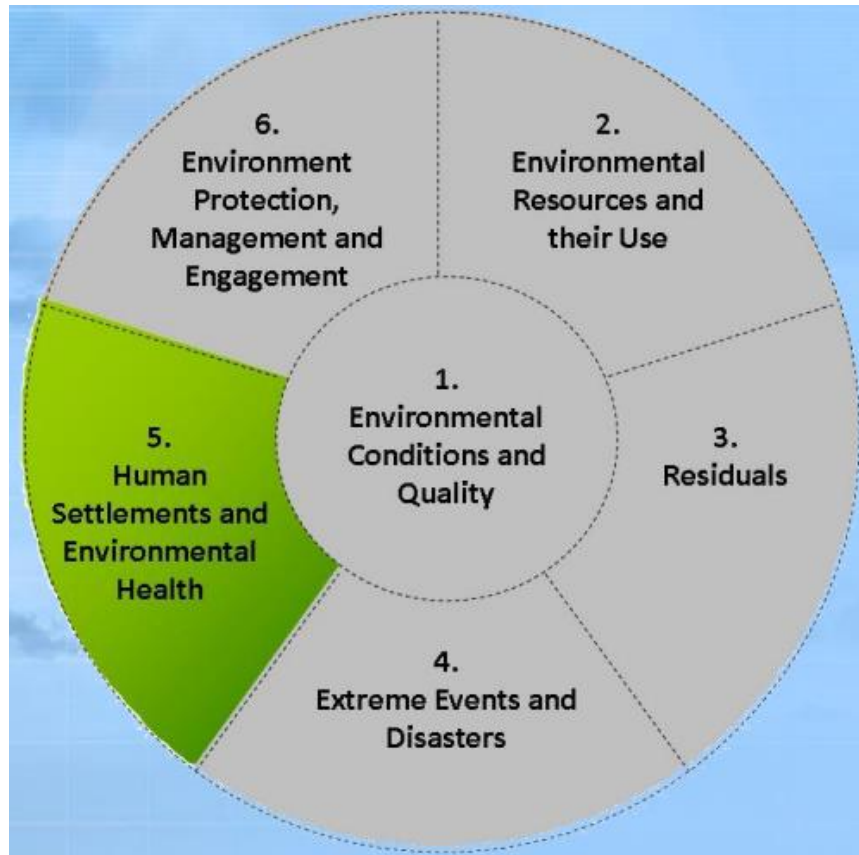


Components, sub-components and statistical topics of the FDES 2013

Component 5: Human Settlements and Environmental Health

Human Settlements and Environmental Health

Introduction



This component contains statistics on the environment in which humans live and work, particularly about **living conditions and environmental health**.

These statistics are important for the management and improvement of conditions related to human settlements, shelter conditions, safe water, sanitation, and health, particularly in the context of rapid urbanization, increasing pollution, environmental degradation, disasters, extreme events, and climate change.

Human Settlements and Environmental Health

Scope and content

- It refers to the human population that resides in a settlement, the physical elements (e.g., shelter and infrastructure), services (e.g., water, sanitation, waste removal, energy and transport), and the exposure of humans to potentially dangerous environmental conditions.
- It Includes statistics on basic services and infrastructure of human settlements.

