

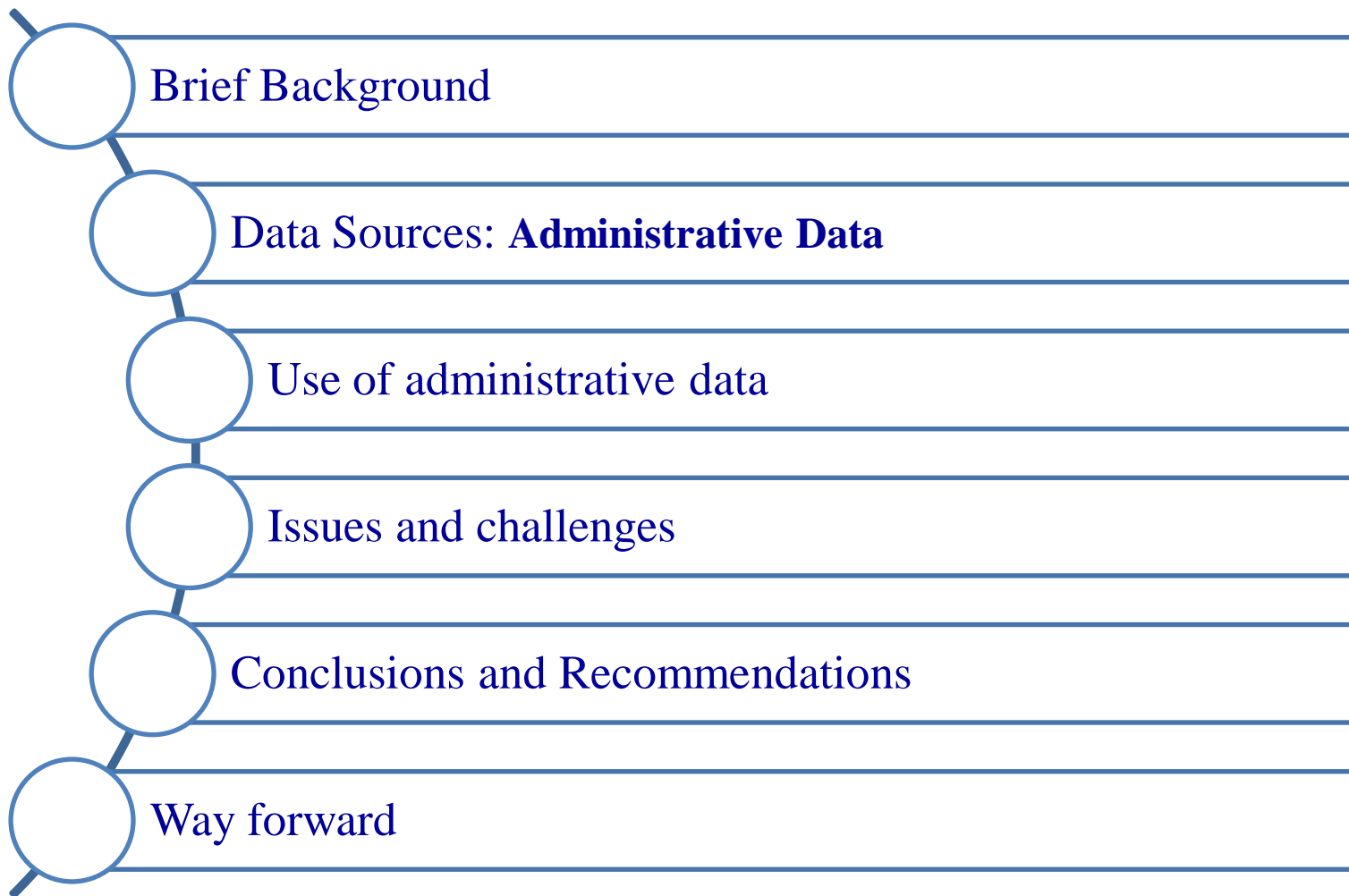
**Inter-regional Workshop on Strengthening Statistical Capacities for Building  
Macroeconomic and Sustainable Development Indicators in Latin America, the  
Caribbean and Asia-Pacific Countries,  
10-12 July 2017, Santiago, Chile**

**MONGOLIAN EXPERIENCE IN THE USE OF  
ADMINISTRATIVE DATA FOR  
COMPILATION OF MFA**

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# OUTLINE



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## BRIEF BACKGROUND

### PURPOSE OF MFA

Interaction of the domestic economy with the natural environment and the rest of the world economy in terms of flows of materials (excluding water and air)



