EKT NATIONAL DOCUMENTATION CENTRE

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**ANNUAL STATISTICAL
PROGRAMME 2022**

ATHENS 2022

INTRODUCTION

National Documentation Center (EKT), as an Agency and a National Authority of the Hellenic Statistical System (ELSS)[1], is committed to the development, production and dissemination of high-quality statistics, which meet impartially and equitably users' needs for policy and decision making, research and debate.

EKT statistics apply mainly to Research, Development and Innovation (RDI) areas. More specifically:

European statistics

- Statistics on Research and Development (R&D statistics)
- Government budget allocations for Research and Development (GBARD indicator)
- Statistics on Innovation in Greek enterprises

National statistics

- Statistics on Greek scientific publications in international journals
- Statistics on doctorate holders
- Statistics on the participation of women in R&D
- Statistics on the digital transformation of Greek enterprises

EKT follows the highest European and international standards in terms of statistical methodologies, organizational procedures and information infrastructure, while at the same time, strictly adheres to and implements the Greek and European legal and institutional framework for statistics. This includes the Greek Statistical Law (Law 3832/2010, as amended and in force, the European Statistical Law (Regulation (EC) 223/2009), the European Statistics Code of Practice, the European Statistical Content Regulations, the Statistical Obligations Regulation of the agencies of ELSS and the Memorandum of Cooperation with the Hellenic Statistical Authority.

The Statistical Work Programme of EKT for 2022 includes information on the statistics to be compiled and published during 2022. Also, EKT development actions for 2022 are presented, which relate to the production of new statistics or the further improvement of produced statistics and aim at depicting areas of high interest, complying with new European Regulations as well as satisfying the needs of national and international users.

In addition, the Statistical Work Programme for 2022 incorporates innovative statistical actions that are part of two EKT-funded priority projects:

- The project «2020_EL_B5618-RDI / High added-value data from CIS and R&D business statistics in Greece» funded by the European Commission under the call «ESTAT-2020-PA6-G-RDI - B5618-2020-RDI/Statistics on Research and Development (R&D) and Innovation», published by Eurostat to the competent national statistical authorities of the EU Member States for the production of statistics for R&D and Innovation.
- The project/ Action "Strengthening EKT's public statistical information mechanism - Integrated digital data services for evidence-based public policies", is implemented by EKT in the context of the call entitled "Strengthening the Executive Function of Public Administration Agencies" of the OP "Public Sector Reform" 2014-2020.

In the above context, the main objectives of the ESF for 2022 are:

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[1] No. 7303 / B2-577 / 25-9-2017 Decision (Government Gazette B '3482), by the President of ELSTAT, as amended and revised, in which the EKT is designated as "Agency of the Hellenic Statistical System", responsible for the data collection.
No. 7304/B2-576/25-9-2017 Decision (Government Gazette B' 3482), by the President of ELSTAT, as amended and revised, in which the EKT is designated as "National Authority" of the Hellenic Statistical System, responsible for the development, production and dissemination of European statistics.
The agencies and the national authorities of ELSS can be found here: https://www.statistics.gr/el/agencies

- The continuation of the production of European and national statistics, which ensure the observance of the quality rules and the methodological requirements of the Hellenic and European Statistical System.
- The enhancement of the statistics produced by EKT either through the production of new variables, such as those included in the 2020_EL_B5618_RDI project on R&D statistics and business innovation statistics, or through the production of new national statistics, such as the research activity of Hellenic agencies in funded projects, or with the production of experimental statistics, such as statistics related to the field of artificial intelligence.
- The implementation of innovative actions on the interconnection of (micro) data of European statistics for R&D and Innovation.
- The enhancement of the value of public statistical information provided and of the processed EKT statistics data to a wide range of different user communities through the provision of integrated digital data services (make the best possible use of all available data).

In addition, EKT will continue to be actively involved in working meetings (Working Groups, Task Forces, national representation) at Eurostat, the Organization for Economic Co-operation and Development (OECD), and the European Commission.

PRODUCTION OF RDI STATISTICS

that ensure the observance of the quality rules and the methodological requirements of the Hellenic and the European Statistical System and meet the new needs of the users

In 2022, the statistics presented in detail in the Appendix - Table of Statistics will be produced and published by EKT, on the mentioned dates, as defined by the mandatory regulatory frameworks of the European Regulations and the European Statistical Office Eurostat, as well as by the monitoring needs of the implementation of the national RIS3 strategy.

