सत्यमेव जयते

DATA FOR DEVELOPMENT

Government of India
Ministry of Statistics and Programme Implementation
National Statistics Office
National Accounts Division

GUIDELINE FOR COMPILATION OF ESTIMATES OF DISTRICT DOMESTIC PRODUCT (DDP)

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NATIONAL ACCOUNTS DIVISION
NATIONAL STATISTICS OFFICE
MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION

National Sample Survey
Celebrating 75 years of NSS
Data for Development

नरेन्द्र कुमार संतोषी
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आज़ादी का अमृत महोत्सव

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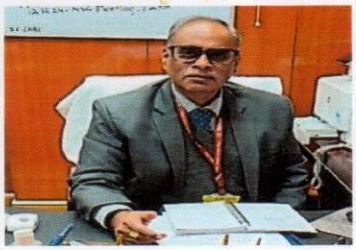

FOREWORD

The revision of the base year of National and Regional Accounts to 2022-23 marks an important step towards strengthening the statistical framework for measuring economic activity across the country. In this context, compilation of District Domestic Product (DDP) estimates assumes greater significance in providing granular insights into district-level economic structure, growth patterns and regional disparities, thereby supporting decentralized planning and evidence-based policymaking.

At present, most States/UTs compile DDP estimates using varying methodologies and allocation indicators, primarily based on top-down approaches. To ensure greater uniformity, comparability and consistency with the revised Gross State Value Added (GSVA) methodology under the new base year 2022-23, the Ministry of Statistics and Programme Implementation (MoSPI), through the National Statistics Office (NSO), has prepared Uniform Guideline for estimation of DDP.

The Guideline, prepared based on the recommendations of the Sub-Committee on Regional Accounts under ACNAS, provide a standardized conceptual and methodological framework for compilation of district-level estimates across sectors. They emphasize adoption of bottom-up approaches wherever feasible, supported by reliable administrative and survey data, while also prescribing suitable top-down allocation methods where district-level information is not available.

The Ministry remains committed to providing continuous technical guidance and support to States and Union Territories in strengthening district-level statistical systems and improving the quality of regional accounts.

I would also like to place on record my deep appreciation for the dedicated efforts of all officers and staff of State Coordination Unit of National Accounts Division (NAD), MoSPI, under the guidance of Shri Siddhartha Kundu, Additional Director General (NAD), for timely release of this publication.

(N.K. Santoshi)

New Delhi
03rd June, 2026

DATA FOR DEVELOPMENT
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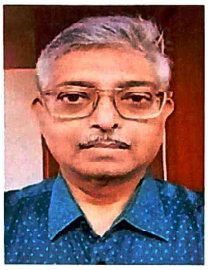

MESSAGE

The preparation of reliable and comparable District Domestic Product (DDP) estimates assumes increasing importance in the context of decentralized planning, balanced regional development and evidence-based policymaking. Recognizing this need, the Ministry of Statistics and Programme Implementation (MoSPI) has undertaken a comprehensive review of the methodology for compilation of DDP estimates in line with the revised base year series of National Accounts Statistics, 2022–23.

The revised framework seeks to ensure greater harmonization and consistency in the compilation of district-level estimates across States and Union Territories. The methodology has been aligned with the revised Gross State Value Added (GSVA) framework and incorporates updated concepts, improved data sources and refined estimation procedures consistent with international standards of national accounting.

The guideline contained in this document provide detailed sector-wise methodologies covering the Primary, Secondary and Tertiary sectors. Emphasis has been placed on the use of reliable district-level administrative and survey-based data sources through bottom-up approaches wherever feasible. In sectors where such information is not available, suitable allocation procedures have been prescribed to derive consistent and comparable estimates.

The methodology also incorporates several improved and contemporary data sources such as the Annual Survey of Industries (ASI), Annual Survey of Unincorporated Sector Enterprises (ASUSE), Periodic Labour Force Data (PLFS), Goods and Service Tax (GST) data, Livestock Census and various departmental administrative databases, thereby enhancing the robustness, transparency and quality of district-level estimates.

I am confident that this guideline will serve as a useful reference for States and Union Territories in strengthening the compilation of District Domestic Product estimates and in improving their comparability with State and National Accounts.

I would like to place on record my appreciation for the dedicated efforts and valuable contributions of the officers and officials of the State Coordination Unit of National Accounts Division (NAD), MoSPI, in preparation of this document. The guidance and technical leadership provided by Dr. Subhra Sarker, Deputy Director General (NAD), MoSPI, have been instrumental in bringing out this publication.

(Siddhartha Kundu)

New Delhi
03rd June, 2026

ACKNOWLEDGEMENT

This Uniform Guideline for Estimation of District Domestic Product (DDP) presents the conceptual framework, methodology and recommended procedures for compilation of district-level estimates consistent with the revised Gross State Value Added (GSVA) series under the base year 2022-23. The Guideline have been prepared based on inputs and recommendations received from the Sub-Committee on Regional Accounts under ACNAS, State/UT Directorates of Economics and Statistics (DESs), line Ministries/Departments and other stakeholders.

The Ministry gratefully acknowledges the valuable cooperation, suggestions and technical support extended by all concerned organizations and institutions during the preparation of these Guideline and looks forward to their continued support in strengthening the system of regional accounts and district-level statistics in the country.

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CONTENT

INTRODUCTION

District Domestic Product (DDP) estimates are statistical measures used to calculate the total value of goods and services produced within a district over a specific period. They serve as a disaggregated counterpart to the Gross State Domestic Product (GSDP) at State level and the Gross Domestic Product (GDP) at the national level, providing granular insights into the local economic structure and performance of districts. They are useful for comparing economic performance between districts, identifying backward regions and planning local development programs. Accurate and reliable DDP estimates support effective policy-making and promote balanced regional growth.

In recent years, DDP has gained importance as a key component in assessing regional human development, being one of the three core indicators for computing the Human Development Index (HDI).

