

## **VIETNAM**

### **Miglioramento del Sistema statistico**

#### **PIANO OPERATIVO GENERALE** **(General Operational Plan)**

#### **Premessa**

Il Piano Operativo Generale del progetto di seguito riportato è stato predisposto in stretta collaborazione con il General Statistical Office del Vietnam, controparte diretta del Progetto, nel corso della missione condotta ad Hanoi dal 4 all'8 giugno 2018.

Il Piano individua le principali linee di attività e modalità di intervento in cui si articolerà il progetto, assegna a ciascuna di esse le risorse individuate nei limiti del finanziamento totale previsto dalla Convenzione Istat/AICS<sup>1</sup> e stabilisce gli obiettivi e la tempistica delle azioni concordate e stabilite nell'arco della durata del progetto (36 mesi).

Il piano, riferito esclusivamente alla parte di finanziamento affidata all'Istat, illustra l'approccio, gli strumenti e le metodologie che verranno utilizzati al fine di trasmettere le conoscenze statistiche necessarie al GSO per rafforzare le sue capacità statistiche ed istituzionali. Tutto ciò al fine di garantire la sostenibilità e la replicabilità del progetto nonché per aiutare l'Istituto ad assumere il ruolo di coordinamento del Sistema Statistico Nazionale previsto dalla vigente legge statistica del paese.

Eventuali aggiustamenti a tale piano che si rendessero necessari nel corso del triennio di implementazione del progetto verranno concordati con il GSO e comunicati tempestivamente all'AICS.

Il Piano viene redatto e presentato, così come gli altri documenti di progetto, in inglese per agevolarne la comprensione alla controparte.

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<sup>1</sup> Reg. Istat n. 22 del 12/4/2018, Rep. AICS n. 215 del 23/4/2018.

## **LIST of ACRONYMS**

AICS	Italian Agency for Development Cooperation
ASEAN	Association of Southeast Asian Nations
CC	Component Coordinator
IOs	International Organisations
GSO	General Statistical Office of Vietnam
Istat	Italian National Institute of Statistics
MDGs	United Nations Millennium Development Goals
MPI	Ministry of Planning and Investment
PM	Project Manager
PMB	Project Management Board
SEDS	Socio - Economic Development Strategy
VDGs	Viet Nam's Development Goals
VSS	Vietnamese Statistical System
WB	World Bank
WTO	World Trade Organisation

## General Operational Plan

Country	<b>Vietnam</b>
Project name	<b>Improvement of the National Statistical System</b>
Duration	<b>36 months (26 April 2018 – 25 April 2021)</b>
Implementing Agency	<b>Istat – Italian National Institute of statistics</b>

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## 1. General overview

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Since the end of the eighties, Vietnam has experienced economic growth rates that have led the country from being one of those with lower income per capita (240 dollars in 1985) to one of those with a middle income (2100 dollars in 2015).

After the decision to adopt political and economic reforms, known as *Đổi Mới*, approved by the Sixth National Congress of the Communist Party in December 1986, the Vietnamese Government formulated and implemented two phases of the so-called Socio-Economic Development Strategy / SEDS (1991-2000 and 2001-2010).

In 1992 the Constitution of the Country has been modified, allowing the private sector to enter the economy.

In 1995 Vietnam became a member of the Association of Southeast Asian Nations (ASEAN).

In 2001 an important bilateral trade agreement was signed between the United States and Vietnam, which entered as a permanent member of the WTO in 2007.

In 2010 the Vietnamese Government started the third phase of SEDS, with the aim of making the country 'modernized and industrialized' by 2020. In the last three decades, the gross domestic product has grown at an annual rate of more than 5% in the nineties and 6% in the 2000s, thanks, according to analysts, to the combination of economic reforms, integration in the world economy and macroeconomic stability.

Thanks to economic growth and specific government programs (such as the Comprehensive Poverty Reduction and Growth Strategy, approved in 2002), Vietnam has achieved remarkable success in reducing poverty while controlling inequality<sup>2</sup>.

Compared to countries with similar per capita income, the Vietnamese population is more educated and has a higher life expectancy at birth, reaching part of the objectives of the Orientation for a Sustainable Development Strategy (also known as Viet Nam's Agenda 21, proposed in 2004).

Based on the United Nations Millennium Development Goals (MDGs), the Vietnamese government has indicated 12 own development goals (Viet Nam's Development Goals or VDGs), which address social inclusion and poverty reduction. The VDGs are considered as a constituent of the ten-year Socio-Economic Development Strategy and are measured through the achievement of specific targets.

Despite the undeniable successes, some areas remain problematic and unresolved and the progress achieved and measured at the aggregate level conceals profound disparities at the level of ethnic groups and provinces.

This initiative, through technical assistance activities at the Vietnamese General Statistical Office (GSO), will support the decision-making processes and their effectiveness evaluation, such as the development of indicators for monitoring and evaluation of the Economic and Social Development Strategy and will allow the updating of the methodologies for the preparation of the most relevant statistical surveys.

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<sup>2</sup> "Climbing the Ladder – Poverty reduction and shared prosperity in Vietnam" – World Bank 2018

In particular, it will enable the strengthening of the GSO's institutional and technical capacities in data production in key sectors such as energy, environment, climate change, dissemination and ICT. The initiative will make it possible to improve the availability and quality of data relating to the energy and environmental sector, allowing better informed and more responsible policy choices in this area. The energy sector is, in fact, the object of great attention both from the local government and from the donor countries, from the IOs and the private sector, considering that the demand for electricity is constantly increasing.

The strengthening of the statistical sector is one of the objectives of the local authorities and the Prime Minister of Vietnam, with Decision n. 1803 dated 18 October 2011, approved the *"Viet Nam Statistics Development Strategy, period 2011 – 2020 and a vision for 2030"* whose objective is: *"Viet Nam Statistics should have a rapid and sustainable development based on improving the organizational system, ensuring enough quantity and improved quality of the manpower, applying synchronously advanced statistical methodology and strengthening the use of modern technology; coming into being a centralized, uniform, smoothly-running and effective national statistical information system with more and more comprehensive and qualified information; trying to make Viet Nam Statistics achieve good level by 2020 and advanced level by 2030 in the region."*

The first Department for Statistics in Vietnam was established on May 6, 1946 within the National Economic Ministry.