With regard to European Regulations, the Regulation (EU) 2019/2152 of the European Parliament and of the Council on European Statistics on Enterprise, which covers, inter alia, European Statistics on R&D and Innovation, has to be mentioned. An important effect of Regulation (EU) 2019/2152 is the better incorporation of the various branches of business statistics and the various statistical production systems in order to improve the quality and the efficiency of data production. Commission Implementing Regulation (EU) 2020/1197 of 30 July 2020 - laying down technical specifications and arrangements in accordance with Regulation (EU) 2019/2152 of the European Parliament and of the Council on European business statistics concerns R&D statistics and GBARD statistics and is valid from 01.01.2021.

Regarding the national RIS3 strategy, monitoring its performance requires the production of a series of indicators related to RDI statistics and described in detail in the project "Production of RIS3 indicators for the years 2016-2023" implemented by EKT in the framework of the Act "Installation of a Monitoring Mechanism of the implementation of the national strategy RIS3-Indicators collection and processing" with MIS code 5008067 and is funded by the OP. Competitiveness, Entrepreneurship & Innovation. The indicators are provided on a systematic basis to the General Secretariat for Research and Innovation and the other competent national and regional agencies in order to be able to depict the course of the Research & Development and Innovation system during the implementation of RIS3, at National and Regional level. The indicators are published on the website of EKT RIS3 monitoring indicators | Metrics (ekt.gr).

At the same time, EKT will continue its actions to ensure and further improve the quality of the statistics it produces, in accordance with the principles of European Statistics Code of Practice, as well as to harmonize its statistics with the new requirements - methodological requirements and new user requirements, as follows.

Assurance and further improvement of quality

In order to assure and further improve the quality of EKT statistics, during 2022, in addition to the regular work of collecting, processing, controlling and analyzing the data for the production of RDI statistics, emphasis will be placed on the following actions:

- Implementation of the requirements of the RDI statistics certification process by ELSTAT.

- Continuation and strengthening of the cooperation with ELSTAT both in the context of the implementation of the current Memorandum of Cooperation between EKT and ELSTAT, as well as for the mutually beneficial exchange of know-how, methodologies and statistical data in order to improve the quality of products. and the reduction of the burden of the investigated statistical units, in application of EC 2019/2152.

- Enhance collaborations with agencies that provide administrative data to EKT that are relevant and useful to RDI statistics. The actions that will be implemented in 2022 will primarily concern the transition to a system of governance structure of standardized microdata that will allow the further use, after appropriate controls, of administrative data and will contribute to the improvement of the quality of statistics produced, to the reduction of the production time of statistical results and to the reduction of the burden of the surveyed statistical units.

- Systematic updating and continuous enrichment of the registers of the agencies with R&D activities from which data are collected in the four R&D execution areas provided by the Frascati manual.

- Enhancement of the focused actions implemented by EKT to improve the understanding and highlight the importance of its statistics to the data collection agencies, combined with the actions described below in the relevant section. In this direction, the organization of targeted, online and physical, working meetings with the individual surveyed statistical units as well as with groups of agencies with common features or sector of activities (e.g. important sectors of the Greek economy), in cooperation with supervisory authorities and collective agencies, will be also enhanced.

- Systematic and continuous training of EKT personnel aiming to improve and enhance knowledge and skills to ensure the quality of the produced statistics.

Enhancing EKT statistics - new variables and new statistics

EKT is actively involved in shaping new trends in the measurement of research and innovation activities. It incorporates the know-how from the collaboration with leading international organizations, improves its statistical processes, and makes full use of the collected data. It constantly aims to enrich the public debate with critical components that help to better understand the innovative processes in Greece and Europe.

Specifically, for 2022, EKT will proceed with the following actions:

- Production of indicators that depict various innovation profiles of enterprises in Greece, at national and regional level, in accordance with Eurostat guide lines and definitions, as developed in the relevant work carried out with the participation of statistical authorities of the Member States, including EKT (Project 2020_EL_B5618-RDI - Area 1 "CIS2020: Regional data and Innovation Profiling).

- Production of indicators requested by Eurostat on a voluntary basis on expenditure and personnel in R&D (non mandatory R&D data) (Project 2020_EL_B5618- RDI - Area 2 "R&D 2020 Data for selected non-mandatory variables").