Human Settlements and Environmental Health

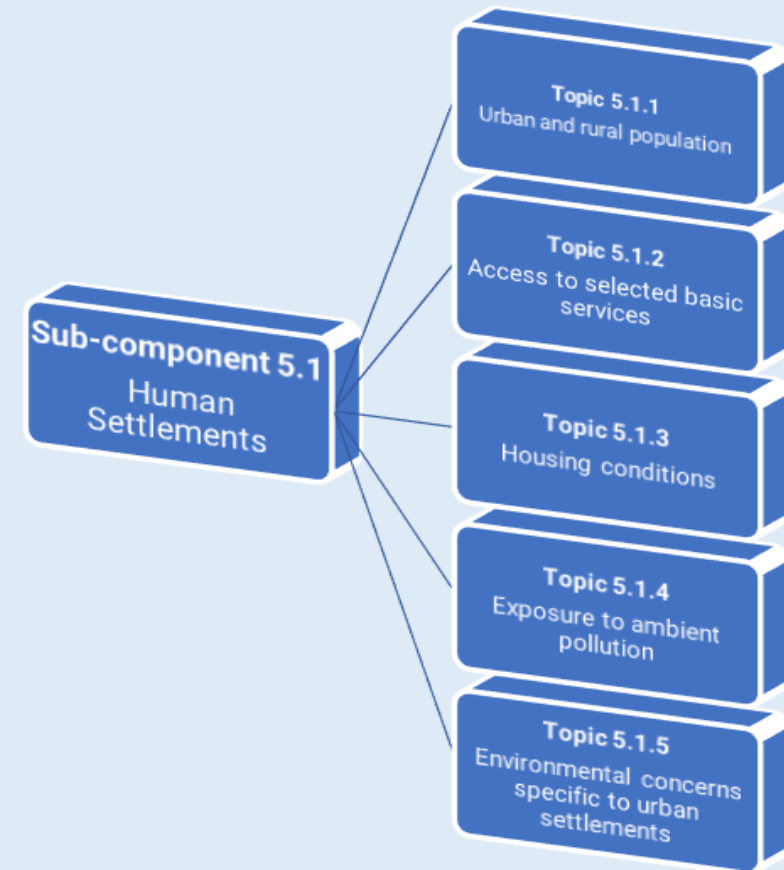
Overview

Component 5 Human Settlements & Environmental Health	Sub-Component 5.1 Human Settlements (five topics, 31 statistics)	Topic 5.1.1: Urban and rural population Topic 5.1.2: Access to selected basic services Topic 5.1.3: Housing conditions Topic 5.1.4: Exposure to ambient pollution Topic 5.1.5: Environmental concerns specific to urban settlements
	Sub-Component 5.2 Environmental Health (5 topics, 23 statistics)	Topic 5.2.1: Airborne diseases and conditions Topic 5.2.2: Water-related diseases and conditions Topic 5.2.3: Vector borne diseases Topic 5.2.4: Health problems associated with excessive UV radiation exposure Topic 5.2.5: Toxic substance – and nuclear radiation – related diseases and conditions

Human Settlements and Environmental Health

Sub-Component 5.1: Human Settlements

- This subcomponent includes relevant statistics on basic services and infrastructure of human settlements which refer to the totality of the human community, whether people live in large cities, towns or villages.
- The status of and changes in human settlements include censuses, surveys, administrative records and remote sensing
- Institutional partners of the NSO include Housing and urban planning authorities, Health and transportation authorities and Research institutions.



Sub-Component 5.1: Human Settlements

Topic 5.1.1: Urban and rural population

This topic Includes:

- Rural, urban and total population, area of urban and rural settlements, urban and rural population density.
- Depending on the carrying capacity of ecosystems, human settlements and their use of environmental resources will affect environmental conditions, as well as human wellbeing and health.
- In combination with housing, water and sanitation statistics, they can provide telling determinants of the environmental sustainability of human settlements and environmental health.
- Relevant statistics are from demographic statistics, and geospatial information sources, collected through censuses and Household surveys.

Sub-Component 5.1: Human Settlements

Topic 5.1.1: Urban and rural population

Statistics and related information for Topic 5.1.1

Component 5: Human Settlements and Environmental Health			
Subcomponent 5.1: Human Settlements			
Topic 5.1.1: Urban and rural population			
Statistics and related information			
(Bold text —Core Set/Tier 1; regular text—Tier 2; <i>italicized text</i> —Tier 3)	Category of measurement	Potential aggregations and scales	Methodological guidance
a. Population living in urban areas	Number	• Urban	• UN Population Division
b. Population living in rural areas	Number	• Rural	• UN Population Fund (UNFPA)
c. Total urban area	Area		
d. Total rural area	Area		
e. Population living in coastal areas	Number		

Sub-Component 5.1: Human Settlements

Topic 5.1.2: Access to selected basic services

This topic Includes:

- Access to water, sanitation, waste removal services and energy in urban and rural areas.
- Access to these basic services can have a positive effect on human health and wellbeing, thereby contributing to improved environmental quality.
- Relevant statistics on this topic include population using an improved drinking water source; using an improved sanitation facility; supplied by the water supply industry; connected to a wastewater collecting system and wastewater treatment; served by municipal waste collection; and with access to electricity.