During the last six decades the ministry for statistics has undergone several changes until the establishment of the current General Statistics Office within the Ministry of Planning and Investment (MPI), whose functions are regulated by the statistical law n. 89/2015/QH13. This law determines the GSO's mandate by defining the statistical activities, the use of statistical information and the consequent rights, obligations and responsibilities of the institutions in this framework.

GSO is organized into a vertical system from central to local administrative level and consist of:

1. GSO headquarter
2. Provincial statistical offices
3. District statistical offices

GSO, due to the importance attributed to statistics at government level, needs to strengthen its statistical system, acquiring knowledge, techniques, concepts, methodologies, classifications and best practices internationally adopted and recognized in compliance with the fundamental principles of official statistics of the United Nations.

## **2. Project key features**

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### *Overall objective*

To contribute to the strengthening of the Statistical System in Vietnam in order to improve the statistical information base necessary to drive the development process of the country.

### *Specific objective*

To support GSO with technical assistance to enhance their statistical capacity to develop, produce and disseminate up-dated and reliable information on topics of crucial importance for the country and the international community such as Energy, Environment and climate change.

### *Beneficiary*

The staff of the GSO is the direct beneficiary of this Project.

Indirectly, the statistical divisions of all Vietnamese Ministries, Governmental and Local bodies, Universities and the International Community (bilateral donors and IOs) will benefit from the intervention having available up-to-date and reliable statistical information.

In addition, even if indirectly, the Vietnamese population will benefit from the intervention as the government policies based on the main statistical indicators will allow to better drive the country's processes, plans and development programs.

## **2.1. Expected results and activities**

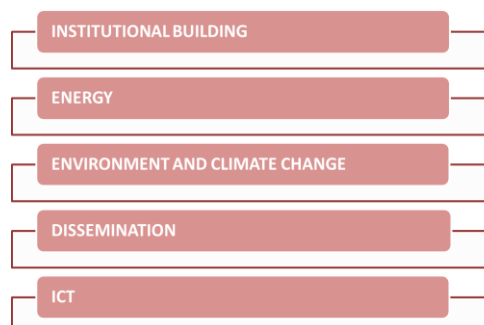
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### **Expected results:**

1. Enhancement of Institutional building of GSO
2. Improvement of the performances of the Department for the industrial statistics with the aim to increase its capacity to produce quality data on Energy
3. Strengthening the capacity of the Department for Socio-Environmental Statistics to produce environmental statistics
4. Strengthen the GSO's capability to disseminate statistics also through the use of the most modern IT tools
5. Improve the services provided by the ICT Department both to the GSO's internal structure and to external users.

### **Activities:**

For each result a specific component of the project was identified as follows:



For each of these components, as shows in the following pages, specific activities have been detailed taking into accounts GSO's needs, the current situation of statistical production and dissemination in the Vietnamese Statistical System, the expected results and related output.

Some general rules are assumed in order to guarantee the effectiveness of each mission:

- The project foreseen technical assistance and support to GSO on the specific activities defined in the work-plan;
- the dates of each mission will be agreed jointly by Istat and GSO;
- as general indication missions will be not planned for the months of February and August, holidays periods respectively for Vietnam and Italy;
- for each mission, Terms of Reference (ToR) will be prepared by Istat and written agreed by GSO relevant component's coordinators for acceptance. The ToR will clear list: the name of the expert/s in charge of the mission, the activity/ies to carry out, the date of the mission, the number of working days, the mission objective/s, the expected results, the assumption and the name of the GSO counterpart/s (relevant expert/s);
- GSO will ensure the continuous presence and commitment of relevant experts for the whole duration of each mission.

## **Component 1 – Institutional building**



The National statistical Law (89/2015/QH13) clearly recognized the GSO as the Vietnamese National Statistical Institute under the Ministry of Planning and Investment assigning it several new tasks. The GSO is strongly committed to carrying out its role of coordinating the institutions responsible for the production of statistical data within the National Statistical System. A key step to enhance the coordination role is mapping available data within the national statistical system and its owners, thus defining a clear picture on who produces what and how, not only among different departments within GSO but also its visibility among other data producers and providers in the System. The mapping exercise is strongly needed but synergies with other components, such as "Energy" and "Environment and climate change", have to be sought of too. To reinforce the dialogue with other producers and providers GSO also needs: a) to develop procedures and tools to assess the activities in the National Statistical Survey Program and Sectorial Statistical Indicator System carried out by other Ministries, b) to carry on consultation processes aimed to update the Program taking into accounts user needs, c) to carry out sensitization activities for other producers and stakeholders.

Integration of data from archives with survey data on characteristics, events, behaviors and attitudes gains an important value added from the synergy of different sources. Access to the administrative data owned by other producers in the National statistical system is essential.

GSO recognizes the importance of integrating sources that work effectively in the institute but it is necessary to foster the access to administrative data, by sharing data within the national statistical system according to the legislation in force, and to enhance tools which contribute to the appraisal of statistical activities which have to meet certain quality standards considering GSO coordination role provided by the Statistical law. The overall informative asset they possess can be increased and better used by integrating administrative and survey information. Considering the GSO role it is necessary that specific training is implemented and synergy with the other components sought of in order to better respond to the new challenges of resources management, organizational changes, the use of administrative sources, development of statistical archives and analysis and forecast.

The future development of reorganization of data collection and ICT departments in the GSO needs to take advantage of an exchange of experience with Istat about its Modernization Program with a focus on the organization/function/tasks of data collection and ICT in Istat.

The project resources allocated to this Component are **52 working days**.