Currently, 26 States/UTs (including Chandigarh, where the Union Territory and the city constitute a single district, making the GSDP and DDP estimates identical) are preparing DDP estimates mainly using Top-down Approach through allocation using suitable indicator available at the district level. However, the indicators used vary across States and across sectors, which limits the comparability of DDP estimates. Therefore, there is a need to formulate uniform guideline that provide a conceptual framework for estimating DDP, following a bottom-up approach wherever feasible. Accordingly, States may strengthen and augment their data sources and indicators for estimating DDP.

Guideline for estimating DDP under the new series with base year 2022–23 have been prepared and are presented below. The guideline suggests alternative indicator or methods of estimation for a number of sub-sectors, where the first indicator/ method suggested is the recommended one for estimation purposes. The alternative method may be adopted only in cases where the recommended method cannot be implemented due to non-availability of requisite.

Methodology for Estimation of DDP

The estimates of District Income can conceptually be prepared by adopting two approaches, namely, income originating and income accruing. In the Income Originating approach, the measurement corresponds to income originates with reference to the factors of production located within the geographical boundaries of a district. It is the income originating as a result of the utilization of the physical assets and the labor force of the district, even though some of the income might flow to residents outside the district.

The income accruing approach relates to the income accruing to the normal residents of a district. In other words, it is the income received by the residents of a region, even though some of it might have originated outside the region. Since this measure the income that becomes available to the residents of a district, it provides a better measure of the welfare of the residents of the district. Therefore, for a realistic measurement of income received, account needs to be

taken of net inflow/outflow of income between districts. But in an open economy like that of a district in this country, it is very doubtful whether such an estimate can be prepared unless special effort is made for the collection of this data. Owing to the absence of reliable data on income accruing to residents of the districts, the income-originating approach is being followed.

Further, for estimating the District Domestic Product, the economy is divided into 11 broad industries (i) Agriculture & Allied, (ii) Mining, (iii) Manufacturing, (iv) Electricity, Gas, Water Supply & Other Utility Services, (v) Construction, (vi) Trade, Repair, Hotel & Restaurants, (vii) Transport, Storage, Communication & Services related to Broadcasting (viii) Financial Services (ix) Real Estate, Ownership of Dwelling & Professional Services (x) Public Administration and Defence, and (xi) Other Services.

Further, there are three possible methods described below that can be used for the estimation of District Domestic Product for these 11 broad industries, according to their suitability and data availability.

- **Top-Down Approach**

In the top-down approach, State-level aggregates are first estimated and then distributed among districts using suitable indicators. This method can be used when district-level data are not directly available. It ensures consistency with higher-level estimates but may not fully capture local variations.

- **Bottom-Up Approach**

The bottom-up approach involves direct estimation at the district level by collecting data from households, enterprises/establishments and administrative records within each district. District estimates are then aggregated to obtain State totals. This approach better reflects local economic conditions but requires detailed and reliable district-level data.

- **Mixed Approach**

The mixed approach is a combination of top-down and bottom-up methods. For sectors where, reliable district-level data are available, the bottom-up method is used while for other sectors State-level estimates are apportioned to districts using the top-down approach. This method balances accuracy and data availability and is commonly used in District Domestic Product (DDP) estimation.

Computation of GDDP, NDDP and District Income

Gross District Domestic Product (GDDP) and Net District Domestic Product (NDDP) are derived as follows:

(i) Estimation of Gross Value Added (GVA) for each economic activity/sub-sector at the district level.

Gross Value Added (GVA)=GVO−IC

(ii) Aggregation of sector/sub-sector-wise Adjusted GVA estimates to derive Gross District Value Added (GDVA):

Gross District Value Added (GDVA) =∑GVAi (adjusted)

(iii) Estimation of Gross District Domestic Product (GDDP) by adding Taxes on Products and deducting Subsidies on Products from GDVA:

GDDP = Gross District Value Added (GDVA) + Taxes on Products – Subsidies on Products

(iv) Estimation of Consumption of Fixed Capital (CFC) for the respective activities/sub-sectors.

(v) Derivation of Net Value Added (NVA) for each activity/sub-sector:

Net Value Added (NVA)=GVA−CFC

(vi) Aggregation of activity/sub-sector-wise NVA estimates to derive Net District Value Added (NDVA):

Net District Value Added (NDVA) = ∑NVAi

(vii) Estimation of Net District Domestic Product (NDDP) by adding Taxes on Products and deducting Subsidies on Products from NDVA:

NDDP = Net District Value Added (NDVA)+ Taxes on Products – Subsidies on Products

The Per Capita District Domestic Product is a measure of average income within District per person in a population. It is usually used to measure the standard of living of a District. It is calculated by dividing the total aggregate income from all the sources by the district's total mid-year projected population. The population figures can be derived from the 'Projection of District-Level Annual Population by Quinquennial Age-Group and Sex from 2012–2031 in India published by the International Institute for Population Sciences, with adjustments made using the mid-year population at the respective State level (Source: MoH&FW).

Sector-wise methodology for compilation of estimates of District Domestic Product

The DDP may be compiled for Primary, Secondary and Tertiary sectors, consistent with the classification followed in the National Accounts.

Primary Sector:

- Agriculture and Allied Activities
- Mining and Quarrying

1. Agriculture and Allied Activities

a) The industry group 'Agriculture & Allied' consists of (i) Crop sector; (ii) Livestock sector; (iii) Forestry; and (iv) Fishing & Aquaculture. As per NIC 2008, the Agriculture and Allied sector is covered under Section A, comprising Division 01 (Crop and animal production, hunting and related service activities), Division 02 (Forestry and logging), and Division 03 (Fishing and Aquaculture) with exceptions such as "01632 Cotton ginning, cleaning and bailing" is considered under manufacturing of textile and not in crop sector. Accordingly, activities such as ornamental plants, ornamental fish, orchards, plantations, Gauchar land, social forestry, riverbed agriculture etc. are covered under the relevant divisions/classes of Section A. In addition, crop sector also includes operation of government irrigation system.

