICT Agency purchases specialized servers for different projects:

Server A (Project Health System at MOH): KShs 2,000,000
Server B (Project Education System at MOE): KShs 3,000,000

Each server is **unique, separately identified, and assigned to a specific project**.

During the period:

Server A is issued to the MOH - Health System project.

Required:

Determine the cost to be assigned upon issue.
State the appropriate costing method.

Solution
1. Cost Assigned (Specific Identification)
Server A is issued → **Cost = KShs 2,000,000**
(Actual cost of the specific item is used)

2. Costing Method
Specific Identification Method is applied because:

Items are **segregated**
Purchased for **specific projects**
Not interchangeable

Journal Entry on Issue

Dr. Transfer Expense (Health System) … KShs 2,000,000
Cr. Inventory – Servers …… KShs 2,000,000

Key Summary
Each item carries its **own unique cost**
No averaging or FIFO is applied
Cost flows **directly to the specific project**

Example 9: Non- interchangeable inventory

A government museum purchases a rare, historical document for its collection (inventory held for exhibition/sale). It is valued at Kshs10,000,000 and is unique.

Logic: The item is not "ordinarily interchangeable" with other documents, so a specific cost is assigned.

Accounting Entry - Upon Acquisition:

Dr. Inventory - Rare Document 001: Kshs 10,000,000
Cr. Cash/Bank: Kshs 10,000,000

9. Measurement of inventory at the lower of cost and Net Realizable Value

Net Realizable Value is the estimated selling price of the inventory, less the estimated costs of completion or the estimated costs to be incurred to make the sale, exchange, or distribution.
Circumstances under which NRV is assessed (there is evidence of a decline in realizable value)

When the inventory:

- Inventory is damaged
- Inventory has become wholly or partially outdated
- Decline in selling prices
- Increase in estimated costs of completion
- Increase in estimated costs to sell, exchange, or distribute

If the cost of inventory exceeds its expected future benefit, it must be written down.

Example 10: Measurement at the lower of cost or NRV

A pharmaceutical entity purchases specialized anti-malaria medication at a cost of KShs 100,000. Due to the introduction of a more effective national program, demand for this older medication declines, and its **net realizable value (NRV)** is reassessed at KShs 60,000.

Required:

Determine the amount of inventory write-down.
Prepare the journal entry to record the write-down.
State the new carrying value of the inventory.

Solution

Inventory Write-Down
Cost = KShs 100,000
NRV = KShs 60,000
Write-down = 100,000 – 60,000 = KShs 40,000

Journal Entry
Dr. Inventory Write-Down / Impairment Loss … KShs 40,000
Cr. Inventory (or Allowance for Obsolescence) … KShs 40,000
New Carrying Value
Inventory is reported at **KShs 60,000 (NRV)**

Note: Writing down inventory will be assessed on an item-by-item basis and not on broad classifications (e.g., all finished goods, all inventories in a geographical segment).

Grouping of inventory items is permitted only when:

- Items have similar purposes or end uses, and
- Items cannot be practically evaluated separately.
  Example: Write down - gloves/ fuels/fertilizer

Example 11: Writing down of Inventory

A University holds two unique items of laboratory specimens as inventory:

Item A: Cost KShs 50,000; Net Realizable Value (NRV) KShs 40,000
Item B: Cost KShs 30,000; Net Realizable Value (NRV) KShs 35,000

Required:

Determine whether a write-down is required for each item.
Calculate the amount of any write-down.
Prepare the journal entries.
State the carrying value of each item.

Solution
1. Assessment of Write-Down
Item A: NRV (40,000) < Cost (50,000) → **Write-down required**
Item B: NRV (35,000) > Cost (30,000) → **No write-down required**

2. Write-Down Calculation
Item A: 50,000 – 40,000 = **KShs 10,000**

Item B: No write-down

3. Journal Entries
For Item A (Write-down):
Dr. Inventory Write-Down / Impairment Loss … KShs 10,000
Cr. Inventory (or Allowance for Obsolescence) … KShs 10,000
For Item B:
No entry required (since NRV exceeds cost)
4. Carrying Values
Item A: KShs 40,000 (at NRV)
Item B: KShs 30,000 (at cost)

NRV and "Purpose Held"/Contracts

Where inventories are held for sale or service contracts, NRV shall be determined based on the contract price. For excess quantities beyond contracts, the NRV shall be the general (market) selling price. The expected distribution or selling price depends on existing contracts.