Activities	Year 1				Year 2				Year 3			
	Quarter				Quarter				Quarter			
	1	2	3	4	1	2	3	4	1	2	3	4
1. Institutional Building												
<b>1.0 Assessment</b>	5											
<b>1.1. Improving institutional buildings and statistical coordination</b>	0	0	5	0	0	5	0	0	5	0	0	0
1.1.1 Analysis of the current role of GSO and definition of elements for Mapping of sources and responsibilities of other producers and providers			1									
1.1.2 Support in developing mechanism/procedure and tools to assess of activities in the National Statistical Survey Program and Sectoral Statistical Indicator System by other Ministries			4			5			5			
<b>1.2. Definition of Tools for planning and monitoring and sensitization actions</b>	0	0	0	0	0	5	0	0	0	0	0	0
1.2.1 Sharing experience to develop a consultation process (users - producers) to update the National statistical Program						1						
1.2.2 Development of mechanism to enhance periodical dialogue with Ministries and other producers defining permanent thematic group and consultation process to update National statistical program(case study on energy and environment)						3						
1.2.3 Development of actions of sensitization on the coordination role of GSO (planning of events, workshop/seminars/etc.) including the National conference						1						
<b>1.3. Enhance quality assessment</b>	0	0	0	5	0	0	0	0	0	5	0	0
1.3.1 Sharing on structure, functioning of Quality system				1								
1.3.2 Support on developing quality assurance framework and guidelines				4					5			
<b>1.4. Support on implementation of Reorganization of data collection and ICT</b>	0	0	0	0	1	1	0	0	0	0	0	0
1.4.1 Sharing experience on function/tasks of data collection					1							
1.4.2 Sharing experience on function/tasks of ICT						1						
<b>1.5. Enhancements of Management skills</b>	0	0	0	5	5	0	0	5	0	0	0	0
1.5.1 Support in training on leadership, change management, quality management....								5				
1.5.2 Support for training on analysis and forecast				5								
1.5.3 Support on training for the use of administrative sources, integration of different sources (including example of use of Big Data)					5							
<b>TOTAL WORKING DAYS PER QUARTERLY PERIOD</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>10</b>	<b>6</b>	<b>11</b>	<b>0</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>0</b>



## Component 2 – Energy



The thematic component on energy is of utmost importance for the Statistical System of Vietnam. In order to allow to strengthen the system of energy statistics it was defined a set of activities having as general aim to produce figures and indicators compliant as possible to the national and international demand of users/stakeholder, improving data capturing and data processing, data and metadata dissemination.

The support will start from some lines of activity of fundamental importance such as:

- the mapping of Statistical Needs and Conceptual Framework aiming to define the list of the main and specific objectives of energy statistics;
- the list of National and International Regulations and classifications to be compliant with;
- the achievement of a stronger cooperation and exchange of data among involved institutions and the central coordinator (GSO) also defining the consultation/information strategy.

To reach this result several actions will be addressed to survey methodologies to improve the survey design, the design of sample, and to give support in designing and implementing the questionnaires.

At the heart of the activities of the planned support, will be the enhancement of the methods to produce balances, accounts and indicators on energy.

The results achievable within this component depend strongly with those of the other components, in particular Institutional building, Dissemination, ICT.

Some activities, in particular those relating to energy balances, to the integration of data from multiple suppliers, and to the strengthening of data on renewable energy statistics, could be carried out, in close cooperation with Istat who will coordinate all the interventions, by other institutions operating within the National Statistical System of Italy (activities: 2.1.3, 2.1.5, 2.1.7).

The project resources allocated to this Component are **56 working days**.



Activities	Year 1				Year 2				Year 3			
	Quarter				Quarter				Quarter			
2. Energy	1	2	3	4	1	2	3	4	1	2	3	4
<b>2.0 Assessment</b>	5											
<b>2.1 General aim for the energy component: strengthen the system of energy statistics producing figures and indicators according to the national and international demand of users/stakeholder. Improve data capturing and data processing, data and metadata dissemination</b>	0	0	5	0	1	5	0	5	5	5	0	0
2.1.1 Mapping of Statistical Needs and Conceptual Framework: define the list of the main and of the specific objectives of energy statistics. List of National and International Regulations and classifications to be compliant with			5									

Activities	Year 1				Year 2				Year 3			
	Quarter				Quarter				Quarter			
2. Energy	1	2	3	4	1	2	3	4	1	2	3	4
2.1.2 Define a strategy to strengthen cooperation and exchange of data Establishing the roles of each Institution and the central coordination (GSO) Define the consultation/information strategy among involved institutions. Establish legal obligations for energy supply companies to provide data						5						
2.1.3 From a single energy supplier to many energy suppliers: strategies and tools to collect and process data from many energy suppliers (*)						0						
2.1.4 Integration of data sources: double/cross checking. Data Benchmarking. Missing data treatment and estimation models for not available data					1							
2.1.5 Methods for producing annual balance at national level on quantities for crude oil, petroleum products, natural gas and manufactures gases, electricity and derived heat, solid fossil fuels, renewables and wastes covering the full spectrum of the energy sector from supply through transformation to final consumption by sector and fuel type. Also, annual imports and exports data of various energy carriers by country of origin and destination, as well as infrastructure information. (*)								3	2			
2.1.6 National accounts and other economic indicators on energy								2	3			
2.1.7 Special focus on methods to improve the quality of renewable energy data (*)									0			
2.1.8 Metadata, quality measures										5		
<b>2.2 Survey methodologies</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
2.2.1 Sample Methods. Data capturing strategies. Size of Samples and multichannel data collection for energy statistics.			10									
2.2.2 Revision of (users) questionnaires: households questionnaire and enterprises questionnaires				10								
2.2.3 Support for the design and assistance on the implementation of a pilot survey							5					
<b>TOTAL WORKING DAYS PER QUARTERLY PERIOD</b>	<b>5</b>	<b>0</b>	<b>15</b>	<b>10</b>	<b>1</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>0</b>

(\*) For these activities, which will be carried out in cooperation with other Italian Public Institutions, the working days are not considered because they will be imputed on the budget line "Fondo esperti".

### Component 3 – Environment and climate change



As far as the "Environment and climate change" is concerned it is important to take in account that Environment statistics and climate change are themes that has to be considered rather new for the Vietnamese Statistical office and that requires an innovative approach.

Three macro-areas have been identified for this component:

3.1 Technical assistance for environment statistics and some feasible environment indicators considering SDGs

3.2. Support for the creation of a set of feasible indicators for the measurement of climate change, extreme events and disasters considering SDGs and Sendai

### 3.3 Technical assistance for the development of some feasible indicators on the urban environment considering SDGs

During the meetings that were organized with GSO it was immediate clear that is important to consider the international frameworks with a focus on SDGs and Sendai.

One of the crucial points for all the areas is the necessity to assist GSO to prepare a mapping of the main objectives and of some feasible indicators considering the National framework and the actual sources. The international frameworks SDGs and Sendai are essential to guarantee the developing of metadata and of some feasible indicators useful to face with national objective and also valid to satisfy international databases.

For all the macro-areas it is very important to work considering an integrate approach within the GSO and also with the other stakeholders or data-producers (ministries or other institutions): for this reason it is important to support GSO in implementing the work also organizing thematic meeting/group. As far as the methods is concerned, the use of administrative sources is useful, and then, a specific support has to be dedicated to this. Sendai framework and best practices will be considered for climate change and extreme events and disasters.

Support to the developing of some feasible statistical indicators is necessary with special focus on: extreme events and disasters. The assistance for reports on the feasible indicators could complete the process.