Sub-Component 5.1: Human Settlements

Topic 5.1.2: Access to selected basic services

Statistics and related information for Topic 5.1.2

Component 5: Human Settlements and Environmental Health			
Subcomponent 5.1: Human Settlements			
Topic 5.1.2: Access to selected basic services			
Statistics and related information			
(Bold text —Core Set/Tier 1; regular text—Tier 2; <i>italicized text</i> —Tier 3)	Category of measurement	Potential aggregations and scales	Methodological guidance
a. Population using an improved drinking water source	Number	<ul style="list-style-type: none"> • Urban 	<ul style="list-style-type: none"> • UNSD: MDG Indicator 7.8 and 7.9 Metadata
b. Population using an improved sanitation facility	Number	<ul style="list-style-type: none"> • Rural 	<ul style="list-style-type: none"> • UN-Water
c. Population served by municipal waste collection	Number	<ul style="list-style-type: none"> • National • Subnational 	<ul style="list-style-type: none"> • UNSD: Environment Statistics Section—Water and Waste Questionnaire • WHO/(United Nations Children’s Fund (UNICEF) Joint Monitoring Programme for Water Supply and Sanitation
d. <i>Population connected to wastewater collecting system</i>	Number	<ul style="list-style-type: none"> • By treatment type (e.g., primary, secondary, tertiary) 	<ul style="list-style-type: none"> • UNSD: IRWS
e. Population connected to wastewater treatment	Number	<ul style="list-style-type: none"> • National • Subnational 	<ul style="list-style-type: none"> • ISIC Rev. 4, Section E, Division 35-37 • UNSD: Environment Statistics Section—Water Questionnaire
f. Population supplied by water supply industry	Number	<ul style="list-style-type: none"> • National • Subnational 	
g. <i>Price of water</i>	Currency	<ul style="list-style-type: none"> • By source (e.g., piped, vendor) 	
h. <i>Population with access to electricity</i>	Number		
i. <i>Price of electricity</i>	Currency		

Sub-Component 5.1: Human Settlements

Topic 5.1.3: Housing conditions

This topic Includes:

- Access of population to an adequate dwelling; the characteristics of the houses in which both rural and urban population live, including the quality of the houses (e.g., building materials) and location in either safe or hazard prone areas.
- Housing sufficiency statistics: number and proportion of individuals or families that do not have access to an adequate dwelling and the homeless population.
- Common statistics describing the quality and the location of houses in either safe or hazard prone areas including urban population living in slums, population living in informal settlements, as well as the number of dwellings with adequate building materials as defined by national or local standards; number of homeless.
- Housing access and conditions exert a direct effect on human wellbeing and health, and these data therefore serve as critical measures of those attributes.

Sub-Component 5.1: Human Settlements

Topic 5.1.3: Housing conditions

Statistics and related information for Topic 5.1.3

Component 5: Human Settlements and Environmental Health			
Subcomponent 5.1: Human Settlements			
Topic 5.1.3: Housing conditions			
Statistics and related information			
(Bold text—Core Set/Tier 1; regular text—Tier 2; italicized text—Tier 3)	Category of measurement	Potential aggregations and scales	Methodological guidance
a. Urban population living in slums	Number		<ul style="list-style-type: none"> • UN Habitat • UNSD: MDG Indicator 7.10 Metadata
b. Area of slums	Area		
c. Population living in hazard-prone areas	Number	<ul style="list-style-type: none"> • Urban 	
d. Hazard-prone areas	Area	<ul style="list-style-type: none"> • Rural 	
e. <i>Population living in informal settlements</i>	Number	<ul style="list-style-type: none"> • National 	
f. <i>Homeless population</i>	Number	<ul style="list-style-type: none"> • Subnational 	
g. <i>Number of dwellings with adequacy of building materials defined by national or local standards</i>	Number		

Sub-Component 5.1: Human Settlements

Topic 5.1.4: Exposure to ambient pollution

- This topic Includes spatially described statistics on human populations exposed to different levels of air and noise pollution.
- Statistics for this topic include the number of people exposed to air pollution or noise in specific areas and the proportion of the exposed population to the total population of the city or region Topic overlays data on pollutant emission and concentration onto geographic and demographic data to create a more detailed understanding of the size and location of populations currently being exposed to pollutants and those most at risk of future exposure.
- Sources:
 - Demographic statistics: NSOs carrying out Censuses and Surveys
 - Point pollution emissions and concentrations: Environmental authorities
 - Geographic or cartographic authorities.