The production approach may be used to estimate Gross District Value added (GDVA) of primary sector including Crops (agriculture and horticulture), forestry, Livestock, Fisheries and Mining & Quarrying. This method relies on production data and corresponding prices to calculate the gross value added (GVA) for each sector. District-wise production data needs to be collected from State Agricultural, Animal Husbandry departments, Fisheries and Forest department. Additionally, secondary data from livestock censuses and surveys conducted by MoSPI and other agencies provide supplementary insights into production trends.

Estimation Approaches for Output and Input in Crop Sub-Sector

1.1 Crop Sub-Sector

The different groups of crops under the crop sub-sector (1) cereals, (2) pulses, (3) oilseeds, (4) sugar, (5) fibers, (6) indigo, dyes and tanning material, (7) drugs and narcotics, (8) condiments & spices, (9) fruits & vegetables, (10) floriculture, (11) other crops, (12) by-products, and (13) crops produced in kitchen garden.

1.1.1 Crops for which reliable district-wise data on area, production and prices are available: In such cases, district-wise value of output for each crop may be compiled by using district-wise production and producer's price called farm harvest prices.

1.1.2 Crops for which though district-wise production is available, corresponding district-wise prices are not available: For this category of crops, district-wise value of output may be computed by using district-wise production and neighboring district prices, if available. In case neighboring district prices are also not available then State average prices may be utilized.

1.1.3 Crops for which district-wise data, both on production and prices, are not available but area figures are available: In such cases, the district-wise value of output for these crops may be compiled by multiplying the State level value per hectare of the specific crop by the corresponding district level area under that crop.

1.1.4 Miscellaneous and unspecified crops for which production and price data are not available even at the State level but district-wise area is available: In such cases, the value

of output may be worked out by multiplying the district-wise area by the State level value per hectare of similar crops.

1.1.5 By Product: The value of output may be estimated by multiplying the district-wise area under cultivation by the corresponding State level Value Per Hectare (VPH). Wherever feasible, data from Cost of Cultivation Survey (CCS) may be utilised for estimating district-wise Value Per Hectare (VPH); otherwise, estimates from the latest available studies may be used. In cases where district-wise VPH is not available either from CCS or other studies, the State level ratios, whether based on output or area, may be uniformly applied across all districts for estimation of VPH.

Estimation of Value of Inputs in Crop Sub-Sector

The deductible inputs are same as used at the State level viz. i) Seed ii) Chemical Fertilizers iii) Organic Manure iv) Feed of Livestock (Male Adult Buffalo and Cattle) v) Pesticides and Insecticides vi) Diesel Oil Consumption vii) Electricity Charges viii) Irrigation Charges ix) Market Charges for Crops x) Repairs and Maintenance of Fixed Assets for crop sector (xi) FISIM.

For estimating the value of these input items at the district level, the estimates may either be compiled directly or the State-level estimates may be apportioned among the districts using appropriate distribution indicators/proportions, as indicated below:

1.1.6 Seed: Wherever district-level seed rates are available from the Cost of Cultivation Survey (CCS), the value of seeds used as inputs may be estimated using the per hectare seed value and the area sown under the respective crops in that district. In cases where such district-level information is not available, the State-level seed value may be apportioned across districts using district-wise and crop-wise gross cropped area.

1.1.7 Chemical Fertilizers: District-wise quantity of chemical fertilizers used and respective prices from Fertilizers Association of India (FAI) may be used to directly estimate the value of input of chemical fertilizers.

1.1.8 Organic Manure: The district-wise value of output of dung /organic manure may be directly estimated by multiplying the animal category-wise evacuation rate with the district-level population of cattle, buffalo, goat and sheep as available from the Livestock Census. The Livestock Census is conducted once every five years. Compound Annual Growth Rates (CAGR) derived from two latest Livestock Censuses may be used to estimate the district-level livestock population for the years till next livestock census is available.

1.1.9 Feed of livestock for crop sector: The feed rate per animal per day, as being used for calculation of feed of livestock at State level, may be multiplied with district-wise number of adult male cattle and buffalo (as per their use) to arrive at feed of livestock for crop sector.

a. For distribution of feed of livestock between crop and livestock sub-sectors, data for population of Adult Buffalo (Male) and Adult Cattle (Male) as per their use as available from Livestock Census published by Ministry of Fisheries, Animal Husbandry and Dairying, GOI may be used.
Classification of adult male cattle and buffalo as per use:

Category (i): Used for breeding only
Category (ii): Used for agriculture only
Category (iii): Used for agriculture & breeding only
Category (iv): Used for Bullock cart / Farm operation
Category (v): Others

b. Bifurcation of adult male cattle and adult male buffalo population in crop and livestock sub-sectors will be done as follows:

$$For\ livestock\ sector:\ category\ (i) + category\ (iii) * \frac{category\ (i)}{sum\ of\ categories\ (i) and\ (ii)}$$

$$For\ \ crop\ sector: category\ (ii) + category\ (iv) + category\ (v) + category\ (iii) * \frac{category\ (ii)}{sum\ of\ categories\ (i) and\ (ii)}$$

1.1.10 Pesticides and Insecticides

a. Where district-wise data on consumption of pesticides and insecticides are available from the State Agriculture Department, the same may be used. Alternatively, State-level value may be allocated to districts in proportion to the area under crops cultivated in each district.

b. Using data from the Cost of Cultivation Survey (CCS), the usage of pesticides and insecticides for major crops could be assessed and the state-level value could thereafter be allocated to districts in proportion to the area under those crops in each district. For remaining amount of input value of pesticides and insecticides can be distributed among districts based on area under non-ccs crop in each district.