A special request has been individuated related to Environmental accounts.

The project resources allocated to this Component are **63 working days**.



Activities	Year 1				Year 2				Year 3			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
3. Environment and climate change	1	2	3	4	1	2	3	4	1	2	3	4
<b>3.0 Assessment</b>	5											
<b>3.1 Technical assistance for environment statistics and some feasible environment indicators considering SDGs</b>	0	0	5	0	3	0	1	5	0	0	5	0
3.1.1 Mapping of the environmental statistical needs: assistance for defining the main objectives and some feasible indicators considering the National framework and the actual sources			4				1					
3.1.2 Support for developing metadata and methods (surveys, archives) considering the international Frameworks (FDES, SDGs) and organizing thematic meeting/group. Assistance for specific household questionnaires (for example: waste)			1		1			2				
3.1.3 Support to the developing of some feasible specific environmental indicators considering the international frameworks (SDGs).					2			3			2	
3.1.4 Assistance for designing a report (indicators, graphs, glossary, metadata, quality)											3	
<b>3.2. Support for the creation of a set of indicators for the measurement of climate change, extreme events and disasters considering SDGs and Sendai</b>	0	0	0	5	2	5	4	0	5	0	0	5
3.2.1 Mapping of the statistical needs on Climate change, extreme events and disasters: assistance for defining the main objectives and some feasible indicators considering the National framework and current sources				4		1	1					
3.2.2 Support for developing metadata, definitions and methods (surveys and archives) focusing on SDGs, Sendai, best practices and organizing thematic meeting groups				1	1	2	2					
3.2.3 Support to developing of some feasible statistical indicators: special focus on extreme events and disasters considering SDGs and Sendai					1	2	1					2
3.2.4 Assistance for designing a report on extreme events and disasters (indicators, graphs, glossary, metadata, quality)												3
3.2.5 Environmental accounts: general framework									5			

Activities	Year 1				Year 2				Year 3			
	Quarter				Quarter				Quarter			
3. Environment and climate change	1	2	3	4	1	2	3	4	1	2	3	4
<b>3.3 Technical assistance for the development of some feasible indicators on the urban environment considering SDGs</b>	0	0	5	0	3	0	0	0	0	5	0	0
3.3.1 Mapping of the urban indicators considering national framework and current sources			4		1							
3.3.2 Support for developing metadata, definitions and methods (surveys and archives) considering the international Frameworks focus on SDGs			1		1					1		
3.3.3 Support for development of some urban feasible statistical indicators considering the international frameworks focus on SDGs					1					4		
<b>TOTAL WORKING DAYS PER QUARTERLY PERIOD</b>	<b>5</b>	<b>0</b>	<b>10</b>	<b>5</b>	<b>8</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>

## Component 4 – Dissemination



GSO needs to improve dissemination through the web. In 2017 a survey on statistical data use was conducted and the results state that the greatest part of users prefer get statistical information from the web. A new, efficient and friendly official website could also play an important role to promote the awareness of GSO in the country and abroad.

That's why the component "Dissemination" of the project will focus on the updating and improvement of the official website of the GSO. Therefore, support for a logical and computer architecture as well as for a graphic design will be necessary from Istat to GSO to build a new institutional website.

A focus on data visualization will be also useful for updating both the website and the printed publications, making data more easy to understand, especially for non-professional users. Support to build a new database for dissemination, to be connected to the website, will also be necessary to facilitate professional users to get data.

Finally, a special attention by the Istat experts must be given to the dissemination of energy data. The production of energy data is indeed an important part of the project and dissemination must follow. The project resources allocated to this component are **60 working days**.

Activities	Year 1				Year 2				Year 3			
	Quarter				Quarter				Quarter			
4. Dissemination	1	2	3	4	1	2	3	4	1	2	3	4
<b>4.0 Assessment</b>	5											
<b>4.1 Support of web development and web design</b>	0	0	10	10	5	5	0	0	0	0	0	0
4.1.1 Support in web architecture			5		5							
4.1.2 Support in using a new CMS for a responsive website			3									
4.1.3 New layout for the web site			2									
4.1.4 Support in improving the new web site				10	5							
<b>4.2 Support for data visualisation</b>	0	0	0	5	0	0	0	0	0	0	0	0
4.2.1 Support and training in using tools for data visualization				5								
<b>4.3 Support for a new database for dissemination</b>	0	0	0	0	0	0	0	0	5	5	5	0
4.3.1 Support in designing a new database for dissemination									5			
4.3.2 Support in developing a new database for dissemination										5	5	
<b>4.4 Support for dissemination of statistics on Energy</b>	0	0	0	0	0	0	0	0	0	0	5	0
4.4.1 Support to the Dissemination of Statistics on Energy (e.g. web-dissemination, e-yearbook, etc.)											5	
<b>TOTAL WORKING DAYS PER QUARTERLY PERIOD</b>	<b>5</b>	<b>0</b>	<b>10</b>	<b>15</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>5</b>	<b>10</b>	<b>0</b>

## Component 5 – ICT



The intervention in IT is based on the GSO needs: the priority is on the improvement of statistical input channels. The reorganization of GSO will bring to the integrated management of channels like surveys, administrative data and data coming from ministries. ICT sector must support those channels with the implementation of a new Input Data Center that can manage all those data in integrated way, connected to Classifications and to shared Metadata.

In view of the Vietnamese Population and Housing Census which will be carried out on April 2019, GSO expressed the need to be supported in the integration between data coming from CSPro and current Data Bases (SQL Server). The experience in this process, acquired by Istat during the recent project in Ethiopia, should be very useful in this context.

Other identified priorities are:

- improve the Security of GSO ICT environment, providing also training on that
- share the knowledge about the use of Big Data in Official Statistics

For the hardware acquisition, considering the current available hardware at GSO and the needs coming from the project implementation, it is suggested to buy three servers for the following purposes:


- one for the deployment of the Private Cloud for 500-600 employees
- one for the installation of the new Web server to be used also for the Dissemination Data Base
- one to store the Archives and to manage the new Input Data Center

Istat will support AICS Hanoi for the preparation of the technical document for the launch of the bid for the purchase of the hardware.

The project resources allocated to this Component are **64 working days**.