Example 12: Determining the NRV under purpose held/contracts
A government printing office holds 100 secured passport booklets with the following details:

Cost per booklet: KShs 2,000
Total cost: KShs 200,000
A firm contract exists to sell 80 booklets to the Department of Home Affairs at KShs 2,500 each. The remaining 20 booklets can be sold in the open market at KShs 2,200 each.
Required:
Determine the net realizable value (NRV) for the inventory.
Assess whether a write-down is required.

Solution
1. NRV Calculation
80 contracted booklets:
NRV = 80 × 2,500 = KShs 200,000
20 excess booklets (open market):
NRV = 20 × 2,200 = KShs 44,000
Total NRV = KShs 244,000
2. Assessment of Write-Down
Cost per unit = KShs 2,000
NRV per unit:
Contracted units = KShs 2,500
Excess units = KShs 2,200
Since NRV is higher than the cost for all items, no write-down is required.

Materials and Supplies Used in Production

Materials and supplies held for use in production shall not be written down below cost if the finished goods in which they will be incorporated are expected to be sold, exchanged, or distributed at or above cost. Raw materials are not written down below cost if the final product is expected to recover all costs.

Example 13: Determining write-down for materials used in Production

Scenario 1: No Write-down:

A public utility holds serum costing KSh 1,000. This serum is used to make vaccines that the utility expects to distribute at a value that covers the KShs 1,000 cost. *In this case, write down is not needed.* Where the cost of finished goods exceeds their NRV, the materials shall be written down to NRV.

Scenario 2: Write-down required:

The price of the serum drops sharply. The replacement cost of the serum (a proxy for NRV) is now only Kshs 700, indicating the final vaccine will likely not recover the original Kshs 1,000 material cost.

Dr. Expense: Inventory Write-Down- Kshs 300
Cr. Inventory (Raw Materials)- Kshs 300

10. Subsequent Measurement

Net Realizable Value is assessed each subsequent period.

11. Reversal of Write-Downs

A previous write-down shall be reversed when:

- The circumstances causing the write-down no longer exist, or
- There is clear evidence of an increase in NRV due to changed economic conditions.

If the situation improves, a previous write-down can be reversed, up to the amount originally written off.

Example 14: Reversal of Write- Downs

The serum from Example 13 (carried at Ksh 700 NRV) is still held for the next year. If the price of serum increases back to Ksh 1,200. The accounting entry shall be as follows:

Reversal Calculation:
The reversal is limited to the original write-down amount of Ksh 300. The new carrying amount becomes Ksh 1,000 (the original cost).

Journal Entry:
Dr. Inventory – Kshs 300
Cr. Expense: Reversal of Inventory Write-Down (or a reduction of the current period's inventory expense) - Kshs 300
(The inventory cannot be revalued above its historical cost).

The amount of any reversal shall be:

Limited to the amount of the original write-down, and
Result in a carrying amount equal to the lower of cost and revised NRV.

12. Guidelines on Distributing Goods at No Charge or for a Nominal Charge

This guideline applies to inventories held by public sector entities where:

- The primary purpose is not revenue generation, and
- Goods are distributed free of charge or for a nominal amount.

Recognition/Valuation of such Inventory: Lower of cost or Current Replacement Cost; this is the cost the entity would incur to acquire the asset on the reporting date.

Scenario	Valuation Basis	Procedure & Consideration
Goods available in the market	Current purchase price or acquisition cost for identical/similar items.	Source recent supplier quotes, catalog prices, or purchase orders reflecting current market conditions.
Goods NOT readily available in the market	Estimated replacement cost.	Estimate based on: • Cost to produce internally (materials, labor, overhead). • Cost of closest alternative that delivers equivalent service potential. • Use of indices or professional appraisal where appropriate.

Example 15: Current Replacement Cost

When a government entity acquires goods intended for free distribution, they are initially recorded at cost. The Disaster Management Department buys 10,000 Nets for Kshs 50,000 (Ksh5/Net) to distribute free of charge during floods.

Journal Entry: (At the Disaster Management Department)
Dr. Inventory - Emergency Supplies – Kshs 50,000
Cr. Accounts Payable / Cash – Kshs 50,000

Write-Down to Current Replacement Cost

If the cost to replace those Nets in the market drops, or if they are damaged /obsolete, you must write them down to the **Current Replacement Cost**.