1.1.11 Diesel Oil Consumption: State input value of diesel oil consumption may be allocated based on the district wise number of tractors obtained from the Offices of State Transport Commissioners/UT Administrations and diesel pumps sets used in each district from the Department of Minor Irrigation. While calculating district-wise no. of tractor, tractors older than 15 years of age to be excluded. Alternatively, State level value of consumption of diesel oil by tractors and diesel engines may be distributed to districts according to district-wise gross cropped area.

1.1.12 Electricity Charges: District-wise data on consumption of electricity for agricultural purposes, available from the State Electricity Distribution Company along with the applicable per unit rate, may be used for direct estimation of electricity charges at the district level.

1.1.13 Irrigation Charges: The district-wise irrigation charges, as collected from the District Irrigation Department/ Water Resources Department Office may be used for this purpose. In the absence of such data, the State level value may be distributed to the districts in proportion to the area irrigated by Government canals.

1.1.14 Market Charges: It is suggested one-time study may be conducted by the States/UTs from regularized market in each district to arrive at market charges for the crops being cultivated at the district level. Items to be covered under market margin (in Rs. per tonne) are as follows:

a) Weighment – Palledari
b) Cleaning/thrashing
c) Transport cost
d) Commission to middlemen (to be included **only if** farmers are charged) – In some State/UTs, producer sellers are paying the commission while in some cases, the commission is charged from the traders. This item to be reported under market margin only if producer sellers/farmers are bearing this cost.
e) Stitching and bagging
f) Loading/Unloading
g) Milling charges (if the agriculture commodity require milling by the farmer/producer before selling at the market)

Alternatively, State-wise rate of market margin may be multiplied with district wise production of crop to arrive at district level market charges.

1.1.15 Repair and Maintenance of fixed assets: District-wise expenditure data on "minor repair and maintenance of machinery and equipment used in crop production", as available from the 70th Round of the NSS (All-India Debt and Investment Survey (2013), may be used for estimation in the crop sector. Alternatively, District-wise GVO of Crop sub-sector may be used as an indicator for allocation.

1.1.16 FISIM: State level value of FISIM may be distributed on the basis of total value of output of the crop sub-sector of the district or by the district-wise agricultural credit from schedule commercial banks as available from RBI.

After evaluation of district-wise input values, it should be adjusted using the ratio of State Input value / sum of district Input value.

$D_i = d_i * S / \Sigma d_i$ where, d_i = ith district estimate
S = State Estimate
D_i = Adjusted ith district estimate
Σd_i = Sum of all district estimate

1.1.17 Gross Product from Operation of Government Irrigation System: GVA of Gross Product from Operation of Government irrigation is added to the Gross Value of Output (GVO)

of Crop Sub-Sector after deducting the value of inputs. The State level value of contribution by Government Irrigation system may be distributed among the districts in proportion to the district-wise area irrigated by Government Canals.

1.2 Livestock Sub-Sector

For estimating value of output from livestock, the livestock products are divided into 7 broad groups viz. (i) milk (ii) meat and meat by products (iii) eggs (iv) wool and hair (v) dung (vi) Silk worm cocoons & honey (vii) Increment in livestock.

Estimation of Value of output of Livestock Sub-Sector

The valuation of livestock output may be carried out by multiplying the quantities of production with the corresponding producer's prices. Alternatively, the State-level value of output will be apportioned among the districts using the best available indicators.

1.2.1 Milk: District-wise milk production from Integrated Sample Survey (ISS) of the State Animal Husbandry Department and district prices may be used to directly estimate the GVO for milk. GVO for milk production uses aggregate milk from Cows, Buffaloes, Goats and Camels.

1.2.2 Meat Products: Gross Value of Output (GVO) of Meat Products (Buffalo, Sheep, Goat and Pig) may be directly estimated by combining district-level production data with corresponding district level meat product prices.

1.2.3 Meat by Products: Animal-wise Meat by- product is estimated as percentage of Value of Meat at the State level. The same percentage may be used for estimation of meat by-product at district level. Alternatively, the State level estimated Gross Value of Output (GVO) may be distributed among the districts in proportion to the number of animals in each category separately.

1.2.4 Wool: Gross Value of Output (GVO) of wool may be estimated directly using wool production from Department of Animal Husbandry & Dairying/Directorate of Animal Husbandry of the respective State and corresponding prices.

1.2.5 Egg: Gross Value of Output (GVO) of eggs may be estimated directly by multiplying the District level data on Eggs production from Department of Animal Husbandry & Dairying/Directorate of Animal Husbandry of the respective State and corresponding prices.

1.2.6 Dung: Gross Value of Output (GVO) of Dung at District level may be estimated directly by multiplying the Animal category-wise evacuation rate by district level population of cattle, buffalo, goat and sheep and the respective prices available at district level.

1.2.7 Silk Worm Cocoons & Honey: State level value of output of silk worm cocoons may be distributed to district based on district-wise production of raw silk available in Seri-States of India 2024, published by Central Silk Board, Ministry of Textiles, Government of India.

For output of Honey, Production and prices data may be collected from State Directorate of Horticulture.

1.2.8 Increment in Livestock: District-wise increment in livestock for each category of animal/poultry may be estimated as done at the State level by using inter census growth rate and these may be evaluated by corresponding district prices. After evaluation of district-wise increment, it should be adjusted using the ratio of State increment/ sum of district increment.

Estimation of Value of input under Livestock Sub-Sector

1.2.9 Feed of Livestock: District-wise value of feed of livestock for livestock sub-sector may be directly estimated by multiplying animal category-wise feed rate per animal by district livestock population. District-wise feed of livestock for crop sectors is then subtracted from district-wise feed of livestock thus calculated to arrive at district-wise feed of livestock for livestock sector.

1.2.10 Market Charges: District level market charges may be arrived at multiplying district wise slaughtering charges per animal and district-wise estimated number of animals slaughtered covering Cattle, Buffalo, Sheep, Goat and Pig.

