



VII: Calculating time-use indicators

Regional Workshop on Time Use Statistics: Methods and Uses

Tunis, 10 -12 October 2023



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Analytical treatment of simultaneous activities

No international agreement - Options based on UN Guide 2005

One hour of folding laundry as a primary activity and providing supervisory childcare during that same hour (while the child was taking a nap).

Method	Ironing, pressing and folding ICATUS 343	Minding children (passive care) ICATUS 416	Advantages	Limitations
Same amount of time to the activities	60 min	60 min	<ul style="list-style-type: none"> Easily Implemented 	<ul style="list-style-type: none"> Exceed 24 hours per day. Assumption: "output" of an activity performed jointly is the same as when the activity is performed solely.
Account only main activity	60 min	--	<ul style="list-style-type: none"> Simplifies tabulation Ensure 24 hours per day 	<ul style="list-style-type: none"> Requires determination of what is a main activity Underreport of supervisory care
Compound activities	Laundry and care 60 min		<ul style="list-style-type: none"> Conceptually appealing 	<ul style="list-style-type: none"> Classification scheme is altered

Analytical treatment of simultaneous activities

No international agreement - Options based on UN Guide 2005

One hour of folding laundry as a primary activity and providing supervisory childcare during that same hour (while the child was taking a nap).

Adult women spend on average 10 hours a week folding laundry and 20 hours a week supervising children (as sole activities) (1/3 and 2/3)

The value of domestic work is \$15 per hour and the value of babysitting is \$5 per hour (3/4 and 1/4)

Method	Ironing, pressing and folding ICATUS 343	Minding children (passive care) ICATUS 416	Advantages	Limitations
Allocation of time base on solo activities	20 min	40 min	<ul style="list-style-type: none"> Ensure 24 hours per day 	<ul style="list-style-type: none"> Might not have info on supervisory care as sole activity Assumption: "output" of an activity performed jointly is the same as when the activity is performed solely
theoretic value	45 min	15 min	<ul style="list-style-type: none"> Ensure 24 hours per day Does not assume equal outputs for joint and sole <ul style="list-style-type: none"> activities 	<ul style="list-style-type: none"> Rely on value of outputs

Key time-use indicators – activity level

$$\textit{Participation rate} = \frac{\textit{Number of persons who reported doing the activity}}{\textit{Number of people in (sub)population}} * 100$$

$$\textit{Average time among participants} = \frac{\sum \textit{time spent on activity by total (sub)population}}{\textit{Number of persons who reported doing the activity}}$$

$$\textit{Average time} = \frac{\sum \textit{time spent on activity by total (sub)population}}{\textit{Number of people in (sub)population}}$$

Key time-use indicators – activity level

Summary table from Statistics Belgium 2013 survey

Day of the week	Weekdays			Saturday			Sunday		
	Duration per respondent (h/day)	Duration per participant (h/day)	Participation rate	Duration per respondent (h/day)	Duration per participant (h/day)	Participation rate	Duration per respondent (h/day)	Duration per participant (h/day)	Participation rate
Paid work	02:44	07:21	37.2 %	00:47	06:06	12.8 %	00:25	04:53	8.5 %
Household work	02:29	02:53	86.0 %	03:01	03:25	88.3 %	02:18	02:42	85.1 %
Childcare and raising children	00:22	01:32	23.6 %	00:20	01:47	18.8 %	00:21	01:45	19.6 %
Personal care	02:23	02:23	100.0 %	02:38	02:38	100.0 %	02:35	02:35	100.0 %
Sleep and rest	08:48	08:48	100.0 %	09:14	09:14	100.0 %	10:08	10:08	100.0 %
Education	00:50	06:02	13.6 %	00:18	03:46	7.8 %	00:18	03:25	8.6 %
Social participation	01:15	01:47	69.4 %	02:02	02:38	77.1 %	01:53	02:24	78.8 %
Free time	03:46	03:58	94.9 %	04:21	04:37	94.3 %	04:59	05:09	96.9 %
Transportation	01:18	01:29	87.4 %	01:15	01:28	84.4 %	00:59	01:20	74.5 %
Other	00:05	00:39	12.4 %	00:05	00:45	11.2 %	00:05	00:39	12.0 %

Table A-1. Time spent in detailed primary activities and percent of the civilian population engaging in each activity, averages per day by sex, 2021 annual averages