Example Continued…

Six months later, the nets are still in the warehouse. Due to a global surplus, the cost to acquire the same Nets has dropped to Kshs 3 each. The nets are now valued at Kshs 30,000 (replacement cost).

Journal Entry:

Dr. Expense: Loss on Inventory (Reduction in price) Ksh20,000
Cr. Inventory - Emergency Supplies - Ksh 20,000

(The inventory is now carried at its replacement cost of Ksh*30,000, reflecting its current service value i.e what the nets would be replaced at since they are held for distribution and not for sale).*

Distribution at No Charge (The Transfer Expense)

When the goods are finally handed out to the public by the Disaster Management Department, the carrying amount is recognized as an expense.

Example 16: Distribution at no charge

The Authority distributes all 10,000 Nets (now valued at Kshs 3/each).

Journal Entry:
Dr. Transfer Expense / Distribution Expense- Kshs 30,000
Cr. Inventory - Emergency Supplies – Kshs 30,000

Change in Purpose

When the purpose for which inventory is held changes (e.g., from free distribution to sale), the inventory shall be: Revalued in accordance with the standard inventory measurement requirements (lower of cost and net realizable value).
The valuation shall occur on the date of the change in use.

Example 17: Change in Purpose

If the entity decides to stop giving the Nets away for free and instead decides to sell them to recover costs, the valuation method must switch from **cost/Replacement Cost** back to the standard **NRV/Cost** rules.

The Authority decides to sell the Nets to a private company for Kshs 4 each.

Since the "purpose" has changed to a commercial sale, one must re-evaluate under standard NRV rules. If the expected selling price (Kshs 4) is higher than the current carrying amount (Kshs 3), no immediate adjustment is needed, but the asset is no longer measured by its "service potential/replacement cost".

13. Recognition as an Expense

Standard Recognition: Inventory carrying amounts are recognized as an expense in the same period as the related revenue.

Recognition Upon Sale
When goods are sold, the inventory cost is expensed (as Cost of Goods Sold) in the same period the revenue is recorded.

Example 18: Recognition as an expense

Receipt Goods received note

Dr. Inventory
Cr. Payable- Supplier/Cash

Issues of inventory

Dr Cost of Sales
Cr Inventory

Sale of Inventory

Dr. Customer
Cr. Sales/Revenue

For public entities providing services (like a government audit or testing lab), the inventory used is expensed when the service is rendered.

Example 19: Provision of Services

A Water Company uses Kshs 500 worth of chemical reagents to perform a water safety test for a client.

Journal Entry:

Dr. Water Testing Expense - Kshs 500
Cr. Inventory - Reagents - Kshs 500

Non-Revenue Transfers: If there is no revenue (e.g., distribution of goods at no cost), the expense is recognized when the goods are distributed or services are rendered, in accordance with **IPSAS 48 (Transfer Expenses)**.

If goods are distributed for free (a non-exchange transaction), the expense is recognized when the goods are handed over.

Example 20: Recognition of the expense of goods distributed at no cost.

The Ministry of Education distributes KShs 50,000 worth of books to public schools.
Show the journal entries for the transaction.

Journal Entry:
Dr. Transfer Expense (Textbooks) — Kshs 50,000
Cr. Inventory - Textbooks — Kshs 50,000

14. Further Comprehensive Examples

Example 1: Cereals Produce Agency

Scenario 1.
Agency ABC Purchases 10,000 bags of maize from local farmers at Ksh 2,500 per 50kg bag. It incurs transport costs of Kshs 500,000 to bring the maize to its conventional stores. Additional costs incurred include insurance of Ksh 1,000,000, software development costs of Ksh 300,000, and commissions to marketing staff of Ksh 100,000.

Required
Determine the cost per bag of maize and elaborate on the accounting entries

Solution
. purchase cost-10,000 bags *2,500=25,000,000
. Transport cost =500,000
. Total cost = purchase price add transport costs = 25,000,000 + 500,000 = 25,500,000
Administrative overheads (insurance and software development costs), Selling and distribution costs (commissions to the marketing team) are **not** included as per IPSAS 12.