- Production and publication of new variables for national statistics on doctoral holders, which depict new dimensions related to issues of digitization of science, professional career, international mobility, etc.

- Production and publication of new variables for national statistics on women's participation in R&D, in order to depict emerging dimensions related to gender issues in research and innovation in Greece associated with developments in relevant European policies. Emphasis will be placed on conducting new focused research and on data collection regarding liability positions of women in research and development activities.

- Establishment of national statistics for the digital transformation of enterprises through the publication of the third publication of statistical results and the publication of the relevant metadata. Production and publication of new variables with emphasis on issues of concern to the international community, such as cutting-edge technologies and digital skills.

- Development of new national statistics on "Research activity of Hellenic agencies in funded projects". The statistics will include variables that reflect the participation in European research projects (Horizon 2020, Horizon Europe) and in national research projects (NSRF 2014-2020), such as the number of projects, number of participations, budget and funding of projects, etc.- for the whole country and with analysis by R&D execution sector, region, thematic area etc. The methodology of statistics will be based on the methodology already developed by EKT to depict the participation of Greece in European research projects in which it is a National Contact Point.

- Publication of new statistics on the orientation and relevance of in-country research and innovation with the eight thematic areas of the smart specialization strategy.

Experimental statistics

- Projects on further specialization and publication of reliable RDI statistics at a more detailed than NUTS2 geographical level (NUTS 3: small regions for specific diagnoses, Regional Units etc.)

- Investigation of emerging issues that are of interest to policy makers and related to:
  - in the field of artificial intelligence, with the production of special publications that highlight the scientific activity of Greek researchers, using data from statistics for scientific publications in international journals, doctorate holders, participation in research projects.
  - the new funding tools used to fund government research, development and innovation activities

International presence and networking

- Participation in the Eurostat working groups, in order to ensure the immediate adjustment to the methodological developments and the promotion of the Greek positions. More specifically, it concerns the representation of Greece in the RD and CIS working groups & task forces of Eurostat, in the Eurostat working groups for the development of questionnaires for business innovation. EKT is also actively involved in Eurostat pilot projects for the development of new variables and the improvement of methodological guidelines for European research and innovation statistics.

- Participation in OECD working groups on research and technology indicators "NESTI Group / National Experts on Science and Technology Indicators" and on digital economy "WPMADE / Working Party on Measurement and Analysis of the Digital Economy". Active participation in OECD pilot projects to explore important issues of modern research ecosystems and their interactions.

- Participation in the OECD RD Tax Incentives network. EKT processes and submits the data on R&D tax exemptions (indirect state funding of R&D) in Greece, provided by the General Secretariat for Research and Innovation, in order to be included in the database and the relevant OECD publications.

- Participation in the EU Gender Working Group on Research and Innovation "ERAC SWG on Gender in Research and Innovation".

TECHNOLOGICAL BACKGROUND – RDI DATA INFRASTRUCTURE

EKT, Following the current developments at the international level and in the corresponding statistical data and procedures infrastructures, the ESF emphasizes:

- the implementation of electronic procedures for the collection and processing of primary data,

- the electronic submission of indicators via the SDMX model to Eurostat,

- the interconnection of the RDI data system with administrative databases of public administration agencies, as well as

- in the management, organization, interconnection and storage of (micro) data collected, in a way that ensures statistical confidentiality and data security.

In this context, in addition to the systematic work required to support the appropriate operation and necessary improvements to the electronic applications and information systems that support data collection (conducting electronic field surveys and administrative data) and their statistical processing, important EKT targets for 2022 are:

- The design and development of an appropriate infrastructure for the interconnection of the (micro) data of the CIS2020 research and the R&D research 2020 - Project2020_EL_B5618_RDI / Area 3: "Micro Data Linking".

- The establishment of a single data infrastructure (registers) from EKT databases and administrative data from external sources - Project "Strengthening EKT's public statistical information mechanism - Integrated digital data services for evidence-based public policies".

- The introduction of a digital governance framework and procedures in EKT management data collected by public agencies in the fields of research, innovation and digital economy - Project "Strengthening EKT's public statistical information mechanism - Integrated digital data services for evidence-based public policies".