Activity	Average hours per day, civilian population			Average percent engaged in the activity per day			Average hours per day for persons who engaged in the activity		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Total, all activities.....	24.00	24.00	24.00	100.0	100.0	100.0	–	–	–
Personal care activities.....	9.70	9.51	9.88	99.9	99.9	100.0	9.71	9.52	9.88
Sleeping ¹	8.95	8.86	9.04	99.9	99.9	99.9	8.96	8.87	9.04
Grooming.....	0.65	0.56	0.74	78.1	75.3	80.7	0.83	0.74	0.92
Health-related self care.....	0.08	0.06	0.09	7.1	6.3	7.8	1.06	1.03	1.09
Personal activities.....	0.01	0.01	– ²	0.3	0.3	0.3	2.78	4.01	1.48
Travel related to personal care.....	0.01	0.02	0.01	1.8	1.9	1.7	0.76	0.81	0.70
Eating and drinking.....	1.19	1.20	1.17	97.0	96.9	97.1	1.22	1.24	1.20
Eating and drinking.....	1.11	1.12	1.09	97.0	96.9	97.1	1.14	1.16	1.12
Travel related to eating and drinking.....	0.08	0.08	0.08	14.1	15.0	13.2	0.55	0.52	0.58
Household activities.....	1.95	1.54	2.33	78.9	71.1	86.2	2.47	2.16	2.70
Housework.....	0.58	0.30	0.84	35.6	21.4	49.1	1.62	1.38	1.71
Interior cleaning.....	0.35	0.20	0.49	23.8	14.0	33.0	1.48	1.46	1.48
Laundry.....	0.17	0.08	0.27	15.5	6.6	23.9	1.12	1.15	1.11
Storing interior household items, including food.....	0.02	0.01	0.03	6.5	4.7	8.3	0.34	0.31	0.35
Food preparation and cleanup.....	0.64	0.42	0.86	61.9	50.8	72.4	1.04	0.82	1.19
Food and drink preparation.....	0.50	0.34	0.65	58.4	47.8	68.3	0.85	0.71	0.95
Kitchen and food cleanup.....	0.14	0.07	0.20	23.9	14.3	33.0	0.59	0.52	0.62
Lawn and garden care.....	0.20	0.27	0.14	10.1	11.3	9.0	2.02	2.38	1.60
Household management.....	0.14	0.11	0.17	17.9	15.1	20.6	0.79	0.74	0.83
Financial management.....	0.03	0.03	0.04	2.9	2.7	3.2	1.10	1.01	1.18
Household and personal organization and planning.....	0.11	0.08	0.13	15.1	12.1	17.9	0.71	0.68	0.74
Interior maintenance, repair, and decoration.....	0.07	0.09	0.05	3.1	3.4	2.8	2.27	2.77	1.70
Exterior maintenance, repair, and decoration.....	0.05	0.08	0.03	2.6	3.5	1.8	1.98	2.26	1.48
Animals and pets.....	0.15	0.13	0.17	19.7	16.4	22.8	0.77	0.82	0.74
Care for animals and pets, not veterinary care.....	0.07	0.06	0.08	14.2	11.2	17.0	0.52	0.55	0.49
Walking, exercising, and playing with animals.....	0.08	0.07	0.08	9.2	8.4	9.9	0.85	0.85	0.85
Vehicles.....	0.04	0.07	0.01	2.3	3.6	1.0	1.65	1.91	0.82
Appliances, tools, and toys.....	0.02	0.02	0.01	1.4	1.8	1.1	1.12	1.34	0.80
Travel related to household activities.....	0.05	0.04	0.05	7.8	6.8	8.6	0.60	0.60	0.59
Purchasing goods and services.....	0.68	0.57	0.78	40.5	37.1	43.7	1.68	1.55	1.79
Consumer goods purchases.....	0.32	0.25	0.38	36.6	33.7	39.4	0.87	0.75	0.96
Grocery shopping.....	0.10	0.08	0.12	12.5	10.6	14.2	0.80	0.74	0.84
Professional and personal care services.....	0.09	0.06	0.11	7.5	5.9	8.9	1.16	1.07	1.22
Financial services and banking.....	0.01	– ²	0.01	1.7	1.5	1.9	0.31	0.29	0.33
Medical and care services.....	0.06	0.05	0.07	4.2	3.1	5.3	1.37	1.50	1.30

See footnotes at end of table.