Accounting entries to record the initial purchase

DR: Inventories (Maize stock) Ksh 25,500,000
CR: Trade payables/ Bank Ksh 25,500,000

Scenario 2.
Agency ABC Sells 4,000 bags from this batch to millers at Ksh 3,000 per bag on credit.

Question
Determine the cost of sales, value of closing stocks after the sale, and elaborate on accounting entries.

Solution
Selling price 4,000 *3,000 = Ksh 12,000,000
Cost of sales using FIFO: We expense the cost of the specific bags sold.
=25,500,000/10,000 bags=Ksh 2,550 per bag
Hence cost of sales =Ksh 2,550*4000 bags=Ksh 10,200,000

Accounting entries to remove inventory and recognize the cost of sales expense

Dr: Cost of sales Kshs 10,200,000
Cr: Inventories Kshs 10,200,000
Remaining inventory is valued at Kshs 25,500,000 less Kshs 10,200,000 =
Ksh 15,300,000 for 6,000 bags, i.e., Kshs 2,550 per bag.

Accounting entries to record the sale of 4,000 bags of maize at Kshs 3,000 per bag

Dr. Receivables (Millers) Kshs 12,000,000
CR. Revenue from the sale of inventories Kshs 12,000,000

Scenario 3 - Impairment
At the year end, due to a bumper harvest, the net realizable value (NRV) per bag falls to Ksh 2,200 while Agency ABC still has 6,000 bags.
Determine the value of stocks at year end and accounting entries.

Solution
Current Carrying cost Ksh 15,300,000 (6,000 bags *2550/bag)
Net realizable value = 6,000 bags *2,200 = Ksh 13,200,000
Required write down Ksh 15,300,000 less Ksh 13,200,000 = Ksh 2,100,000

Accounting entries
Dr: Expense /provision Ksh 2,100,000
Cr: Inventories Ksh 2,100,000
The new carrying cost is Ksh 13,200,000 to be reported in the financial statements.

Scenario 4: Reversal of previous write-down
The following year, due to drought, the NRV Per bag rises to Ksh 2,500. The 6,000 bags are still in stock.
Determine the value of the stocks at year-end and show the accounting entries.

Solution
Current Carrying cost Ksh 13,200,000
New NRV =6,000 Bags * 2,500 = Ksh 15,000,000
Original cost Ksh 15,300,000
Reversal amount- the carrying amount can be increased to the lower of the new NRV (Ksh 15,000,000) and the original cost (Ksh 15,300,000), hence we can reverse to Ksh 15,000,000, which is the new ceiling less Ksh 13,200,000 (current value) = Ksh 1,800,000

Accounting entries
Dr Inventories-maize 1,800,000
Cr. Expense for write down 1,800,000
Results is final inventory amount Ksh 13,200,000 +1,800,000 = Ksh 15,000,000

Example 2: Housing Projects

The National Housing Agency (NHA) is a public sector entity mandated to provide affordable housing. During the 2024/25 financial year, the NHA commenced construction of "Project Tulip," comprising 10 identical low-cost housing units intended for sale to civil servants.

The following costs were incurred during the year:

Land Acquisition: (The site for all 10 units). = 2M

1. Site Preparation & Clearing = 0.2M
2. Direct Materials (Cement, steel, timber) = 5M
3. Direct Labor (Contracted masons and engineers) = 3M
4. Variable Production Overheads (Electricity and water for the site) = 0.5M
5. Fixed Production Overheads (Depreciation of construction machinery) = 0.3M
6. Administrative Salaries (Head office staff not involved in the project) = 0.8M
7. Selling and Marketing Expenses = 0.15M

Required: How much is the total cost of the "Project Tulip" inventory calculated in accordance with IPSAS 12?

Solution and Guidance

To arrive at the cost, we sum only the costs of conversion and costs directly related to bringing the houses to their completion. Administrative and selling costs are excluded under IPSAS 12 as they do not contribute to the "location and condition" of the inventory

Cost Component	Included/Excluded	AMOUNT
Land Acquisition	Included (Direct cost)	2M
Site Preparation	Included (Direct cost)	0.2M
Direct Materials	Included (Conversion cost)	5M
Direct Labor	Included (Conversion cost)	3M
Variable Overheads	Included (Indirect production cost)	0.5M
Fixed Overheads	Included (Allocated production cost)	0.3M
Selling and Marketing costs	Excluded	0
Total cost of 10 Houses		11M

Example 3: Entity transitioning from Cash to Accrual Accounting

County Entity X is in Year 2 of its transition to accrual accounting. Under IPSAS 33, the entity has elected to use the three-year relief period for the recognition and measurement of assets.