1.2.11 Repair & Maintenance of Fixed Assets and Operational Cost: State-wise input value of Repair & Maintenance of Fixed Assets and Operational cost may be allocated to districts based on information available on Average cost of Repair and Maintenance on (i) building, barns & animals, sheds; (ii) livestock: working/breeding cattle& buffaloes and (iii) livestock: egg-laying ducks and hens from 70th Round of NSS All India Debt and Investment Survey (AIDIS), 2013.

1.3 Forestry & Logging Sub-Sector

The economic activities covered under this sector include (i) forestry (e.g., planting and conservation of forests, gathering of forest products, charcoal burning carried out in the forests), (ii) logging (e.g., felling and rough cutting of trees, hewing or rough shaping of poles, blocks etc.) and transportation of forest products to the sale depots/assembly centers and, (iii) farmyard wood (industrial wood and fuel wood collected by the primary producers from trees outside regular forests).

The forest products are classified into two broad groups viz., (a) major products comprising industrial wood (timber, Round wood, match and pulpwood) and fuel wood (firewood and charcoal wood) and (b) Non Timber Forest Products (NTFP) formerly known minor products comprising a large number of wild growing forest material such as bamboo, fodder, lac, honey, resin, gum, tendu leaves, cork, balsams, vegetable hair, eelgrass, acorns, horse chestnuts, mosses, lichens etc. Production of field crops (Jhum cultivation etc.) and extraction of minor and major minerals in forests are included in agriculture and mining sectors respectively.

Estimation of Gross Value of Output (GVO) for Major Forest Produce

1.3.1 Industrial Wood or Timber from Forest: The production and prices of timber are available at the district level and may be collected from State Forest Dept.

1.3.2 Industrial Wood from Trees Outside Forest: In case of Industrial wood from Trees Outside Forest, district-wise value of output may be obtained by allocating State level estimates to the district in proportion to district-wise area under Miscellaneous Tree Crops, Groves.

1.3.3 Fuelwood: State level value of Firewood/Fuelwood may be allocated to the districts on the basis district-wise consumption of firewood from Household Consumer Expenditure Survey (HCES). In the absence of such data, the State-level estimates may be apportioned among the districts using the proportion of agricultural labourers/workers to total labourers in the respective districts.

Estimation of Value of Output of Minor Forest Produce:

1.3.4 The district-wise value of output may be estimated directly using the district-wise production and prices of different varieties. In the absence of district-wise data, the State level value of minor forest produce may be allocated to districts in proportion to the workers in the forestry sector/ forest area in different districts. State should ensure that land record should be updated and maintained properly.

1.3.5 Fodder from Forest: The Value of roughages consumed by animal at district level will be estimated as 42% of district-wise no. of animals (Cattle, Buffalo, Sheep and Goat) × feed rate (category of animal wise) × price. State-wise share of fodder from forest may be applied on value of roughages consumed by animals at district level.

Estimation of Value of Input for Forestry & Logging Sub-Sector

1.3.6 Repairs, Maintenance and other Operational Costs: State level ratio may be utilised for working out district-wise estimates of repair, maintenance and other operational costs. The repair and maintenance is a standard activity so State level ratios may be uniformly used for all the districts.

1.4 Fishing & Aquaculture Sub-Sector

In the national accounts, activities covered in the fishing sector are (i) commercial fishing in (a) ocean, coastal and offshore waters and (b) inland waters, that include catching, tackling and gathering of fish from rivers, irrigation and other canals, lakes, tanks, fields inundated tracts etc., (ii) subsistence fishing in inland waters and artificial ponds, (iii) gathering of sea weeds, sea shells, pearls, sponges and other ocean and coastal water products and (iv) fish curing viz., salting and sun-drying of fish.

Estimation of Output in Fishing and Aquaculture Sub-Sector

In case of Marine fishing, the district-wise value of output may be estimated by multiplying the district-wise production by corresponding district prices. Similar procedure is followed in estimating district-wise value of output of Inland fish also. The district-wise production of marine and inland fish is likely to be available through district fishery officer. But, if the district-wise prices are not available, then district-wise value may be worked out using district-wise production and State level prices. To work out the output value of subsistence fish, the State level norm/ratios may be used.

Estimation of input value of Fishing and Aquaculture Sub-Sector

Operational costs broadly include expenditure on boats (mechanized and non-mechanized), trawlers, liners, fishing gears, gillnets, trawl-nets, cast-nets, traps, other bag-nets, consumption of diesel etc.

For estimation of operational costs, including repairs and maintenance, the corresponding State level norms/ratios may be adopted at the district level.

2. Mining and Quarrying Sector

For estimating the value of output, the mining and quarrying sector is divided into two broad groups viz., Major Minerals and Minor Minerals. The major minerals cover fuel minerals consisting of coal, lignite, petroleum & natural gas and other major minerals i.e. metallic minerals including atomic minerals and non-metallic minerals. Minor minerals consist of materials such as marble, slate, shale etc.

Estimation of Output and Input value

2.1 Major Minerals

2.1.1 Fuel Minerals

2.1.1.1 Coal: District-wise value of production of coal obtained from Coal India Ltd. may be used to allocate the State level estimates amongst the districts.

2.1.1.2 Petroleum & Natural Gas: District-wise production may be compiled from Oil and Natural Gas Corporation Limited (ONGC) publication which provides production data structured by asset (refinery) and geographical location (refinery/plant wise production of petroleum products). States may conduct survey to obtain the district-wise prices of PNG; otherwise, State level prices may be applied on district-wise production.

2.1.1.3 Major Metallic and Non-Metallic Minerals: For estimation of District-wise value of output in case of Major Metallic and Non-Metallic Minerals, District-wise Production and Prices may be taken from Indian Bureau of Mines, Nagpur.