Activities	Year 1				Year 2				Year 3			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
5. ICT	1	2	3	4	1	2	3	4	1	2	3	4
<b>5.0 Assessment</b>	5											
<b>5.1 Input Data Center</b>	0	5	0	5	0	4	0	5	0	0	0	0
5.1.1 Present ISTAT experience on Metadata, Input management Classifications		5										
5.1.2 Support for Design the new Input Data Center starting with pilot on specific domain				5		4		5				
<b>5.2 Security</b>	0	0	0	5	0	0	0	0	5	0	0	0
5.2.1 Private Cloud configuration and implementation				2								
5.2.2 Firewall configuration re-design				3								
5.2.3 Decision about the usage of money for hardware/software				M								
5.2.4 Support on Security: Mail server, mobile, antiviruses									5			



Activities	Year 1				Year 2				Year 3			
	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter
5. ICT	1	2	3	4	1	2	3	4	1	2	3	4
<b>5.3 Support for Census</b>	0	5	5	5	0	0	0	0	0	0	0	0
5.3.1 ISTAT experiences in IT solutions for Census		5										
5.3.2 ISTAT and GSO tools and Databases migration/optimization for Census			5									
5.3.3 IT Support for Census				5								
<b>5.4 Training on Security and System Maintenance</b>	0	0	5	0	5	0	0	0	0	0	0	0
5.4.1 Training on Security			5									
5.4.2 Training on System Maintenance					5							
<b>5.5 Big Data</b>	0	0	0	0	0	5	0	0	0	0	0	0
5.5.1 Training on Big Data and its tools						5						
<b>TOTAL WORKING DAYS PER QUARTERLY PERIOD</b>	5	10	10	15	5	9	0	5	5	0	0	0

**Technical project documentation.** Specific care will be devoted to the drafting and sharing of documentation for all the activities. This will represent key deliverables of the project and remain as a reference for GSO for the future, serving the sharing and wide dissemination of improvements, innovations introduced and results, and therefore their re-use, ownership and sustainability. Therefore, in addition to the results listed for each Component, overall project deliverables will be:

- Mission reports;
- Recommendations and guidelines for technical assistance activities;
- Documentation and materials of trainings and study visits;
- Six-months reports and Final report.

## 2.2. Resources and implementation

According to the budget assigned, Istat will provide technical assistance, training and training on the job to GSO staff for a total of 59 working week/person, equal to 295 working days, plus 9 working week/person for coordination and management during the 36 months of project duration. In addition, 3 study visits are foreseen during the project time life.

As for concrete implementation, the project results will be achieved through:

**Technical assistance missions.** Missions of Istat's experts specifically selected for each activity will form an important part of the scope of work in this project. At the beginning of the project the Component Coordinators will carry out assessment/ fact-finding missions to define an outline of all specific topics to be covered during the project implementation.

The main format of all our Technical Assistance and most of the training activities is "hands on" and "on the job", hence organizing concrete and practical missions around defined problems and presenting tangible results. It is important to deliver sustainable results that are jointly produced with the Vietnamese counterparts who are ready to continue the work independently.

For reasons of transparency, sustainability and efficiency, all activities will be coordinated by experienced component coordinator of the counterparts throughout the project.

**Tailor made training programmes.** In addition to the “on the job” approach proposed for TA missions, specific training activities will be organized. These activities will follow mainly two objectives: i) to provide conceptual and methodological capabilities according to international standards and recommendations; ii) to transfer specific and technical know-how.

Training activities will be detailed and organized jointly with the beneficiary after the analysis of the training needs.

The following aspects will be taken into consideration in the organisation of the training programmes:

- Further analysis on current capabilities and skills of beneficiary staff
- Specific definition of training needs
- Definition of the list of participants
- Preparation of ToRs for trainers
- Selection of Istat’s trainers
- Preparation of and decision on content of training materials.

As for the methodology to be used during the trainings, a special, tailor-made mix of training methodologies will be used, including the following main elements:

- Theoretical knowledge, concepts, models
- Analysis of case studies, international standards and best practices
- Practical examples and exercises.

**Study visits.** Study visits are an important part of the knowledge transfer process in this project. They will allow GSO to acquire best practices and to have direct experience about how Istat daily works in the sector targeted by this project and to illustrate the innovations introduced. The subjects and topics of the study visits will be agreed with GSO at a later stage.

**Small-scale pilot exercises.** Based on the GSO indications and feasibility, Istat experts will provide advice to in preparing small-scale pilots. A pilot is the best means for GSO to acquire an understanding how a specific process can be performed using the suitable tools, and to develop the capacity of staff within the organisation who may be involved in subsequent full-scale implementation. Practical hints/advice for developing a pilot exercise based on previous experiences from other countries will be provided.

**Workshops and seminars.** When relevant, and in agreement with GSO and AICS, events such as workshops and seminars could be organized. Such events can support project visibility, promote GSO role and contribute to the overall achievement of results, especially as regards cooperation with other national and international actors, or when particular developments or innovations introduced may be promoted and exchanged as best practices.

Senior and junior experts from Istat, with the proper professional and technical requirements, will carry out the activities as per the work-plan agreed with the counterpart and harmonized with other international support, taking into proper account the absorption capacity of GSO. Throughout project life, Istat will also ensure distance support and assistance in between missions.

Institutional building will be based on the introduction and application of methodologies and techniques appropriate for the national context and aligned with international standards and best practices.

Together with the beneficiary, proper attention will be also paid to the identification of the resources that GSO involve in the project. Appropriate commitment and availability of the officials and staff is essential to ensure effectiveness, ownership and sustainability of results and outcomes, especially in a situation of general understaffing as it is the case for GSO.

The allocation of resources/missions is liable to changes against newly arisen needs or re-prioritization of needs, that will be assessed and agreed with the counterpart.

### **2.3. Organisation and management**

For the management of the project a project manager from each side will be appointed with the duty to follow the overall implementation of the activities.

Under the technical point of view, each side will identify a Component Coordinator (CC) which will set a pool of experts for each component. This aims at streamlining workflows and communication and decisional processes and channels avoiding redundancies.

<b>Project Managers</b>	<b>Istat</b>	<b>GSO</b>
	Ms. Roberta Fontana	Mrs. Nguyen Thi Huong
<b>Components</b>	<b>Istat CC</b>	<b>GSO CC</b>
Institutional Building	Ms. Marina Gandolfo	Mr. Nguyen Tri Duy
Energy	Mr. Fabio Crescenzi	Mr. Pham Dinh Thuy
Environment and Climate Change	Ms. Angela Ferruzza	Mr. Do Anh Kiem
Dissemination	Ms. Cristiana Conti	Mr. Dau Ngoc Hung
ICT	Mr. Carlo Vaccari	Mr. Cao Van Hoach

A Project Management Board (PMB) will be established with the aim to steer and monitor the project progresses and its results, to assess and approve possible changes (newly arisen needs and /or adjustments), to assure smooth and effective implementation.