During the current financial year (Year 2), the following transactions and discoveries occurred regarding inventory:

1. Opening Stock (Historical): The entity identified a stockpile of medical supplies and construction materials purchased in prior years (before the transition began). The original purchase records are missing, and the historical cost is unknown.
2. New Purchases: The entity purchased office stationery for Ksh 5,000,000.
3. Donated Inventory: A development partner donated 1,000 bags of fertilizer for distribution to local farmers. The market value at the date of acquisition was Ksh 3,500 per bag.
4. Damaged Goods: A portion of the office stationery (purchased in item 2) with a cost of Ksh 400,000 was damaged by water. Its net realizable value is now estimated at Ksh 50,000.

Required: Explain how the entity should recognize and measure these items in the Year 2 financial statements in accordance with IPSAS 12 (Inventories) and IPSAS 33.

Suggested Solution

1. Recognition of Historical Inventory (IPSAS 33 Relief) Since the cost of the older inventory is unknown, IPSAS 33 allows the entity to use deemed cost.

- Measurement: The entity should perform a physical stocktake and value these items at their fair value at the date of recognition. This fair value serves as the "deemed cost."
- Accounting Treatment: The initial recognition of this inventory is credited directly to accumulated surpluses/deficits (an opening balance adjustment) rather than to the current year's statement of financial performance, as it relates to prior periods.

2. New Purchases (IPSAS 12 General Rule)

- Measurement: These are measured at cost (purchase price plus any incidental costs to bring them to their current location and condition).
- Accounting Treatment: The Ksh 5,000,000 is recognized as an asset (Inventory) on the Statement of Financial Position. Under accrual accounting, it is only recognized as an expense (Cost of Sales/Inventory Consumed) when the items are actually issued or used.

3. Donated Inventory (Non-Exchange Transaction)

- Measurement: Inventory acquired through a non-exchange transaction is measured at its fair value as at the date of acquisition.
- Accounting Treatment: Debit Inventory Ksh 3,500,000 and Credit Revenue from Non-Exchange Transactions (Donations) Ksh 3,500,000.

4. Measurement of Damaged Goods (Lower of Cost and NRV)

- Requirement: IPSAS 12 requires inventory to be measured at the lower of cost and net realizable value (NRV).
- Adjustment: The cost (Ksh 400,000) exceeds the NRV (Ksh 50,000). Therefore, the inventory must be written down by Ksh 350,000.
- Accounting Treatment: The Ksh 350,000 write-down is recognized as an expense in the Statement of Financial Performance for Year 2.

Example 4: A public sector agency handling Third Party Inventory

1. A public sector entity:
2. purchases and resells goods to the public at a small margin.
3. acts as a distribution agent for a third party, holding and transporting inventory across the country for a fee. The risks and controls of these third-party goods remain with the principal.

How should the agency account for these two categories of inventory in its financial statements in accordance with **IPSAS 12**?

Suggested Solution

Under IPSAS 12, the primary criterion for recognizing an asset as inventory is that the entity must have control over the resource and expect future economic benefits or service potential to flow to the entity.

1. Purchased Inventory for Resale (Own Inventory)

- **Recognition:** Since the agency buys these goods to sell them (at a margin), it has physical control and bears the risks and rewards (such as obsolescence or price changes). These must be recognized on the Statement of Financial Position as Inventories.
- **Measurement at Recognition:** These should be initially measured at cost. This includes purchase price, import duties, and transport costs directly attributable to their acquisition.
- **Subsequent Measurement:** Under IPSAS 12, because these are held for sale in a commercial-type transaction (at a margin), they are measured at the lower of cost and net realizable value (NRV).
- **Expense Recognition:** When the goods are sold, the carrying amount is recognized as an expense (Cost of Sales) in the period the related revenue is recognized.