**MFA is needed for indicator DMC – Domestic Material Consumption**

# DMC – how much «stuff» is needed for the economy to function?

DMC = Domestic extraction + **imports** - exports

Biomass

Metallic minerals

Non-metallic minerals

Fossil fuels





## A BRIEF HISTORY

2013	Established a Working Team on implementation and compilation of the SEEA at NSO of Mongolia
	Developed an Action Plan for the implementation of the SEEA
	Studied International Manuals and References
	Translated SEEA-CF into Mongolian language
	Identified Priority Accounts
2014	Pilot compilation of MFA (2005-2013)
2015	Developed national methodology on compilation of MFA
	Conducted the Environmental Protection Expenditure Survey
2016	Made initial evaluation of some available data
	Compiled MFA 2005-2015
2016-2018	Technical assistance from ADB for strengthening capacity for Environmental-Economic Accounting

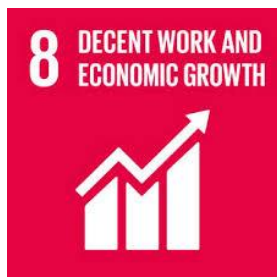


## LEGAL FRAMEWORK

### ■ Sustainable Development Goal 8.4 and 12.2

*“Improve progressively through 2030, global resource efficiency in consumption and production...”*

#### SUSTAINABLE DEVELOPMENT GOALS



- 8.4.1 Material Footprint, material footprint per capita and material footprint per GDP
- 8.4.2 Domestic material consumption and Domestic material consumption per capita and Domestic material consumption per GDP



- 12.2.1 Material Footprint, material footprint per capita and material footprint per GDP
- 12.2.2 Domestic material consumption and DMC per capita, per GDP

- Mongolian Sustainable Development Vision 2030
- Green Development Policy of Mongolia

for monitoring and quantifying of the implementation of the green development policy

specific challenges: natural resource based economy, inefficient use of energy and resource and wasteful consumption and vulnerability to climate change

- National Program for Development of Official Statistics, 2011-2015 and 2016-2020

Parliament of Mongolia approved the NSDS, which initiated data collection and analysis necessary to support environmentally sustainable growth



## METHODOLOGY, CLASSIFICATION

### INTERNATIONAL MANUAL, REFERENCES:

- ② Economy-wide Material Flow Accounts Compilations Guide, Eurostat 2013
- ② Eurostat's 2013 EW-MFA Standard Tables and Questionnaire

### CLASSIFICATION:

- ② International Standard of Industrial Classification (ISIC), CPC
- ② HS, SITC
- ② Conversion Factors