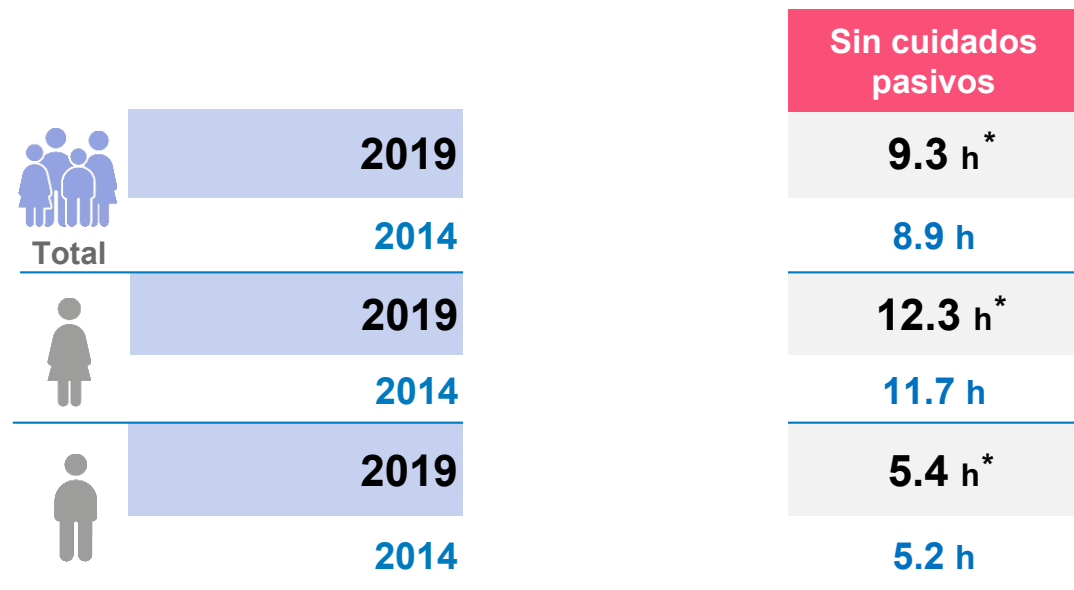
Most common combination of two simultaneous activities, South Africa

1st activity	2nd activity	% of 2 simultaneous activities
Watch TV	Socialise with family	16.0
Eat and drink	Watch TV	12.8
Eat and drink	Socialise with friends	5.0
Eat and drink	Socialise with family	4.4
Cooking	Eat and drink	3.4
Watch TV	Socialise with friends	3.2
Cooking	Watch TV	3.1
Cleaning	Listen to radio	2.3
Cooking	Listen to radio	2.2
Socialise with family	Listen to radio	2.0
Socialise with friends	Listen to radio	1.9
Cooking	Socialise with family	1.9
Eat and drink	Listen to radio	1.7



TNRH de CUIDADOS para el propio Hogar

Promedio de horas a la semana de la población de 12 años y más que realiza actividad de cuidados, por tipo de actividad de cuidado a integrante del hogar, y sexo



Primary activities only
= No supervisory care



En total, considerando cuidados pasivos, las mujeres dedican en promedio **15.9 horas semanales más** al cuidado que los hombres. Excluyendo cuidados pasivos, la brecha se reduce a **6.9 horas**.



*Target 5.4: Recognize and value **unpaid care and domestic work** through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate*

*SDG 5.4.1. Proportion of **time spent on unpaid domestic and care work** by sex, age and location*

Time use statistics are key to recognize and value unpaid care and domestic work and to promote shared responsibility within the household and the family

Unpaid Domestic and Care Work

Intended destination of production	For own final use			For use by others						
	Own-use production work			Employment (work for pay or profit)	Unpaid trainee work	Other work activities	Volunteer work			
Forms of work	Services	Goods	Production of goods for own final use				11. Employment in corporations, government and non-profit institutions	12. Employment in household enterprises to produce goods	13. Employment in households and household enterprises to provide services	53. Unpaid trainee work and related activities
						Goods				
Relation to SNA				Activities within the SNA production boundary (included in the GDP)						
	Activities within the SNA general production boundary (excluded from the GDP)									
ICATUS 2016	4. Unpaid caregiving services for household and family members	3. Unpaid domestic services for household and family members	2. Production of goods for own final use	1. Employment and related activities ^c			5. Unpaid volunteer, trainee and other unpaid work			
				14 Ancillary activities and breaks related to employment	15 Training and studies in relation to employment	17 Setting up a business	181 Employment-related travel			51. Unpaid direct volunteering for other households ^b
										52. Unpaid community - and organization-based volunteering ^b
Type of work	Unpaid work (unpaid care work, domestic work and production of goods for own final use ^a)			Paid work			Unpaid work (community, volunteer, trainee work)			