2. Third-Party Inventory (Agency Relationship)

- **Recognition:** This category does not meet the agency's definition of inventory. Since the "risk and control" remains with the principal, the agency is merely a bailee or service provider.
- **Accounting Treatment:** These goods should not appear on the agency's Statement of Financial Position. Including them would overstate the agency's assets and liabilities.
- **Revenue Recognition:** The agency should recognize supply chain fees as revenue only when the service is rendered.
- **Disclosure of third-party inventory:** While the goods are not recognized as assets, the agency should disclose the existence of these third-party goods in the notes to the financial statements where the volume is significant for the operational context.

15. Disclosures

An entity having Inventory in the financial statements shall disclose the following:

(a) The accounting policies adopted in measuring inventories, including the cost formula used;
(b) The total carrying amount of inventories and the carrying amount in classifications appropriate to the entity;
(c) The carrying amount of inventories carried at fair value less costs of disposal;
(d) The amount of inventories recognized as an expense during the period;
(e) The amount of any write-down of inventories recognized as an expense in the period;
(f) The amount of any reversal of any write-down that is recognized in the statement of financial performance in the period;
(g) The circumstances or events that led to the reversal of a write-down of inventories; and
(h) The carrying amount of inventories pledged as security for liabilities.

16. Frequently Asked Questions.

1. **What exactly qualifies as "Inventory" under IPSAS 12?**

In the public sector, inventories are assets held for sale or distribution in the ordinary course of operations. This includes:

- Consumable supplies: Ammunition, maintenance materials, and office supplies.
- Strategic stockpiles: Energy reserves (e.g., oil) or emergency food supplies.
- Goods for distribution: Books for schools or vaccines for a health clinic.
- Work-in-progress: Educational course materials currently being developed.

2. **How is inventory initially measured?**

Inventory is initially measured at cost. This includes the purchase price, import duties, transport, and handling costs. However, if you acquire inventory through a non-exchange transaction (e.g., a donation of medical supplies), the initial cost is measured at its fair value as of the date of acquisition.

3. **What is the "Lower of Cost and Net Realizable Value" rule?**

Generally, inventories are measured at the lower of cost and Net Realizable Value (NRV). NRV is the estimated selling price minus the costs of completion and sale. This ensures that assets aren't carried at more than what you expect to recover from their sale or use.

4. **When do I use "Current Replacement Cost" instead of NRV?**

This is a key public sector difference! If you hold inventory for distribution at no charge or for a nominal charge (like free textbooks), you measure it at the lower of cost and current replacement cost. Since there is no "sale price," NRV doesn't apply; instead, you look at what it would cost to replace that service potential today.

5. **Are "Strategic Stockpiles" considered Inventory or Property, Plant, and Equipment (PPE)?**

Under IPSAS 12, strategic stockpiles (like grain or fuel reserves held for emergencies) are specifically classified as inventory. Even though they might be held for a long time, their purpose is to be "consumed" during an event, rather than used continuously like a building or machine.

6. **Which cost formulas are allowed under IPSAS 12?**

You can use:

- Specific Identification: For items that are not ordinarily interchangeable.
- FIFO (First-In, First-Out): Assumes the oldest items are used first.
- Weighted Average Cost: Calculates a weighted average cost across all similar items.

7. How should a service provider account for inventory?

If a public entity "sells" services (like an audit or a training course), the inventory includes the costs of the service (labor and other overheads) for which the entity has not yet recognized the related revenue.

8. What happens if the value of inventory recovers after a write-down?

If the circumstances that caused a write-down (to NRV or replacement cost) no longer exist, you can reverse the write-down. The new carrying amount is the lower of the original cost and the revised NRV. This reversal is recognized as a reduction in the inventory expense for that period.

9. When is inventory recognized as an expense?

The carrying amount is recognized as an expense:

- When the inventories are **sold** (matching the revenue).
- When the inventories are **distributed** (for free/nominal goods).
- When the service is **rendered**.
- Immediately, if there is a write-down or a total loss of the goods.

10. What are the key disclosure requirements?

Entities must disclose:

- The accounting policies used
- The total carrying amount and the amount in classifications (e.g., raw materials vs. finished goods).
- The amount of inventories recognized as an expense during the period.
- The amount of any write-downs or reversals of write-downs.

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Disclaimer:

This guideline has been prepared to guide public sector entities in Kenya in implementing IPSAS 12. However, it does not serve as an advisory, complete standard documentation, or a replacement for IPSAS 12. For further engagements on IPSAS 12, reach out to us at acctstandards@psasb.go.ke