### UNIT:

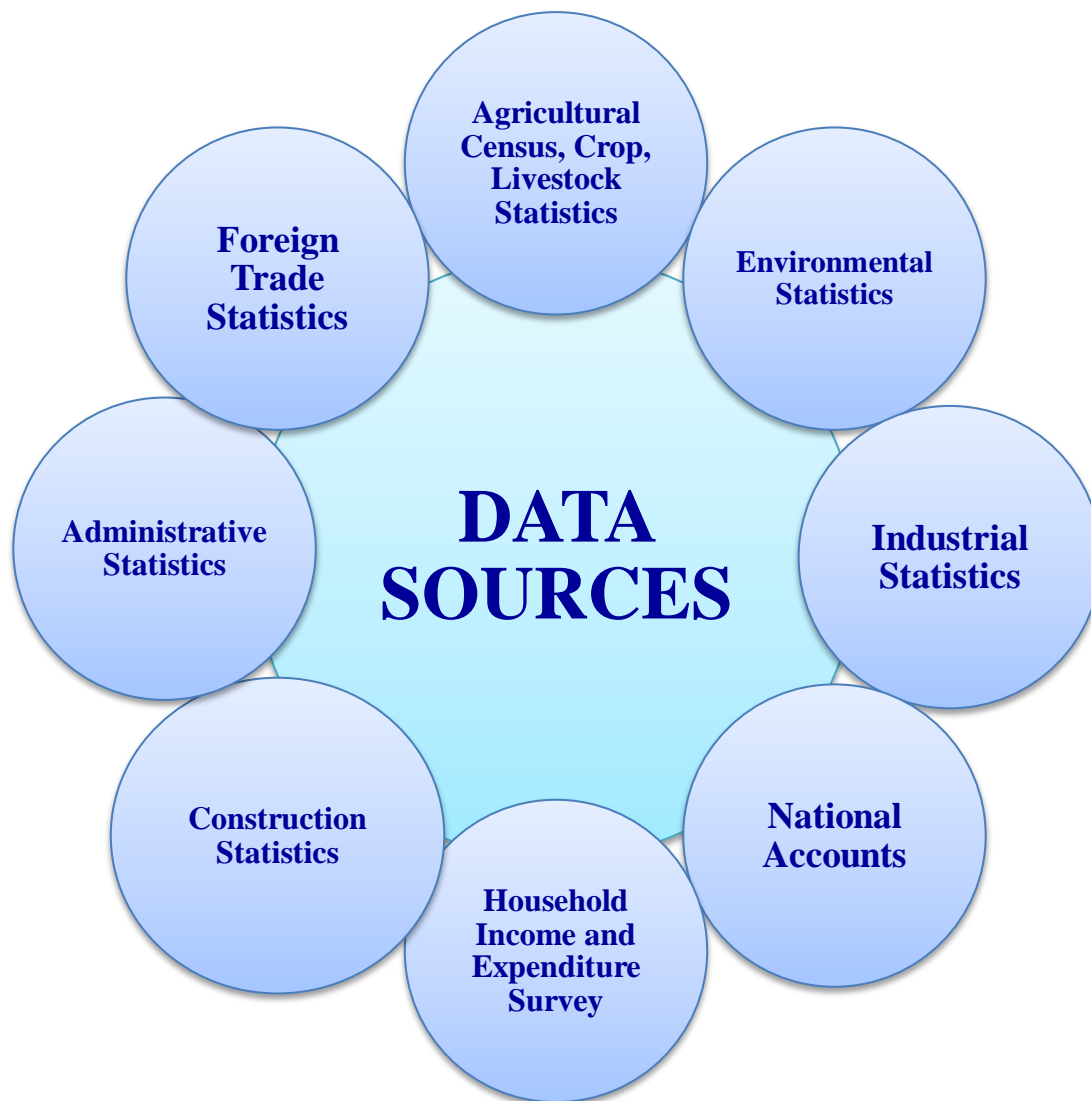
- ② Physical unit (tonnes)





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## DATA SOURCES





## USE OF ADMINISTRATIVE DATA

### I. Domestic extraction

Biomass

Metal ores  
(gross ores)

Non metallic  
minerals

Fossil energy  
materials

### II. Imports

Biomass

Metal ores  
(gross ores)

Non metallic  
minerals

Fossil energy  
materials

Other production

Waste imported for final  
treatment and disposal

### III. Exports

Biomass

Metal ores  
(gross ores)

Non metallic  
minerals

Fossil energy  
materials

Other production

Waste exported for final  
treatment and disposal



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## USE OF ADMINISTRATIVE DATA

EW-MFA category	Source
A1.Biomass	
A1.1. Crops (excluding fodder crops)	available from agricultural statistics by MNSO
A1.2 Crop residues (used), fodder crops and grazed biomass	available from the agriculture statistics by MNSO
A1.3 Wood	reported officially from MoET
A1.4 Wild fish catch, aquatic plants/animals, hunting and gathering	Agriculture Census by MNSO, MoET, General Administration of Customs
A2.Metal ores (gross ores)	MNSO
A3.Non metallic minerals	MNSO
A4.Fossil energy materials	MNSO
Imports	Foreign trade data by General Administration of Customs
Exports	Foreign trade data by General Administration of Customs



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## Administrative data

	Organization	2014
<b>Consumption of wood, m3</b>		
Timber	MoET	245.6
Wood fuel and other sections of wood		598.3
<b>Net increment of timber stock, m3</b>		
Larch trees	Center of Forest Research and Development	7049060.0
Pine trees		519026.0
Pinus sibirica Ldb		755307.0
Spruce trees		22462.0
Abies sibirica Ldb		1866.0
Betula		1437671.0
Populus lauripolia Ldb		33865.0
Populus tremula L		14726.0
Elm trees		1871.0
Salix Miyabeana		143059.0