It will be composed by AICS, GSO and Istat’s representatives and will meet regularly on a 6-monthly basis in Hanoi.

Based on the technical inputs provided by the project managers and component coordinators, the PMB will produce and approve 6-monthly reports detailing activities, progresses and planning for next reference period.



The reports will include a financial section for submission and approval from the Italian Agency for Development Cooperation.

### **3. Coordination with other international support and actors**

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“Energy” and “Environment and climate change” are crucial aspects in Vietnam and many international donors are working in the country to support the Vietnamese Institutions in developing good policies on these themes.

Therefore it is very important to know the different on-going initiatives and to work in close cooperation with them.

AICS Hanoi is funding some projects in the framework of “Energy” and “Environment and Climate Change” and, in particular:

- 1) Project: “Debt – for – development swap programme”. The programme originates from the agreement between Vietnam and Italy to convert the existing debt into development projects in Vietnam. As Vietnam is among the 10<sup>th</sup> countries in the world most affected by the effects of Climate Change, the debt-swap fund will finance projects focusing on sustainable energy, energy efficiency, sustainable water resources management and saline intrusion.
- 2) Project: “Improving the Flood forecasting and warning system in Vietnam – Phase II”. Building on the experience gained during the first phase, reducing the vulnerability of local populations to flooding. This project is aimed to the improvement of the flood forecasting and warning system through supply and installation of equipment for 114 automatic stations capable to measure remotely hydrological, meteorological, oceanographic and rainfall data; provision of equipment to 4 centers for management of data, forecast and warnings at the provincial, regional and national level; provision of training for specialized staff to properly manage the new hydro-meteorological network.

Other international donors are also working in these fields. A first contact has been established with the European Delegation to Vietnam that is coordinating the different interventions on the sector of Energy and that has published a report on “Enhance Energy Data and Statistics of Vietnam in view of the Establishment of an Energy Information System in Vietnam”.

The EU Delegation is organizing some thematic partnership groups on Energy and Istat is invited to participate, while GSO is member of the Energy Statistics Working Group.

GIZ (the German cooperation) is also working with a big team on the sector of Energy.

Regarding “Environment and Climate change”, World Bank is supporting the Vietnamese Government in the management of environment risks linked to extreme climate events and is also carrying out some activities related to the quality of air and solid waste in the country.

## 4. Assumption and risks

It should be pointed out here that, as known, the effective implementation of any project relies on a set of different factors, not entirely under the direct control of the project management. Such factors concern the assumptions underlying project intervention as well as the set of related risks, which should be both taken into consideration and tackled for the successful implementation of the project.

Assumption	Comment on the assumption
GSO top management is fully sharing the project's objectives and is strongly willing to achieve its results	It is important to share with GSO any decision about the project objectives, the activities to be carried out and the results to be obtained. Only with a strong commitment of GSO the success of the project can be ensured
The Institutions of the Vietnamese Statistical System (Ministries, Agencies, etc.) will cooperate with GSO providing data and necessary information for the implementation of the project	Official statistical production in Vietnam is implemented not only by GSO but also by other authorities of the Vietnamese Statistical System. It is necessary to carry out all the steps necessary for the involvement of these Institutions in the project when their tasks are connected with the project activities (e.g. for the preparation of the Energy balance, etc.)
The management of GSO takes all necessary steps to facilitate the involvement in the project of the properly skills, encouraging employees to work closely with Istat's team of experts and promoting their participation in training courses organised in the frame of the project.	The involvement in the project of employees with the adequate skills will ensure not only the success of the project but also its sustainability.

Figure 1: *Assumptions*

On the other hand we also should take into consideration some risks in order to be ready to carry out an effective strategy of contrast:

Risk/Threat	Likelihood	Impact	Means to minimise risk
GSO is not able to involve enough qualified staff in the implementation of the Project;	Low	High	Efficient human resource management - training
Taking into consideration the activities foreseen in the contract and the period of	Low	Medium	Assessment activities will be implemented at the beginning of the project in order to

Risk/Threat	Likelihood	Impact	Means to minimise risk
execution given (36 months), time constraint is a risk factor for the overall implementation of the project			verify the state of the art and design a plan of activities tailored on the GSO's needs taking into account the project duration
Other Vietnamese statistical authorities do not cooperate with GSO	Medium	High	One of the activities of the project is the support to GSO in enhancing its coordination role of the VSS. It will be necessary to start the actions related to this activity since the beginning of the project. It allows to ensure also collaboration within specific sectorial domains such as energy, environment and climate change statistics
GSO relevant experts are not available to host missions of Italian experts / Scarce resources are not used efficiently if not coordinated to avoid overlaps	Low	High	The working plan of the project will be drafted jointly by Istat and GSO so that the activities timing will be agreed together
Activities to be carried out before or in parallel with the project upon which the project relies are not going according to plan	Low	High	The jointly drafting the work planning and a continuous monitoring of the project can help in adjust the timing of the activities when necessary
Language barrier and the necessary documents will not be provided or available in English	Medium	Low	The appointment of component coordinator by GSO who are able to speak English will help to overcome the language barrier.