- The enhancement of the capacity of statistical processing of (micro) data and the production of public data with a Data Management System and Business Intelligence, specialized in the requirements of EKT - Project "Strengthening EKT's public statistical information mechanism - Integrated digital data services for evidence-based public policies".

- Actions to ensure the security of the systems used to collect, store, accumulate, process and dispose of the data.

ACCESSIBILITY AND IMPROVEMENT OF THE UNDERSTANDING OF STATISTICS

The statistical information actions of EKT use the established and widely recognizable scientific information infrastructure of the agency regarding the many years of experience in the dissemination of knowledge and its position in the Greek science ecosystem, the information systems, the systematic and extensive communication actions, the collaborations with promotion and networking actions of the scientific and business community.

The main tools used by EKT for the systematic and regular dissemination of the statistical results it produces are:

- continuous development, updating and enrichment of the website https://metrics.ekt.gr/en (Greek and English version) with data, metadata and publications.

- continuous improvement of the clarity of the statistics published with the use of new visualization tools, interactive charts and maps, infographics.

- organisation of workshops with statistical data users both to improve the understanding of RDI statistics and to record new needs.
- implementation of targeted studies in enhanced thematic units to demonstrate the importance of documentation with reliable statistics.

Specific objectives of EKT for 2022 are:

- The standardization of the processes of production of statistical publications and specialized studies, while increasing their number and enriching their content.

- The launch of a platform to provide Integrated Data Services for the timely and wide availability of not only simple statistical data and indicators, but mainly the information, knowledge and expertise associated with them - project "Strengthening EKT's public statistical information mechanism - Integrated digital data services for evidence-based public policies".

- The launch of anonymization activities of (micro)data in order to provide them to interested research groups and to enhance further research - project "Strengthening EKT's public statistical information mechanism - Integrated digital data services for evidence-based public policies".

DEVELOPMENT PROJECTS

related to the provision of high-quality data services to the political, scientific, research and business community of the country

In 2022, EKT implements two funded projects focusing on its statistical activities, which are marked by high innovative character and results with a significant impact, both for the statistical operation of EKT and for the users of its statistics. In the previous sections, actions from these two projects were mentioned, as they contribute to the sub-objectives of EKT statistical program. Further on, in order to depict the holistic approach of the projects, the objectives and their content are presented.

Project: 2020_EL_B5618-RDI / High added-value data from CIS and R&D business statistics in Greece

The aim of the project is to enhance the indicators produced concerning European statistics for Research, Development and Innovation in order to serve the emerging needs of users from the field of planning and monitoring policies (evidence-based policy making) at European, national and regional level.

Expected results of the project:

- Establish systematic production and availability of innovation profiles at national and regional level (NUTS2 level) at Eurostat, in order to provide policy makers with informed knowledge and more diversified information on the factors that promote or prevent innovation, as a basis for policy planning and monitoring.

- Production of data on expenditures and personnel in E&A from the research "R&D 2020" with reference year 2020 for selected variables that are produced on a voluntary basis. The aim is to increase the completeness of the indicators of national R&D statistics from data with high value, for the exercise of public policies.

- Evaluation and development of the interconnection capability of the (micro) data of the surveys "CIS 2020" and "R&D 2020 - business sector" for the comparison between innovative companies and companies that perform R&D.

Action "Strengthening EKT's public statistical information mechanism - Integrated digital data services for evidence-based public policies" NSRF 2014 - 2020, Operational Program "Public Sector Reform" / OPS code 5075083

The aim of the Action is to strengthen the operation of the Public Statistical Information Mechanism provided by EKT through the provision of integrated digital data services, which will enhance and support the exercise of documented public policies.

In this regard, EKT will use state-of-the-art technologies to create an Integrated Registry Information Infrastructure and Integrated Data Services Platform, through which digital data services will be provided to serve public administrations and different user communities, with the necessary customization, depending on their needs.

The Platform will have modern digital tools and visualization mechanisms for the presentation of information, will provide specialized reports to specific populations of interest and will offer advanced capabilities of combined search and navigation, capabilities of classified data and other knowledge material as well as specialized support by agency.