2.2 Minor Minerals including Sand

For minor minerals, the District-wise value of output (production and price as Pit's mouth value) may be collected from the State Mines and Geology Department. If the data is not available, the State-level value of output may be distributed among districts in proportion to the royalty collected from each district, assuming that royalty reflects the relative level of mineral production.

Estimation of Value of Input: The State level input rates may be adopted for district estimates.

Secondary Sector: Estimation Approaches

It covers

- **Manufacturing,**
- **Electricity, Gas, Water Supply and Other Utility Services (EGWR) and**
- **Construction**

3. Manufacturing

For organized manufacturing sector, district-wise Gross Value Added (GVA) from Annual Survey of Industries (ASI) may be used as the primary indicator for allocation of State-level GVA of Organized Manufacturing across districts. It may be mentioned that multiplier information available in the ASI data is adjusted for non-response and closed units.

The district-wise estimates of value added from organized manufacturing sector are available from Annual Survey of Industries (ASI) in respect of some smaller States/UTs, for which ASI covers the factories on census basis. In case of major States, ASI data are collected on a sample basis, in that case States also canvasses the ASI schedule as part of their own state sample sector. Central and State samples may be pooled to arrive at district level estimates of GVA. These district-wise GVA may be used as an indicator to allocate the State level estimates of GVA among the districts.

In cases where ASI data for a particular year are unavailable, the previous year's ASI data may be used until the current year's data become available, provided there is no significant variation in the GVA from that economic activity. However, where substantial variation is observed, a three-year moving average may be used for the allocation of GVA.

In case of unorganized manufacturing, the district-wise GVA shares derived from Annual Survey of Unincorporated Sector Enterprises (ASUSE) may be considered as the basis for distributing State-level GVA among districts. Increase sample size for ASUSE from 2025 and considering district as strata, ASUSE in expected to provide reliable estimates at district level.

In case of non-availability of Annual Survey of Unincorporated Sector Enterprises (ASUSE) data, the district-wise distribution of GVA from Annual Survey of Industries (ASI) pertaining to organization type codes 1 and 2, representing the Unorganised segment of the sector, may be used as an indicator for allocation of State-level GVA estimates among the districts.

4. Electricity, Gas, Water Supply and Other Utility Services (EGWR)

4.1 Electricity

4.1.1 Electricity Generation: Bottom-up approach may be adopted by collecting revenue and expenditure data from the establishments engaged in electricity/power generation activities, as District-wise spread of electricity generation establishment will be countable.

4.1.2 Electricity Transmission and Distribution: For the remaining segment of the electricity sector, i.e., Transmission and Distribution, GVA may be apportioned across districts on the basis of electricity consumption as it serves as most suitable proxy for both demand and transmission.

It is clarified that the value added arising from electricity generation, including renewable energy, should be attributed to the district where the income from such generation accrues. Accordingly, GVA should be recorded on the basis of the place of generation or origin of income, rather than the place of consumption. District-wise electricity generation at household level may be estimated from HCES.

It may further be noted that the issues relating to (i) self-generation and self-consumption of electricity, and (ii) the measurement of renewable energy production at the district level, would require further detailed examination to appropriately address their conceptual and practical treatment within the GVA estimation framework.

4.2 Gas

4.2.1 Gas (Public): State-level GVA pertaining to the Gas (Public Sector) sector may be allocated directly to the respective districts using Drawing and Disbursing Office (DDO) code-wise information available in the Public Financial Management System (PFMS) for the Central Government component and the Integrated Financial Management System (IFMS) for the State Government component.

4.2.2 Gas (Private): State level GVA of the Private Corporate sector may be distributed across districts based on District-wise sales/consumption of LPG, PNG and CNG. The proposed allocation methodology is based on the income accrual approach.

4.2.3 Gas (unorganized): State level value added from bio-gas may be distributed according to number of Bio-Gas plants in each district obtained from Khadi and Village Industries Commission (KVIC), MSME and M/o New and Renewable Energy.

4.3 Water Supply

4.3.1 Water Supply (Public): The GVA of Water Supply (Public) may be allocated to the districts using salary and wages of employees in Water Supply Department.

4.3.2 Water Supply (Local Bodies): The GVA of Water Supply (local bodies) may be allocated to the districts using salary and wages provided to workers engaged in water supply under local bodies.

4.3.3 Water Supply (Remaining Institutional Sector): For this sub-sector, the State-level Gross Value Added (GVA) may be allocated among the districts in proportion to the district-wise population as per Population Census data. Alternatively, wherever available, the State-level GVA may be apportioned using District-wise quantum of water supplied, obtained from the Housing & Urban Development Department for urban areas and the Panchayati Raj Department for rural areas.

4.4 Remediation Sector

4.4.1 Remediation (recycling)

District-wise GVA estimates can be obtained from the ASI results.

4.4.2 Remediation (sewerage & sanitation): State level value added may be allocated to districts in proportion to the District-wise estimates of workforce from Periodic Labour Force Survey (PLFS) or State level value added may be allocated to districts on the indicator based on pucca houses.

5. Construction

5.1 Construction (Public): GVA of Construction (Public) may be allocated to the districts using salary and wages of employees of Public Works Department.

5.2 Construction (local bodies): GVA of Construction (local bodies) may be allocated to the districts using salary and wages provided to workers engaged in construction work under local bodies.

5.3 Construction (Non-Departmental Enterprises): GVA of Construction (NDE) may be allocated to the districts directly based on the location of the NDE.

5.4 Construction (Private and Household Sector): GVA of Private Corporate and Household sector may be allocated to the districts based on amount of outward supplies from GST Returns in respect of sale of cement, iron, glass, plastics and steel at district level.