Sub-Component 5.1: Human Settlements

Topic 5.1.4: Exposure to ambient pollution

Statistics and related information for Topic 5.1.4

Component 5: Human Settlements and Environmental Health			
Subcomponent 5.1: Human Settlements			
Topic 5.1.4: Exposure to ambient pollution			
Statistics and related information			
(Bold text —Core Set/Tier 1; regular text—Tier 2; <i>italicized text</i> —Tier 3)	Category of measurement	Potential aggregations and scales	Methodological guidance
a. Population exposed to air pollution in main cities	Number	By pollutant (e.g., SO ₂ , NO _x , O ₃)	WHO
b. <i>Population exposed to noise pollution in main cities</i>	Number		

Sub-Component 5.1: Human Settlements

Topic 5.1.5: Environmental concerns specific to urban settlements

- This topic organizes issues of specific relevance to the population living in urban areas. Additional environmentally relevant urban concerns should be included here (e.g. extent of urban sprawl, the availability of green spaces the types of transportation in and between urban areas, and the existence and effectiveness of urban planning and zoning).
- Transportation statistics may be disaggregated by:
 - Number of private, public and commercial vehicles by engine type
 - Number of passengers transported by public transportation systems, by hybrid and electric modes of transportation.
 - The extent of roadway infrastructure.

Source: Administrative records, and remote sensing; NSO's partners authorities: municipal, urban planning and housing responsible for zoning, transport and urban research centres

Sub-Component 5.1: Human Settlements

Topic 5.1.5: Environmental concerns specific to urban settlements

Statistics and related information for Topic 5.1.5

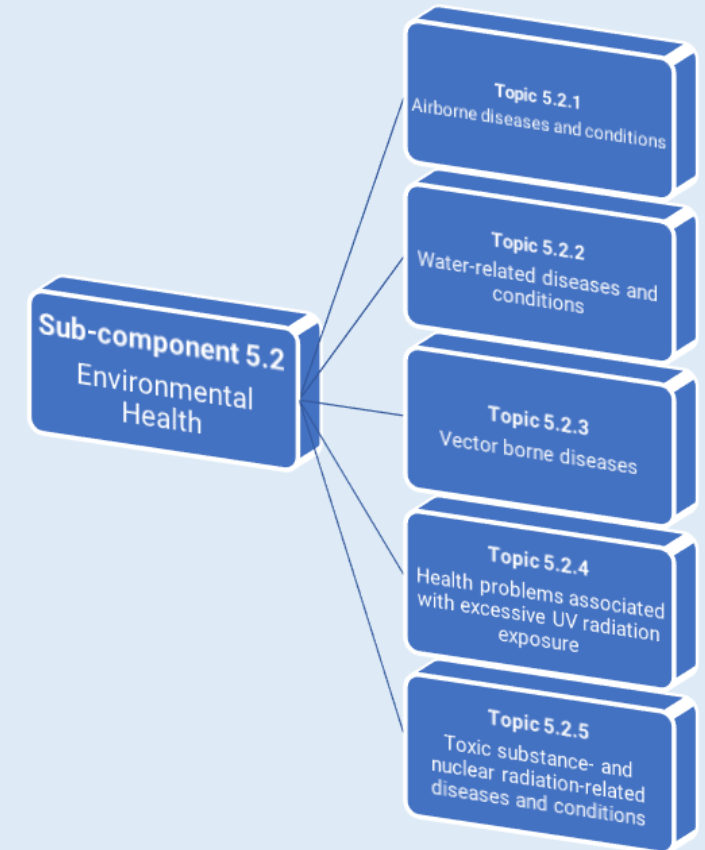
Component 5: Human Settlements and Environmental Health			
Subcomponent 5.1: Human Settlements			
Topic 5.1.5: Environmental concerns specific to urban settlements			
Statistics and related information			
(Bold text —Core Set/Tier 1; regular text—Tier 2; <i>italicized text</i> —Tier 3)	Category of measurement	Potential aggregations and scales	Methodological guidance
a. Extent of urban sprawl	Area		• UN Habitat
b. Available green spaces	Area		• WHO
c. Number of private and public vehicles	Number	By type of engine or type of fuel	• UNEP Urban Environment Unit
d. Population using public modes of transportation	Number		
e. <i>Population using hybrid and electric modes of transportation</i>	Number		
f. Extent of roadways	Length		
g. <i>Existence of urban planning and zoning regulations and instruments in main cities</i>	Description		
h. <i>Effectiveness of urban planning and zoning regulations and instruments in main cities</i>	Description		