## Domestic Extraction

	2013	2014
A.1 Biomass	57169.5	66208.9
A.1.1 Crops (excluding fodder crops)	723.7	838.2
A.1.1.1 Cereals	387.0	518.8
A.1.1.2 Roots, tubers	191.6	161.5
A.1.1.3 Sugar crops	-	-
A.1.1.4 Pulses	-	-
A.1.1.5 Nuts	-	-
A.1.1.6 Oil-bearing crops	41.7	51.9
A.1.1.7 Vegetables	101.8	104.8
A.1.1.8 Fruits	1.6	1.2
A.1.1.9 Fibres	-	-
A.1.1.10 Other	-	-
A.1.2 Crop residues (used), fodder crops and grazed biomass	56234.6	64981.3
A.1.2.1 Crop residues	414.8	560.9
A.1.2.1.1 Straw	3.1	5.1
A.1.2.1.2 Other crop residues (sugar and fodder beet leaves)	411.7	555.8
A.1.2.2 Fodder crops and grazed biomass	55819.8	64420.4
A.1.2.2.1 Fodder crops (biomass harvest from grassland)	1211.9	1223.4
A.1.2.2.2 Grazed biomass	54607.9	63197.0
A.1.3 Wood	210.7	389.3
A.1.3.1 Timber (industrial roundwood)	109.7	140.5
A.1.3.2 Wood fuel and other extraction	340.8	342.3
A.1.3.3 Net increment of timber stock	-239.7	93.4
A.1.4 Wild fish catch, aquatic plants/animals, hunting and gathering	0.4	0.0
A.1.4.1 Wild fish catch	0.4	-
A.1.4.2 All other aquatic animals and plants	-	-
A.1.4.3 Hunting and gathering	0.0	0.0



МОНГОЛ УЛСЫН  
БАЙГАЛЬ ОРЧИН,  
НОГООН ХӨГЖЛИЙН САЙДЫН  
ТУШААЛ

2014 оны 04 сарын 21 өдөр

Дугаар А-122

Улаанбаатар хот

Тусгай болон ахуй зориулалтаар  
амьтан агнах, барих хуваарь батлах тухай

Амьтны тухай хуулийн 26.1 болон Засгийн газрын 2013 оны 03 дугаар сарын 16-ны өдрийн 93 дугаар тогтоолын 2 дугаар хавсралтаар батлагдсан "Ховор амьтан агнах, барих тусгай зөвшөөрөл олгох" журмын 4.5 дахь хэсэг, 2014 оны 04 дүгээр сарын 12-ны өдрийн 122 дугаар тогтоолыг тус тус үндэслэн ТУШААХ нь:

1. Тусгай зориулалтаар 2014 онд агнуулах, бариулах амьтны тоо хэмжээг агнуурын бус нутагт хуваарилсан хуваарийг 1 дүгээр хавсралт, ахуйн зориулалтаар агнах, барих амьтны тоо хэмжээг аймаг бүрээр тогтоосон хуваарийг 2 дугаар хавсралт ёсоор тус тус баталсугай.

2. Амьтны нөөц ашигласны төлбөрийн 50%-ийг тухайн агнуурын бус нутгийн менежментийн төлөвлөгөөг хэрэгжүүлэхэд зарцуулах, агнуурын бус нутгийн менежментийг хариуцагч иргэн, хуулийн этгээдийн оролцоог хангах, хяналт тавьж ажиллах менежментийн тогтвортой байдлыг хангах, хууль бус агнуураас урьдчилан сэргийлэх арга хэмжээг зохион байгуулахыг хуваарьт орсон аймгийн Засаг дарга нарт үүрэг болгосугай.

3. Холбогдох хууль, журамд заасны дагуу энэхүү тушаалын нэгдүгээр хавсралтын хуваарьт орсон агнуурын бус нутагт тусгай зориулалтаар амьтан агнах, барих зөвшөөрлийг олгох ажлыг зохион байгуулахыг Хүрээлэн буй орчин, байгалийн нөөцийн газар /Д.Энхбат/-д даалгасугай.