Tertiary Sector

Comprised of:

6. Trade, Repair, Hotels and Restaurants

- **6.1 Trade & Repair Services**
- **6.2 Hotels & Restaurants**

7. Transport, Storage, Communication & Services related to Broadcasting

- **7.1 Railways**
- **7.2 Road Transport**
- **7.3 Water Transport**
- **7.4 Air Transport**
- **7.5 Services Incidental to Transport**
- **7.6 Storage**
- **7.7 Communication & Services Related to Broadcasting**

8. Financial Services
9. Real Estate, Ownership of Dwellings & Professional Services
10. Public Administration
11. Other Services

6. Trade, Repair, Hotels and Restaurants

6.1 Trade & Repair Services

State GVA of Trade and Repair services may be distributed among districts based on the amount of GST Collection from Trading related Establishments registered under GST in each district. Alternatively, District-wise commercial consumption of electricity data may be used for allocation of GVA of trade sector among districts.

6.2 Hotels and Restaurants

State GVA may be distributed among districts based on the amount of GST Collection from Hotel & Restaurant by State Commercial Taxes Department. Alternatively, number of Tourist arrival in the district (both domestic and international) data may be collected from State Tourism Department. It should be kept in mind that international tourists generally have higher per capita expenditure compared to domestic tourists. Accordingly, if tourist arrival data are to be used, a weighted approach assigning higher weight to international tourists would be more

appropriate. For information on per tourist expenditure by International and Domestic tourists for the year 2015-16 is available in 3rd Tourism Satellite Account (TSA) of India. The expenditure available in TSA then can be inflated with respective item level CPI.

7. Transport, Storage, Communication & Services related to broadcasting

7.1 Railways

State level GVA may be allocated to the districts using traffic indicators, namely vehicle kilometers per route per day for passenger traffic and net tonne kilometers per route per day for goods traffic, reflecting the level of railway activity in each district.

Alternatively, a composite index by combining two indicators: (i) share of district workforce engaged in the railway sector and (ii) share of length of railway track or Volume / Tonnage of freight handled in the district from Indian Railways freight Statistics may be created by giving each indicator an equal weight of 0.5. Using this composite index State level GVA may be allocated to districts.

7.2 Road Transport

7.2.1 **Road Transport (Public):** State Level GVA may be distributed among districts using District-wise salary and wages of employees from State Road Transport Corporations.

7.2.2 **Road Transport (Private):** State GVA may be allocated to districts based on no. of registered commercial vehicles may be obtained from respective State Transport Department.

7.2.3 **Road Transport (unorganized):** The district-wise GVA shares derived from Annual Survey of Unincorporated Sector Enterprises (ASUSE) may be considered as the basis for distributing State-level GVA among districts. Increase sample size for ASUSE from 2025 and considering district as strata, ASUSE in expected to provide reliable estimates at district level.

7.3 Water Transport

District-wise total cargo (in tonnes) handled by Major and Minor Ports may be taken from District Port Office (State Maritime Board). There are 12 major operational ports and approximately 200–213 minor ports in the country, a one-time mapping of port locations to their respective districts by the States would be required. Once such mapping is completed, the Gross Value Added (GVA) of water transport sector may be allocated to those districts only on the basis of suggested indicator above.

In case of unorganized water transport, district-wise navigable length of waterways may be used for allocation of Gross Value Added (GVA).

7.4 Air Transport

The State-level GVA of Air Transport may be allocated to districts based on the District-wise share of air traffic. In cases where only one airport exists in a State, the entire GVA of Air Transport may be allocated to the district in which the airport is located. However, where more than one airport exists in a State, a one-time mapping of each airport with the respective district in which it is located may be undertaken and the State-level GVA may then be distributed among those districts based on their respective share in air traffic (both passenger and cargo).

7.5 For services incidental to transport

District-wise outward supplies ratio derived from GST may be used for allocation of GVA among districts. Alternatively, District-wise combined GVA share of Road, Air and Water may be used for allocation of State level GVA of services incidental to transport.

7.6 Storage

7.6.1 **Storage (Public):** State GVA of Storage (Public) Sector may be distributed based on the District wise total storage capacity of Warehouse (Central Warehousing Corporation + State Warehousing Corporations), as available from Warehousing Development and Regulatory Authority and Directorate of Horticulture.

7.6.2 **Storage (Private):** District-wise information on the number of storage units and their storage capacity may be obtained from the local bodies. This information may be used for the allocation of Gross Value Added (GVA) of the Storage activities of the Private Corporate Sector across districts.

7.7 Communications & Services related to Broadcasting Sector

Districts-wise number of BTS (Base Transceiver Station) Towers from respective States LSA (Licensed Service Areas) or District-wise number of telephone connections including landline and mobile connections may be considered for the allocation of GVA across districts.

8. Financial Services

District-wise sum of credits and deposits of Scheduled Commercial Banks (SCBs) obtained from the Reserve Bank of India's Basic Statistical Returns (BSR) database may be used for allocation of GVA of Financial services across districts.

9. Real Estate, Ownership of Dwellings and Professional Services

9.1 Real Estate

The State Gross Value Added (GVA) of Real Estate may be allocated to districts using District-wise information on the total cost of projects or the number of projects registered under the Real Estate Regulatory Authority (RERA) of the respective State during the financial year.

9.2 Ownership of Dwellings

Allocation or Direct Estimation: The State-level Gross Value Added (GVA) for Ownership of Dwellings may be allocated to districts in proportion to the number of dwellings (rural / urban) in each district, based on data from the Population Census 2011.

In addition, Electoral Rolls, which are updated through Special Intensive Revisions (SIRs) and contain information on the number of households and electors, may be explored as an alternative and more frequently updated data source for deriving suitable distribution indicators for this sector.

Further, data from the All India Debt and Investment Survey (AIDIS), conducted by the National Sample Survey at decennial intervals (most recently during the 77th Round, 2019) at the instance of the Reserve Bank of India, may also be utilised, as it provides valuable information on household indebtedness and asset ownership in both rural and urban areas.