APPENDIX – TABLE OF STATISTICS

Statistics on Research and Development (R&D statistics)	
Statistical product description	Research & Development - R&D statistics produce indicators for the personnel engaged in R&D activities as well as for the (internal) expenditure incurred for these activities in all sectors of the economy: Business Enterprise Sector - BES, Government Sector - GOV, Higher Education Sector - HES, Private non- Profit – PNP as well as for country total.
Periodicity	Annual

Indicators 2022	Description	Reference period	Publication of results
	Main indicators of R&D expenditures and personnel - Final data	2020	2nd quarter 2022
	Monitoring indicators RIS3 T4201	2020	2nd quarter 2022
	Main indicators of R&D expenditures and personnel - Provisional data	2021	4th quarter 2022

Statistics on Government budget allocations for R&D (GBARD indicator)	
Statistical product description	Statistics on Government budget allocations for R&D (GBARD indicator), cover the Government budget allocations (Regular Budget and Public Investment Program available for R&D purposes, not only to public agencies but to all sectors of the national economy, as well as abroad (including European and international organizations). Production of indicators on (a) Government budget allocations for R&D in the provisional and final budget with an analysis of 14 socio-economic objectives, (b) National public funding for transnationally coordinated R&D
Periodicity	Annual

Indicators 2022	Description	Reference period	Publication of results
	Government budget allocations for R&D in the provisional budget with an analysis of 14 socio-economic objectives.	2021	2nd quarter 2022
	(a) Government budget allocations for R&D in the final budget with an analysis of 14 socio-economic objectives. (b) National public funding for transnationally coordinated R&D	2021	4th quarter 2022

Statistics on Innovation in Greek enterprises

Statistical product description	Statistics on innovation in Greek enterprises produce indicators of business innovation and innovation activities, types of innovation, costs for innovation activities, partnerships, etc.		
Periodicity	Biennial		
Indicators 2022	**Description**	**Reference period**	**Publication of results**
	Key innovation in enterprises indicators used in European Innovation Scoreboard	2018-2020	2nd quarter 2022
	Monitoring indicators RIS3 T4207	2018-2020	2nd quarter 2022
	Detailed series of innovation in enterprises indicators	2018-2020	2nd quarter 2022

Greek scientific publications in international journals

Statistical product description	Statistics on Greek scientific publications in international journals concern the production of internationally established bibliometric indicators (number of publications, number of reports, impact indicators, etc.).		
Periodicity	Biennial		
Indicators 2022	**Description**	**Reference period**	**Publication of results**
	Monitoring indicators RIS3 T4224	2020	2nd quarter 2022
	Detailed series of bibliometric indicators for the country, for the Greek regions, for specific categories of agencies and individual agencies	2006-2020	2nd quarter 2022

Statistics on doctorate holders

Statistical product description	The statistics refer to doctorate holders from Greek universities and produce indicators for ISCED 8 (PhD) graduates regarding their demographics, dissertation backgrounds, and doctoral studies. From 2022 onwards, statistics on doctorate holders include new variables that depict broader features for their professional careers and the digitization of science.		
Periodicity	Annual		
Indicators 2022	**Description**	**Reference period**	**Publication of results**
	Data of doctorate holders from Greek universities	2021	4th quarter 2022

Statistics on the Participation of women in R&D			
Statistical product description	Statistics include data on the participation of women in new doctorate holders, academic personnel, R&D personnel, as well as their participation in European and nationally funded projects. Statistics on women in R&D in 2022 will include new variables that depict the participation of women in positions of responsibility in research and innovation activities,		
Periodicity	Annual		
Indicators 2022	**Description**	**Reference period**	**Publication of results**
	Data for the participation of women in positions of responsibility in research and innovation activities.	2018-2021	4th quarter 2022

Statistics on digital transformation of Greek enterprises			
Statistical product description	Statistics on the digital transformation of Greek enterprises are produced by specialized questions included in the questionnaire of the statistical survey on innovation of enterprises. The questions are formed by EKT, according to the agenda of issues concerning international organizations, such as Eurostat and the OECD, and statistical organizations. The statistical methodology, the population and the sampling framework, and the processing of the data are in line with what is provided in the statistical survey on innovation of enterprises. The produced data record the position of digital transformation in the strategic planning of Greek enterprises and depict the main areas of their digital transformation. In 2022, statistics on digital transformation of Greek enterprises will include additional data on the use of pioneering technologies in Greek enterprises.		
Periodicity	Annual		
Indicators 2022	**Description**	**Reference period**	**Publication of results**
	Digital transformation of Greek enterprises - pioneering technologies	2018-2020	2nd quarter 2022