Time spent on unpaid domestic and care work

$$\sum \text{Activities under ICATUS major division 3} + \sum \text{Activities under ICATUS major division 4} \rightarrow$$

Minimum Set of Gender Indicators I.1
Average number of hours spent on unpaid domestic and care work

Sustainable Development Goals indicator 5.4.1
Proportion of time spent on unpaid domestic and care work

Note: These indicators require that the time spent in all activities should amount to 24 hours

Only main activity

Unpaid Domestic and Care Work



Minimum Set of Gender Indicators I.1: Average number of hours spent on unpaid domestic and care work

Average number of hours spent daily on unpaid domestic and care work

$$= \frac{\text{Total number of daily hours spent by the population on unpaid domestic and care work activities}}{\text{Total population (regardless of whether they participated in the activity)}}$$

daily hours spent on unpaid domestic work = Total number of daily hours spent by the population on activities under ICATUS 3

daily hours spent on unpaid care work = Total number of daily hours spent by the population on activities under ICATUS 4

Expressed in hours



Sustainable Development Goals indicator 5.4.1: Proportion of time spent on unpaid domestic and care work

Proportion of time spent on unpaid domestic and care work

$$= \frac{\text{Average number of hours spent daily on unpaid domestic and care work}}{24} * 100$$

Expressed as a proportion

Example: 1. Identify activities for SDG 5.4.1

Personal care activities:

- Sleeping
- Sleeplessness
- Personal hygiene
- Personal health care
- Eating and drinking
- Travel associated with personal care activities

Employment related activities:

- Work
- Job Search
- Travel associated with employment activities

Education activities:

- Formal education
- Travel associated with education activities

Voluntary work activities:

- Voluntary work
- Help/favour for friend/neighbour
- Travel associated with voluntary work

Domestic activities:

- Food and drink preparation/service
- Shopping
- Housework
- Grounds care and gardening
- Home and vehicle maintenance
- Household management
- Pet and animal care
- Travel associated with domestic activities

Child care activities:

- Physical and emotional care of children
- Teaching/helping/reprimanding children
- Playing/reading/talking with child
- Minding child
- Accompanying child to school or extra-curricular activities
- Feeding and food preparation for children
- Travel associated with child care activities

Adult care activities:

- Physical care for adults (sick, with disability or aged)
- Travel associated with adult care activities

Social and community interaction:

- Social Interaction
- Visiting entertainment and cultural venues
- Eating and drinking out
- Religious or cultural practices
- Community participation
- Travel associated with social and community interaction

Recreation and leisure:

- Exercise, sport and outdoor activity
- Reading
- Playing games and puzzles
- Digital games
- Watching TV and video
- Listening to music, radio, podcast
- General internet and device use
- Participation in non-formal courses
- Relaxing
- Hobbies and arts
- Travel associated with recreation and leisure

Example: 2. Calculate averages

Primary Activity	Number of people who participated in the activity			Total number of hours spend daily in the activity		
	Males	Females	Total	Males hh:mm	Females hh:mm	Total hh:mm
Domestic activities	8,457,186	9,817,698	18,268,523	23,806,173	34,634,069	58,440,242
Food and drink preparation/service	5,610,721	7,951,700	13,570,903	5,309,290	9,188,631	14,497,921
Shopping	3,134,194	4,018,259	7,140,383	3,254,081	4,417,611	7,671,692
Housework	4,357,044	7,421,586	11,775,368	4,452,953	10,955,675	15,408,628
Grounds care and gardening	1,572,235	1,473,715	3,048,234	2,740,279	1,943,749	4,684,028
Home and vehicle maintenance	986,500	434,693	1,419,725	1,883,942	530,113	2,414,055
Household management	3,103,300	753,202	3,856,965	2,569,012	3,003,975	5,572,987
Pet and animal care	1,531,100	1,575,001	3,106,001	1,198,872	1,943,749	3,142,621
Travel associated with domestic activities	2,599,840	2,255,927	4,855,927	2,397,744	2,650,567	5,048,311
Child care activities	2,219,626	2,997,952	5,219,578	6,508,162	11,662,493	18,170,655
Physical and emotional care of children	1,120,089	2,137,867	3,257,017	1,027,605	3,180,680	4,208,284
Teaching/helping/reprimanding children	143,800	1,042,836	1,186,636	513,802	883,522	1,397,324
Playing/reading/talking with child	1,161,100	1,875,158	3,036,258	1,712,674	2,297,158	4,009,832
Minding child	524,078	816,374	1,340,452	1,370,139	1,590,340	2,960,479
Accompanying child to school or extra-curricular activities	102,760	243,852	346,612	342,535	530,113	872,648
Feeding and food preparation for children	452,146	1,219,261	1,670,265	342,535	1,236,931	1,579,466
Travel associated with child care activities	924,844	1,516,124	2,440,968	1,198,872	1,943,749	3,142,621
Adult care activities	267,177	530,113	814,254	856,337	1,590,340	2,446,677
Physical care for adults (sick, with disability or aged)	133,589	371,079	504,668	342,535	883,522	1,226,057
Travel associated with adult care activities	102,760	127,227	229,987	513,802	706,818	1,220,620
:						
Total activities	10,276,046	10,602,266	20,878,312	246,625,104	254,454,384	501,079,488