	2013	2014
<b>A.1 Biomass</b>	<b>57169.5</b>	<b>66208.9</b>
<b>A.1.1 Crops (excluding fodder crops)</b>	<b>723.7</b>	<b>838.2</b>
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A.1.4.3 Hunting and gathering	0.0	0.0

## ISSUES & CHALLENGES

### Use of administrative data:

- Coverage data may not represent the population of statistical interest
- Quality – data often do not meet official statistics standards in terms of relevance, timeliness, accuracy, accessibility, interpretability and coherence
  - Metallic and non-metallic mining: need production figures as gross ore not concentrate
  - Fossil energy: need production/extraction figures

### MFA:

- Create national conversion factors:
  - Biomass: need grazing factors of Mongolia
- Need to work with the Ministries / Agencies / Institutions that have the responsibility of regulating and monitoring the extraction industries
- Lack of qualified staff and expertise in environmental accounts
- Stakeholders lack of knowledge and practice in the framework on the SEEA



## CONCLUSIONS & RECOMMENDATIONS

- ② Increased use of administrative data will require quality issues to be addressed: the idea of administrative data as a “cost free” source be revisited
- ② Strong cooperation between Statistical Office and Government Agencies dealing with administrative data is key to guarantee quality of data (Leadership in NSS required)
  - MNSO has developed and signed MoU’S with line ministries and Government agencies
- ② Disadvantages over concepts, definitions, coverage & quality discourage the use of administrative data to generate statistics
- ② The costs and response burden associated with a survey can be avoided through effective use of Administrative data
- ② The Eurostat EW-MFA compilation guide provides an excellent starting point for countries wishing to develop MFA
- ② MFA provide a statistical framework for producing the data needed to analyse the decoupling of resource use from economic growth, to analyse the sustainability growth (annual reporting to SDGs indicators)



## WAY FORWARD

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- ② Assess current data availability
- ② Define conversion factors and convert commodities to the mass weights
- ② Conduct a survey to collect necessary data on metal ore and non-metal minerals
- ② Develop glossary of material flow accounts





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**THANK YOU FOR YOUR  
ATTENTION**

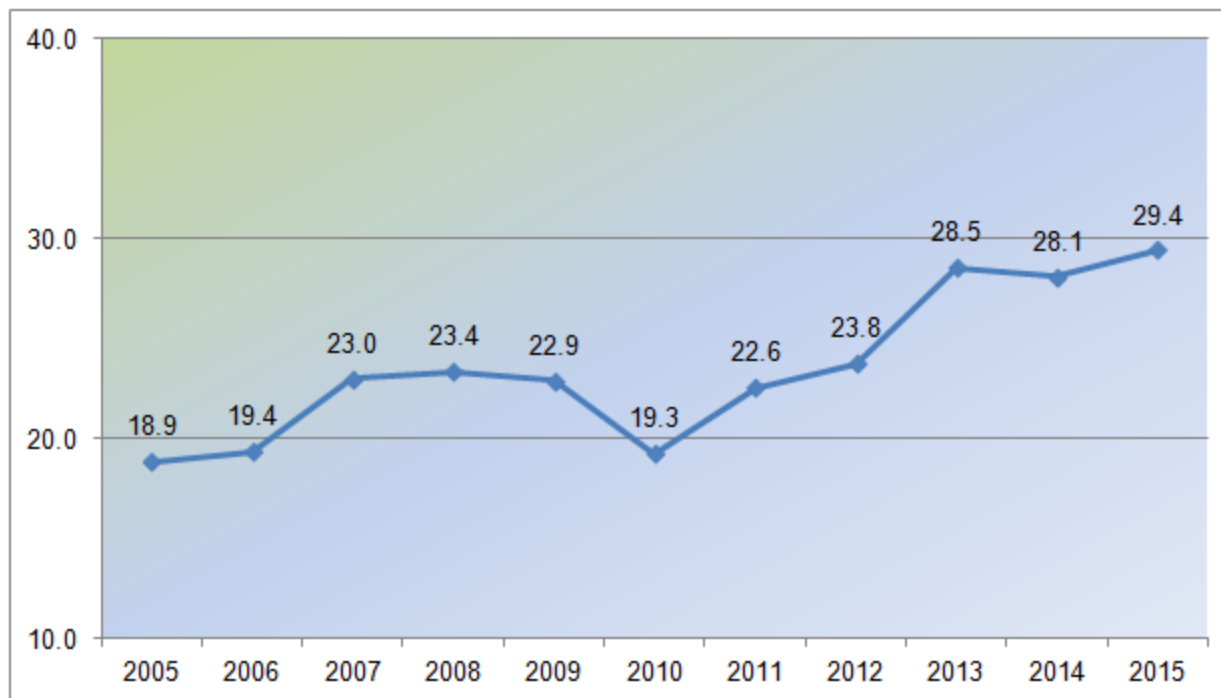


Web page : [www.nso.mn](http://www.nso.mn)  
[www.1212.mn](http://www.1212.mn)