Figure 2: *Risks*

Rome,  
 The Project Manager  
 Roberta Fontana



## 5. WORKPLAN

Activities	Year 1				Year 2				Year 3				w/d
	1Q Apr 18 - Jul 18	2Q Oct 18 - Jan 19	3Q Apr 19 - Jul 19	4Q Oct 19 - Jan 20	1Q Apr 20 - Jul 20	2Q Oct 20 - Jan 21	3Q Apr 21 - Jul 21	4Q Oct 21 - Jan 22	1Q Apr 22 - Jul 22	2Q Oct 22 - Jan 23	3Q Apr 23 - Jul 23	4Q Oct 23 - Jan 24	
<b>1 Institutional Building</b>													<b>52</b>
<b>1.0 Assessment</b>													<b>5</b>
<b>1.1 Improving Institutional buildings and statistical coordination</b>													<b>1</b>
1.1.1 Analysis of the current role of GSO and definition of elements for Mapping of sources and responsibilities of other producers and providers													1
1.1.2 Support in developing mechanism/procedure and tools to assess of activities in the National Statistical Survey Program and Sectoral Statistical Indicator System by other Ministries													14
<b>1.2 Definition of Tools for planning and monitoring and sensitization actions</b>													<b>1</b>
1.2.1 Sharing experience to develop a consultation process (users - producers) to update the National statistical Program													1
1.2.2 Development of mechanism to enhance periodical dialogue with Ministries and other producers defining permanent thematic group and consultation process to update National statistical program(case study on energy and environment)													3
1.2.3 Development of actions of sensitization on the coordination role of GSO (planning of events, workshop/seminars/etc) including the National conference													1
<b>1.3 Enhance quality assessment</b>													<b>1</b>
1.3.1 Sharing on structure, functioning of Quality system													1
1.3.2 Support on developing quality assurance framework and guidelines													9
<b>1.4 Support on implementation of Reorganization of data collection and ICT</b>													<b>1</b>
1.4.1 Sharing experience on function/tasks of data collection													1
1.4.2 Sharing experience on function/tasks of ICT													1
<b>1.5 Enhancements of Management skills</b>													<b>5</b>
1.5.1 Support in training on leadership, change management, quality management...													5
1.5.2 Support for training on analysis and forecast													5
1.5.3 Support on training for the use of administrative sources, integration of different sources (including example of use of Big Data)													5
<b>2 Energy</b>													<b>56</b>
<b>2.0 Assessment</b>													<b>5</b>
<b>General aim for the energy component: strengthen the system of energy statistics producing figures and indicators according to the national and international demand of users/stakeholders:</b>													<b>5</b>
<b>2.1 Improve data capturing and data processing, data and metadata dissemination</b>													<b>5</b>
2.1.1 Mapping of Statistical Needs and Conceptual Framework: define the list of the main and of the specific objectives of energy statistics. List of National and International Regulations and classifications to be compliant with													5
2.1.2 Define a strategy to strengthen cooperation and exchange of data. Establishing the roles of each Institution and the central coordination (GSO). Define the consultation/information strategy among involved institutions. Establish legal obligations for energy supply companies to provide data													5
2.1.3 From a single energy supplier to many energy suppliers: strategies and tools to collect and process data from many energy suppliers													0
2.1.4 Integration of data sources: double/cross checking, Data Benchmarking, Missing data treatment and estimation models for not available data													1
2.1.5 Methods for producing annual balance at national level on quantities for crude oil, petroleum products, natural gas and manufactures gases, electricity and derived heat, solid fossil fuels, renewables and wastes covering the full spectrum of the energy sector from supply through transformation to final consumption by sector and fuel type. Also, annual imports and exports data of various energy carriers by country of origin and destination, as well as infrastructure information.													5
2.1.6 National accounts and other economic indicators on energy													5
2.1.7 Special focus on methods to improve the quality of renewable energy data													0
2.1.8 Metadata, quality measures													5
<b>2.2 Survey methodologies</b>													<b>10</b>
2.2.1 Sample Methods, Data capturing strategies, Size of Samples and multichannel data collection for energy statistics.													10
2.2.2 Revision of (users) questionnaires: households questionnaire and enterprises questionnaires													10
2.2.3 Support for the design of a pilot survey													5
<b>3 Environment and Climate change</b>													<b>63</b>
<b>3.0 Assessment</b>													<b>5</b>
<b>3.1 Technical assistance for environment statistics and some feasible environment indicators considering SDGs</b>													<b>5</b>
3.1.1 Mapping of the environmental statistical needs; assistance for defining the main objectives and some feasible indicators considering the National framework and the actual sources													5
3.1.2 Support for developing metadata and methods (surveys, archives) considering the international Frameworks (FDES, SDGs) and organizing thematic meeting/group. Assistance for specific household questionnaires (for example: waste)													4
3.1.3 Support to the developing of some feasible specific environmental indicators considering the international frameworks (SDGs).													7
3.1.4 Assistance for designing a report (indicators, graphs, glossary, metadata, quality)													3
<b>3.2 Support for the creation of a set of indicators for the measurement of climate change, extreme events and disasters considering SDGs and Sendai</b>													<b>3</b>
3.2.1 Mapping of the statistical needs on Climate change, extreme events and disasters: assistance for defining the main objectives and some feasible indicators considering the National framework and current sources													6
3.2.2 Support for developing metadata, definitions and methods (surveys and archives) focusing on SDGs, Sendai, best practices and organizing thematic meeting groups													6
3.2.3 Support to developing of some feasible statistical indicators: special focus on extreme events and disasters considering SDGs and Sendai													6
3.2.4 Assistance for designing a report on extreme events and disasters (indicators, graphs, glossary, metadata, quality)													3
3.2.5 Environmental accounts: general framework													5
<b>3.3 Technical assistance for the development of some feasible indicators on the urban environment considering SDGs</b>													<b>5</b>
3.3.1 Mapping of the urban indicators considering national framework and current sources													5
3.3.2 Support for developing metadata, definitions and methods (surveys and archives) considering the international frameworks focus on SDGs.													3
3.3.3 Support for development of some urban feasible statistical indicators: considering the international frameworks focus on SDGs													5
<b>4 Dissemination</b>													<b>60</b>
<b>4.0 Assessment</b>													<b>5</b>
<b>4.1 Support of web development and web design</b>													<b>10</b>
4.1.1 Support in web architecture													10
4.1.2 Support in using a new CMS for a responsive website													3
4.1.3 New layout for the web site													2
4.1.4 Support in improving the new web site													15
<b>4.2 Support for data visualisation</b>													<b>5</b>
4.2.1 Support and training in using tools for data visualization													5
<b>4.3 Support for a new database for dissemination</b>													<b>5</b>
4.3.1 Support in designing a new database for dissemination													5
4.3.2 Support in developing a new database for dissemination													10
<b>4.4 Support for dissemination of statistics on Energy</b>													<b>5</b>
4.4.1 Support to the Dissemination of Statistics on Energy (e.g. web-dissemination, e-yearbook, etc.)													5
<b>5 ICT</b>													<b>64</b>
<b>5.0 Assessment</b>													<b>5</b>
<b>5.1 Input Data Center</b>													<b>5</b>
5.1.1 Present ISTAT experience on Metadata, Input management Classifications													5
5.1.2 Support for Design the new Input Data Center starting with pilot on specific domain													14
<b>5.2 Security</b>													<b>2</b>
5.2.1 Private Cloud configuration and implementation													2
5.2.2 Firewall configuration re-design													3
5.2.3 Decision about the usage of money for hardware/software													0
5.2.4 Support on Security: Mail server, mobile, antiviruses													5
<b>5.3 Support for Census</b>													<b>5</b>
5.3.1 ISTAT experiences in IT solutions for Census													5
5.3.2 ISTAT and GSO tools and Databases migration/optimization for Census													5
5.3.3 IT Support for Census													5
<b>5.4 Training on Security and System Maintenance</b>													<b>5</b>
5.4.1 Training on Security													5
5.4.2 Training on System Maintenance													5
<b>5.5 Big Data</b>													<b>5</b>
5.5.1 Training on Big Data and its tools													5
<b>6 Study visits</b>													<b>3</b>
6.1 Study visit on Institutional Building													1
6.2 Study visit on Energy and Environment and Climate Change													1
6.3 Study visit on Dissemination and ICT													1
<b>7 Project management and coordination</b>													<b>45</b>
7.1 Project monitoring													45