Example: 2. Identify averages for SDG 5.4.1

$$\text{Proportion of time spent on unpaid domestic and care work} = \frac{\text{Average number of hours spent daily on unpaid domestic and care work}}{24} * 100$$

	Males	Females	Persons
+ Unpaid domestic work (in daily hours)	23,806,173	34,634,069	58,440,242
Unpaid care work (in daily hours)	7,364,500	13,252,833	20,617,332



24



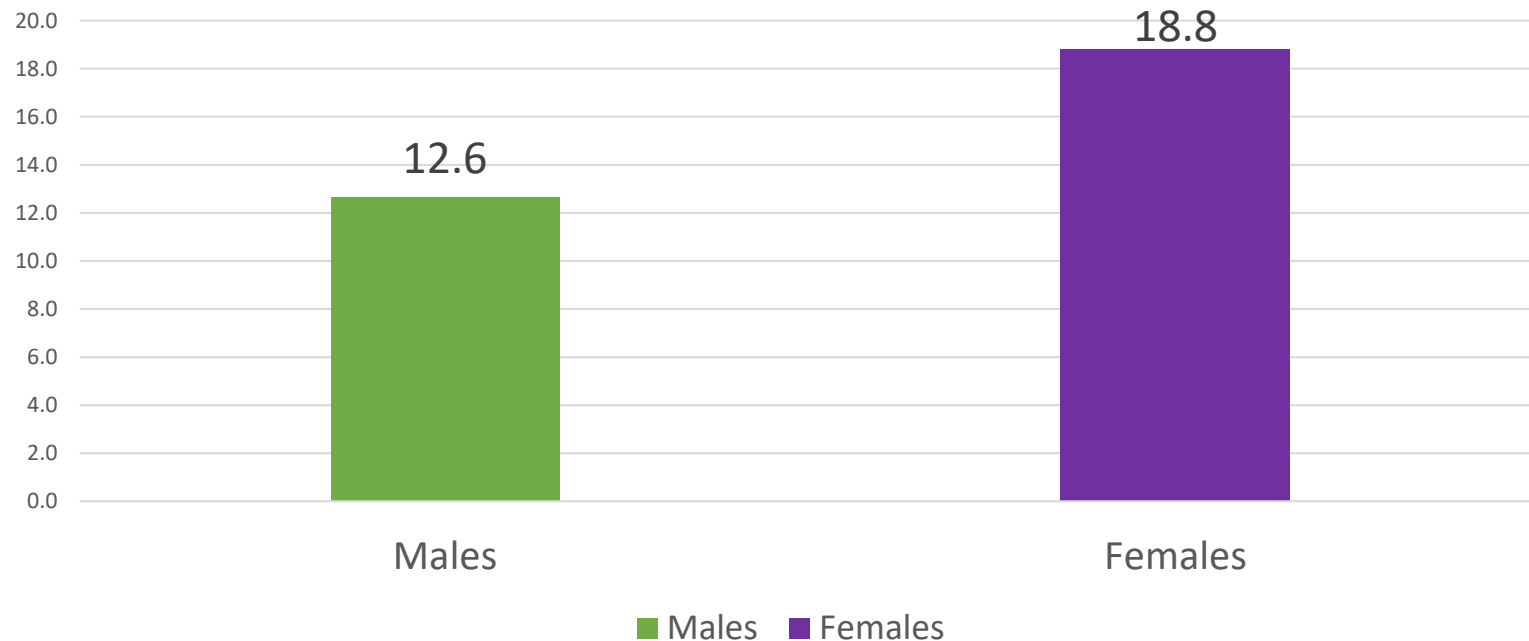
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Example: 2. Identify averages for SDG 5.4.1

$$\text{Proportion of time spent on unpaid domestic and care work} = \frac{\text{Average number of hours spent daily on unpaid domestic and care work}}{24} * 100$$