9.3 Professional Services

State level GVA may be distributed among districts in proportion to the workforce from PLFS /GST collection data.

10. Public Administration

The District-wise GVA of Central Government employees can be calculated directly using salary and wage expenditure data available in PFMS, mapped by DDO codes, as compiled by the Comptroller General of Accounts (CGA).

District-wise GVA of employees working in State government, local body (urban and rural) and autonomous bodies can be estimated directly using actual salary and wage disbursement data from the respective authorities. For estimation of district-wise Gross Value Added (GVA) of State Government employees, salary and wages disbursement data may be obtained from the District Treasury Offices located in each district. Similarly, District-wise GVA of employees under Urban Local Bodies may be estimated using salary and wages data from Municipal Corporations, Municipal Councils and Nagar Panchayats, while for Rural Local Bodies, salary and wages data from Gram Panchayats, Panchayat Samitis and Zila Parishads may be used. Further, for employees under Autonomous Bodies, District-wise salary

and wage expenditure data may be obtained from the respective Autonomous Bodies to facilitate accurate district-level estimation of GVA.

11. Other Services

11.1 Education

11.1.1 Education (Public): The State level estimates for the public sector in education may be allocated to districts using the salary and wages of employees engaged in educational institutions. The required data on salaries and wages of State Government employees may be obtained from the School Education Department for employees working in schools and from the Higher and Technical Education Department of the State Government for employees working in colleges. In case of Central Government employees engaged in this sector, the relevant data on salaries and wages may be obtained from the Public Financial Management System (PFMS) for allocation of estimates across districts.

11.1.2 Education (Private): The State-level estimates for the private corporate sector in education may be distributed across districts in proportion to the district-wise share in GST collection related to education activities. The required district-wise GST collection data may be obtained from the State Commercial Taxes Department for this purpose.

11.1.3 Education (unincorporated/unorganized): State level estimates for the unorganized sector may be allocated to the districts on the basis of district-wise GVA share from ASUSE or data on benches sold, online classes, etc. can be explored.

11.2 Health

11.2.1 Health (Public): In case of Public Sector, State level estimates may be allocated to districts on the basis of salary and wages of employees working (medical and paramedical staff) in Govt. hospitals and health centers. The information may be obtained from Health and Family Welfare Department of the respective State/UT.

11.2.2 Health (Private): The State-level estimates for the Private Corporate sector in health may be distributed across districts in proportion to the district-wise share in GST collection related to health activities. The required district-wise GST collection data may be obtained from the State Commercial Taxes Department for this purpose.

11.2.3 Health (unincorporated/unorganized): In case of Unincorporated sector, State level estimates may be allocated to the districts on the basis of District-wise GVA share from ASUSE.

11.3 Other Personal Services

GST data and workforce data from PLFS may be used for organized and unorganized sectors, respectively.

Note: In the upcoming survey rounds, MoSPI has enhanced the district-level sample size for both the surveys, namely ASUSE and PLFS. Further, stratification is being carried out at the district level, which will make the district-level estimates more robust.

Accordingly, estimates from ASUSE and PLFS may be utilized for direct estimation or for the allocation of State-level GVA to districts.

Consumption of Fixed Capital

Sector-wise ratio of consumption of fixed capital to Gross value added may be adopted for the district level estimates.

***

ABBREVIATIONS

ACNAS	**Advisory Committee on National Accounts Statistics**
AIDIS	**All India Debt and Investment Survey**
ASI	**Annual Survey of Industries**
ASUSE	**Annual Survey of Unincorporated Sector Enterprises**
BSR	**Basic Statistical Returns**
BTS	**Base Transceiver Station**
CAGR	**Compound Annual Growth Rate**
CBR	**Cultivable Biological Resources**
CCS	**Cost of Cultivation Survey**
CFC	**Consumption of Fixed Capital**
CGA	**Comptroller General of Accounts**
CNG	**Compressed Natural Gas**
DDO	**Drawing and Disbursing Office**
DDP	**District Domestic Product**
DES	**Directorates of Economics and Statistics**
EGWR	**Electricity, Gas, Water Supply and Remediation**
FAI	**Fertilizers Association of India**
GDP	**Gross Domestic Product**
GDDP	**Gross District Domestic Product**
GDVA	**Gross District Value Added**
GST	**Goods and Service Tax**
GSDP	**Gross State Domestic Product**
GSVA	**Gross State Value Added**
GVO	**Gross Value of Output**
HCES	**Household Consumer Expenditure Survey**
HDI	**Human Development Index**
IBM	**Indian Bureau of Mines**
IC	**Intermediate Consumption**
IFMS	**Integrated Financial Management System**
ILC	**Indian Livestock Census**
ISS	**Integrated Sample Survey**
KVIC	**Khadi & Village Industries Commission**
LI	**Labour Input**
LPG	**Liquefied Petroleum Gas**
LSA	**Licensed Service Areas**
MoAgFW	**Ministry of Agriculture & Farmers Welfare**
MoH&FW	**Ministry of Health & Family Welfare**
MSME	**Micro, Small & Medium Enterprises**
NDE	**Non-Departmental Enterprises**
NDP	**Net Domestic Product**
NDDP	**Net District Domestic Product**
NDVA	**Net District Value Added**
NSO	**National Statistics Office**
NSS	**National Sample Survey**
NTFP	**Non-Timber Forest Products**
NVA	**Net Value Added**

ONGC	**Oil & Natural Gas Corporation Limited**
PFMS	**Public Financial Management System**
PLFS	**Periodic Labour Force Survey**
PNG	**Piped Natural Gas**
RBI	**Reserve Bank of India**
RERA	**Real Estate Regulatory Authority**
SCB	**Scheduled Commercial Banks**
SIRs	**Special Intensive Revisions (SIRs)**
TSA	**Tourism Satellite Account**
VAPW	**Value Added Per Worker**
VPH	**Value Per Hectare**

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