Q & A

Human Settlements and Environmental Health

Sub-Component 5.2: Environmental Health

- This subcomponent focus on environmental health and how environmental factors and processes impact and change human health in other words the relationship between public health and the environment.
- Common measures of health problems of human populations include statistics on morbidity (incidence and prevalence) and mortality associated with specific types of diseases and conditions that are heavily influenced by environmental factors.
- Estimations of premature death, the loss of workdays and estimation of the economic cost in monetary terms (i.e., loss of wages or costs of treatment).



Sub-Component 5.2: Environmental Health

Topic 5.2.1: Airborne diseases and conditions

- All airborne diseases and conditions are caused or worsened by exposure to unhealthy levels of pollutants (such as respirable PM, SO₂ or O₃).
- Health statistics on morbidity (such as incidence and prevalence) and mortality of these diseases or conditions, measurement of the associated loss of work force and on the economic costs.
- Where available, the attributable portion and burden of diseases, premature deaths and DALYs (disability-adjusted life years) associated with pollution are to be included in this topic.

Examples of airborne diseases and conditions include:

- Upper and lower respiratory disease
- Obstructive pulmonary disease
- Asthma, Allergic rhinitis

Sub-Component 5.2: Environmental Health

Topic 5.2.1: Airborne diseases and conditions

Statistics and related information for Topic 5.2.1

Component 5: Human Settlements and Environmental Health			
Subcomponent 5.2: Environmental Health			
Topic 5.2.1: Airborne diseases and conditions			
Statistics and related information			
(Bold text —Core Set/Tier 1; regular text—Tier 2; <i>italicized text</i> —Tier 3)	Category of measurement	Potential aggregations and scales	Methodological guidance
a. Airborne diseases and conditions		<ul style="list-style-type: none"> • By disease or condition 	WHO
1. Incidence	Number	<ul style="list-style-type: none"> • National 	
2. Prevalence	Number	<ul style="list-style-type: none"> • Subnational 	
3. Mortality	Number	<ul style="list-style-type: none"> • Urban 	
4. <i>Loss of work days</i>	Number	<ul style="list-style-type: none"> • Rural 	
5. <i>Estimates of economic cost in monetary terms</i>	Currency	<ul style="list-style-type: none"> • By gender • By age group • By time period 	

Sub-Component 5.2: Environmental Health

Topic 5.2.2: Water-related diseases and conditions

- This topic covers all water-related diseases and conditions that result from micro-organisms and chemicals in the water humans drink as defined by the WHO.
- Diseases caused by biological contamination such as gastroenteritis infections caused by bacteria, viruses and protozoa, and water borne parasite infections.
- Diseases and health problems associated with the (organic or inorganic) chemical contamination of water (e.g., from arsenic, cadmium, chromium, copper, etc.)
- Health statistics such as morbidity (incidence and prevalence) and mortality of these diseases or conditions, as well as measures of the associated impact on the labour force and on the economic costs.
- The attributable portion and burden of diseases, premature deaths and DALYs associated with water related factors.