## 6. LOGFRAME

		INDICATORS	SOURCES OF VERIFICATION
<b>OVERALL OBJECTIVE</b>	Contribute to the improvement of the Statistical System in Vietnam by strengthening the GSO. The statistical information base needed to govern the social, economic and demographic development process will be improved through training and technical assistance activities.		
<b>SPECIFIC OBJECTIVE</b>	Strengthen the statistical capacities of the GSO and its coordinating role within the national statistical system in order to provide Vietnam with a series of comprehensive and reliable information on issues of crucial importance for the country and for the international community, such as energy, environment and climate change.		
<b>EXPECTED RESULTS</b>	<ol style="list-style-type: none"> <li>1. Institutional enhancement of GSO</li> <li>2. Improvement of the performances of the Department for the industrial statistics with the aim to increase its capacity to produce quality data on Energy</li> <li>3. Strengthening the capacity of the Department for Socio-Environmental Statistics to produce environmental statistics useful for policy-makers.</li> <li>4. Strengthen the GSO's capability to disseminate statistics also through the use of the most modern IT tools</li> <li>5. Improve the services provided by the ICT Department both to the GSO's internal structure and to external users.</li> </ol>	<ul style="list-style-type: none"> <li>- Number of hours AT and training on the job</li> <li>- Number of hours activity training on the job</li> <li>- Number of IT equipment provided</li> <li>- Number of IT programs</li> <li>- Number of Vietnamese officials receiving technical assistance and training on the job</li> </ul>	Official documents published by the GSO
<b>ACTIVITIES</b>	<p><b>For the expected result 1:</b></p> <p>1.a Analysis of the current role of the GSO and its ability to produce quality statistics and strengthen the managerial skills of its</p>	<p>For the expected result 1:</p> <ul style="list-style-type: none"> <li>- number of GSO staff beneficiary of</li> </ul>	<p><b>COST:</b></p> <p><b>€ 648.134</b></p>

	<p>managers;</p> <p>1.b Support to the GSO in carrying out its coordinating role of the institutions responsible for the production of statistical data within the National Statistical System;          1.c Assistance for launching awareness activities among other data-producing administrations in order to facilitate the data exchange between the country's public administrations.</p> <p><b>For the expected result 2:</b>          2.a Training on the job and technical assistance for the compilation of the country's energy balance starting from the centralization of available data produced by other administrations;          2.b Technical assistance to improve the ability to produce statistics on the energy consumption of households and enterprises;          2.c Technical assistance for the development of a web-portal for the data collection of large companies by web.</p> <p><b>For the expected result 3:</b>          3.a Technical assistance for the creation of an integrated system for environmental statistics;          3.b Support for the creation of a system of indicators and statistics for the measurement of extreme events and disasters;          3.b Technical assistance for the development of indicators on the urban environment.</p> <p><b>For the expected result 4:</b>          4.a Technical assistance for the updating of the institutional website in order to make it more effective for the purposes of institutional communication and more user-friendly;          4.b Improvement of the GSO Data Warehouse and its integration on the institutional website.</p>	<p>the training</p> <ul style="list-style-type: none"> <li>- start of collaborations with other data producing institutions</li> </ul> <p>For the expected result 2:</p> <ul style="list-style-type: none"> <li>- compilation of the energy balance</li> <li>- development of a web-portal for the data collection of large companies by web</li> </ul> <p>For the expected result 3:</p> <ul style="list-style-type: none"> <li>- setting up an integrated system for environmental statistics</li> <li>- creation of an indicator system for the measurement of extreme events and disasters</li> <li>- development of indicators on the urban environment</li> </ul> <p>For the expected result 4:</p> <ul style="list-style-type: none"> <li>- update of the institutional website</li> <li>- Improved Data Warehouse</li> <li>- Purchase of hardware</li> <li>- GSO ICT staff training</li> </ul>	<p><b>DURATION:</b>          36 months</p>
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	<p><b>For the expected result 5:</b></p> <p>5.a Increase the use of Data Base - Data Warehouse techniques to allow the integration of data from the various surveys and reduce the request of information directly to the users;</p> <p>5.b Improve the functionality of the Institute's website, making it easier to manage and improving the functions available to the end user;</p> <p>5.c To jointly define the hardware resources (servers, storage systems and network devices) necessary to improve the performance and security of the currently available ICT system; follow from a technical point of view the relative tender for the acquisition of the hardware;</p> <p>5.d Provide the skills to use the new data collection techniques, both through web questionnaires and through new tools such as tablets;</p> <p>5.e Train GSO personnel (IT and statistical) on the tools and methodologies necessary to collect and manage administrative data archives.</p>	<p>For the expected result 5:</p> <p>- Upgrade of the GSO institutional website also through the use of Data Warehouses</p> <p>- Hardware and software purchased</p> <p>- N. of GSO personnel trained on the tools and methodologies necessary to collect and manage the administrative data archives</p>	
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## 7. BUDGET

Budget related to Istat project:

		Units	Quantity	Unit cost (€)	Total (€)
<b>1</b>	<b>Agreement ISTAT</b>				<b>516.394</b>
1.1	Technical assistance and training	Weeks	59	3.663	216.117
1.2	Travels for Technical assistance and training	n.	59	2.400	141.600
1.3	Management and Coordination	Weeks	9	3.663	32.967
1.4	Travels for Management and Coordination	n.	9	2.400	21.600
1.5	GSO study visits to Italy	n.	3	19.055	57.165
	<b>SUBTOTAL</b>				<b>469.449</b>
1.5	Overheads	10%			46.945