## RESULTS OF MFA, 2005-2015

**Domestic material consumption per capita, 2005-2015, tonnes**



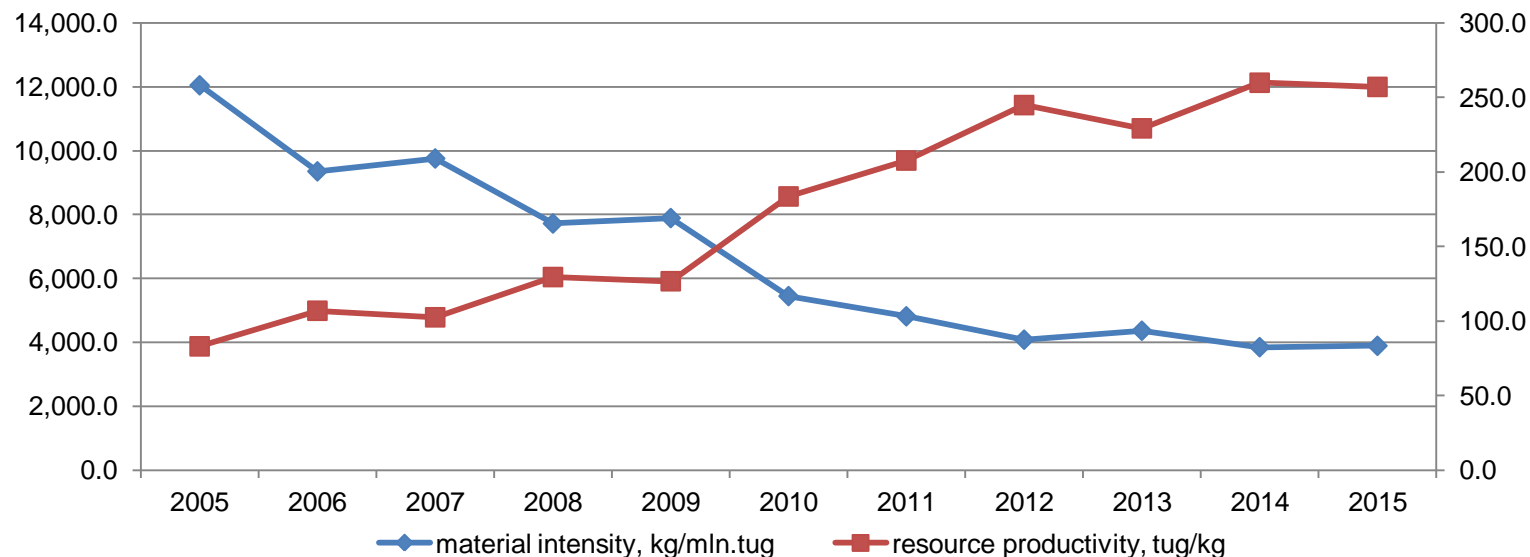
Domestic material consumption per capita was 18.9-19.3 tonnes between 2005-2010, 22.6 - 23.8 tonnes in 2007-2009, whereas in 2013-2015 it reached 28.1-29.4 tonnes and increased by 9.2-10.5 tonnes or 48.7-55.6% compared with 2005.

Domestic material consumption in national economy reached 90.0 million tonnes in 2015 and 41.8 million tonnes or 86.8% compared with 2005.



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## Material intensity and Resource productivity, 2005-2015



Mongolia produced 1 million tugrugs GDP using the 12.0 ton materials in 2005, whereas 1 million tugrugs GDP were produced by 3.9 tons materials.

From the resource productivity perspectives, between 2005 and 2015, Mongolia used 1 kg material to produce 83.0 and 257.1 tugrugs GDP, respectively.

**Domestic Material Consumption, 2005-2015, thousand tonnes**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total	48164	50017	60317	62257	62277	53153	63425	68130	83634	84246	89990
Biomass	36401	37313	45614	46738	49373	37806	43320	48896	54045	61645	65368
Metal Ores	1654	2831	3758	4125	3223	2694	2972	4222	2538	4304	4303
Non Metallic minerals	3402	3589	4443	4708	2751	2986	5262	5175	14503	11524	8022
Fossil energy materials	6628	6201	6386	6543	6761	9459	11542	9488	12124	6249	11789
Other	79	84	115	144	168	209	328	349	423	524	508

Domestic material consumption in national economy reached 90.0 million tonnes in 2015 and 41.8 million tonnes or 86.8% compared with 2005.