	Males	Females	Persons
Proportion of time spent on unpaid domestic and care work	12.6	18.8	15.8



Total Work

Work (19th ICLS): Any activity performed by persons of any sex and age to produce goods or to provide services for use by others or for own use

Intended destination of production	For own final use			For use by others					
Forms of work	Own-use production work			Employment (work for pay or profit)	Unpaid trainee work	Other work activities	Volunteer work		
	Services	Goods					Market and nonmarket units	Households producing	
Type of work	Unpaid work (unpaid care work, domestic work and production of goods for own final use ^a)			Paid work			Unpaid work (community, volunteer, trainee work)		
ICATUS 2016	4. Unpaid caregiving services for household and family members	3. Unpaid domestic services for household and family members	2. Production of goods for own final use	1. Employment and related activities ^c			5. Unpaid volunteer, trainee and other unpaid work		
				11. Employment in corporations, government and non-profit institutions	12. Employment in household enterprises to produce goods	13. Employment in households and household enterprises to provide services	53. Unpaid trainee work and related activities	59. Other unpaid work activities	51. Unpaid direct volunteering for other households ^b
				14 Ancillary activities and breaks related to employment 15 Training and studies in relation to employment 17 Setting up a business 181 Employment-related travel					52. Unpaid community - and organization-based volunteering ^b

Time spent on total work

$$\sum_{j=1}^5 \text{Activities under ICATUS major division } j$$



Minimum Set of Gender Indicators I.2
Average number of hours spent on total work

Note: These indicators require that the time spent in all activities should amount to 24 hours

Only main activity

Example: Identify activities for Total work

Personal care activities:

- Sleeping
- Sleeplessness
- Personal hygiene
- Personal health care
- Eating and drinking
- Travel associated with personal care activities

Employment related activities:

- Work
- Job Search
- Travel associated with employment activities

Education activities:

- Formal education
- Travel associated with education activities

Voluntary work activities:

- Voluntary work
- Help/favour for friend/neighbour
- Travel associated with voluntary work

Domestic activities:

- Food and drink preparation/service
- Shopping
- Housework
- Grounds care and gardening
- Home and vehicle maintenance
- Household management
- Pet and animal care
- Travel associated with domestic activities

Child care activities:

- Physical and emotional care of children
- Teaching/helping/reprimanding children
- Playing/reading/talking with child
- Minding child
- Accompanying child to school or extra-curricular activities
- Feeding and food preparation for children
- Travel associated with child care activities

Adult care activities:

- Physical care for adults (sick, with disability or aged)
- Travel associated with adult care activities

Social and community interaction:

- Social Interaction
- Visiting entertainment and cultural venues
- Eating and drinking out
- Religious or cultural practices
- Community participation
- Travel associated with social and community interaction

Recreation and leisure:

- Exercise, sport and outdoor activity
- Reading
- Playing games and puzzles
- Digital games
- Watching TV and video
- Listening to music, radio, podcast
- General internet and device use
- Participation in non-formal courses
- Relaxing
- Hobbies and arts
- Travel associated with recreation and leisure

Total Work

Minimum Set of Gender Indicators I.2: Average number of hours spent on total work (paid and unpaid)

Average number of hours spent on total work (paid and unpaid)

$$= \frac{\text{Total number of hours spent by the population on paid work activities} + \text{Total number of hours spent by population on unpaid work activities}}{\text{Total population (regardless of whether they participated in the activity)}}$$

*hours spent on paid work = Total number of daily hours spent by the population on activities under ICATUS 1 **

*hours spent on unpaid work = Total number of daily hours spent by the population on activities under ICATUS 2 +
Total number of daily hours spent by the population on activities under ICATUS 3 +
Total number of daily hours spent by the population on activities under ICATUS 4 +
Total number of daily hours spent by the population on activities under ICATUS 5*

** Except for activities classified under Division 16 Seeking employment and Group 182 Commuting which are not classified as work as no production takes place even though classified under ICATUS major division 1.*



The **total work** time allows for a more comprehensive analysis of **all forms of work** and to shed light on the **gender division of labour**. The total work shows women and men contribution to societies and economies through their production of services and goods. Time-use data can reveal the unequal distribution of paid and unpaid work time (and the benefits associated with each type of work) due to gender norms and roles and unequal power relations.