Sub-Component 5.2: Environmental Health

Topic 5.2.2: Water-related diseases and conditions

Statistics and related information for Topic 5.2.2

Component 5: Human Settlements and Environmental Health			
Subcomponent 5.2: Environmental Health			
Topic 5.2.2: Water-related diseases and conditions			
Statistics and related information			
(Bold text —Core Set/Tier 1; regular text—Tier 2; <i>italicized text</i> —Tier 3)	Category of measurement	Potential aggregations and scales	Methodological guidance
a. Water-related diseases and conditions		<ul style="list-style-type: none"> • By disease or condition 	WHO
1. Incidence	Number	<ul style="list-style-type: none"> • National • Subnational 	
2. Prevalence	Number	<ul style="list-style-type: none"> • Urban • Rural 	
3. Mortality	Number	<ul style="list-style-type: none"> • By gender • By age group 	
4. <i>Loss of work days</i>	Number	<ul style="list-style-type: none"> • By time period 	
5. <i>Estimates of economic cost in monetary terms</i>	Currency		

Increased risk of cancer, organ damage and malfunction, increased blood cholesterol and pressure, among others.

- Water-related diseases and conditions are still a considerable public health problem in developing countries.
- Prolonged exposure to organic or inorganic chemical contamination of water (e.g., from arsenic, cadmium, chromium, copper, etc.) can provoke different health problems

Sub-Component 5.2: Environmental Health

Topic 5.2.3: Vector-borne diseases

- Vector borne diseases that are transmitted by vectors (e.g., insects and arachnids) that carry viruses, bacteria, protozoa and other pathogens, as defined by the WHO.
- Health statistics such as morbidity (incidence and prevalence) and mortality of these diseases or conditions, as well as measures of the associated impact on the labour force and on the economic costs.
- Attributable portion and burden of diseases, premature deaths and DALYs associated with vector-borne environmental factors. Relevance:
- Some vector borne diseases are being directly affected by climate change, notably by the change in rain patterns and floods.

Examples: common vector borne diseases include: malaria, dengue fever, yellow fever and Lyme disease.

Sub-Component 5.2: Environmental Health

Topic 5.2.3: Vector-borne diseases

Statistics and related information for Topic 5.2.3

Component 5: Human Settlements and Environmental Health			
Subcomponent 5.2: Environmental Health			
Topic 5.2.3: Vector-borne diseases			
Statistics and related information			
(Bold text —Core Set/Tier 1; regular text—Tier 2; <i>italicized text</i> —Tier 3)	Category of measurement	Potential aggregations and scales	Methodological guidance
a. Vector-borne diseases		<ul style="list-style-type: none"> • By disease or condition 	WHO
1. Incidence	Number	<ul style="list-style-type: none"> • National • Subnational 	
2. Prevalence	Number	<ul style="list-style-type: none"> • Urban • Rural 	
3. Mortality	Number	<ul style="list-style-type: none"> • By gender 	
4. <i>Loss of work days</i>	Number	<ul style="list-style-type: none"> • By age group 	
5. <i>Estimates of economic cost in monetary terms</i>	Currency	<ul style="list-style-type: none"> • By time period 	

Sub-Component 5.2: Environmental Health

Topic 5.2.4: Health problems associated with excessive UV radiation exposure

- This topic includes statistics on the incidence and prevalence of melanoma and other skin cancers, the incidence and prevalence of cataracts associated with excessive and prolonged UV radiation exposure.
- Statistics on workdays lost and economic costs in monetary terms.
- The attributable portion and burden of diseases, premature deaths and DALYs associated with excessive UV radiation exposure.

Statistics and related information for Topic 5.2.4

Component 5: Human Settlements and Environmental Health			
Subcomponent 5.2: Environmental Health			
Topic 5.2.4: Health problems associated with excessive UV radiation exposure			
Statistics and related information			
(Bold text —Core Set/Tier 1; regular text—Tier 2; <i>italicized text</i> —Tier 3)	Category of measurement	Potential aggregations and scales	Methodological guidance
a. Problems associated with excessive UV radiation exposure		<ul style="list-style-type: none"> • By disease or condition • National 	WHO
1. <i>Incidence</i>	Number	<ul style="list-style-type: none"> • Subnational 	
2. <i>Prevalence</i>	Number	<ul style="list-style-type: none"> • Urban • Rural 	
3. <i>Loss of work days</i>	Number	<ul style="list-style-type: none"> • By gender 	
4. <i>Estimates of economic cost in monetary terms</i>	Currency	<ul style="list-style-type: none"> • By age group • By time period 	

Sub-Component 5.2: Environmental Health

Topic 5.2.5: Toxic substance- and nuclear radiation-related diseases and conditions

- This topic includes diseases and conditions associated with exposure to toxic substances, residuals and/or waste that result from localized emissions.
- Toxic substances include toxic pesticides (e.g., pesticides that have teratogenic, carcinogenic, tumorigenic and/or mutagenic effects), and toxic industrial chemicals (e.g., lead, arsenic, mercury and nickel, among others).
- Toxic substance-related diseases and health problems include: chronic illnesses of the respiratory system (such as pneumonia, upper respiratory diseases, asthma and chronic obstructive pulmonary diseases), cancer, infertility, and congenital anomalies or malformations.

Sources of epidemiological data:

The sanitation or health authority, Nuclear regulatory agencies and Environmental protection agencies.

Sub-Component 5.2: Environmental Health

Topic 5.2.5: Toxic substance- and nuclear radiation-related diseases and conditions

Statistics and related information for Topic 5.2.5

Component 5: Human Settlements and Environmental Health			
Subcomponent 5.2: Environmental Health			
Topic 5.2.5: Toxic substance- and nuclear radiation-related diseases and conditions			
Statistics and related information			
(Bold text —Core Set/Tier 1; regular text—Tier 2; <i>italicized text</i> —Tier 3)	Category of measurement	Potential aggregations and scales	Methodological guidance
a. Toxic substance- and nuclear radiation-related diseases and conditions		<ul style="list-style-type: none"> • By category of toxic substance • By disease or condition 	WHO
1. Incidence	Number	<ul style="list-style-type: none"> • National 	
2. Prevalence	Number	<ul style="list-style-type: none"> • Subnational 	
3. <i>Loss of work days</i>	Number	<ul style="list-style-type: none"> • Urban • Rural 	
4. <i>Estimates of economic cost in monetary terms</i>	Currency	<ul style="list-style-type: none"> • By gender • By age group 	

Q & A

Human Settlements and Environmental Health

Exercise

Component 5: Human Settlements and Environmental Health

Statistics and Related Information		Category of Measurement	Potential Aggregations and Scales	Relevance of Statistic at the National Level (High /Medium /Low/Not Relevant/Not Applicable)	Priority for National Data Collection (High /Medium /Low/Not a Priority)	Availability of Statistic at the National Level (Identical/Similar/Not Available)	Component 5: Human Settlements and Environmental Health										Main Reasons why Statistic is not Available Check all that apply								
Bold Text - Core Set/Tier 1 Regular Text - Tier 2 <i>Italicized Text - Tier 3</i>							Type of Data Source	Periodicity (Annual/Monthly/Daily/Hourly/Other)	Earliest Year Available	Latest Year Available	Format of Statistic (Publication/Excel/Database/Website/Other)	Unit of Measurement	Resource constraints			Methodological/Technical difficulty in data collection			Insufficient quality			Inaccessibility			Lack of institutional set-up /coordination
		NSO	Annual	2010	2010	Excel	Household																		
		Ministry of Environment or equivalent institution	National	Annual	2010	Excel	National																		
		Other (specify):	Regional	Annual	2010	Excel	Regional																		
			International	Annual	2010	Excel	International																		

Human Settlements and Environmental Health

Primary institution (s) responsible for the following statistics

Sub-component 5.1: Human Settlements	
Topic 5.1.2: Access to selected basic services	
Statistics	Institution (s)
a. Population using an improved drinking water source	
b. Population using an improved sanitation facility	
c. Population served by municipal waste collection	
e. Population connected to wastewater treatment	
f. Population supplied by water supply industry	
Topic 5.1.5: Environmental concerns specific to urban settlements	
c. Number of private and public vehicles	

Human Settlements and Environmental Health

Primary institution (s) responsible for the following statistics

Topic 5.2.2: Water-related diseases and conditions	
Statistics	Institution (s)
a.1. Incidence	
a.2. Prevalence	
a.3. Mortality	
Topic 5.2.3: Vector-borne diseases	
a.1. Incidence	
a.2. Prevalence	
a.3. Mortality	

Thank you



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