

# CARBON FOOTPRINT REPORT

2021-2022





**THIS REPORT HAS BEEN PREPARED BY DCARBON  
EGYPT AND THE INSTITUTE OF NATIONAL  
PLANNING (INP) TEAM**

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### **INFORMATION**



# FOREWORD



As part of Egypt's Preparations for the United Nations Climate Change Conference, known as the Conference of Parties COP27, Sharm El Sheikh 2022, I am pleased to introduce herewith the Institute of National Planning (INP) initiative contribution to these efforts. INP embarked on research work to measure the carbon footprint of its premises in 2021-22. This stems from the mandate of INP as a developmental research institution and from its conviction of the importance of environmental sustainability and community participation in facing the climate change issue and improving the environment at large.

This initiative was undertaken by INP's academic and administrative staff with the valuable assistance of DCarbon, a leading specialized company in this field in Egypt. INP's carbon footprint is an important indicator for measuring the greenhouse gas emissions of its research, educational, training, technical, administrative, and other activities. It is expressed in equivalent carbon dioxide tons annually. Although the research revealed that this emission is very low, INP endeavors to improve this indicator.

It is worth mentioning that this is the first attempt at this connection. It will set a frame to reduce carbon dioxide based on the fact that "what cannot be measured cannot be managed".

I would like to seize this opportunity to extend my appreciation to everyone who participated in the preparation of this report. Special recognition is due to DCarbon for identifying and analyzing the necessary data and the development of this report.

**Prof. Dr. Ashraf El-Araby**

President of the Institute of National Planning (INP)



## ABBREVIATIONS AND ACRONYMS

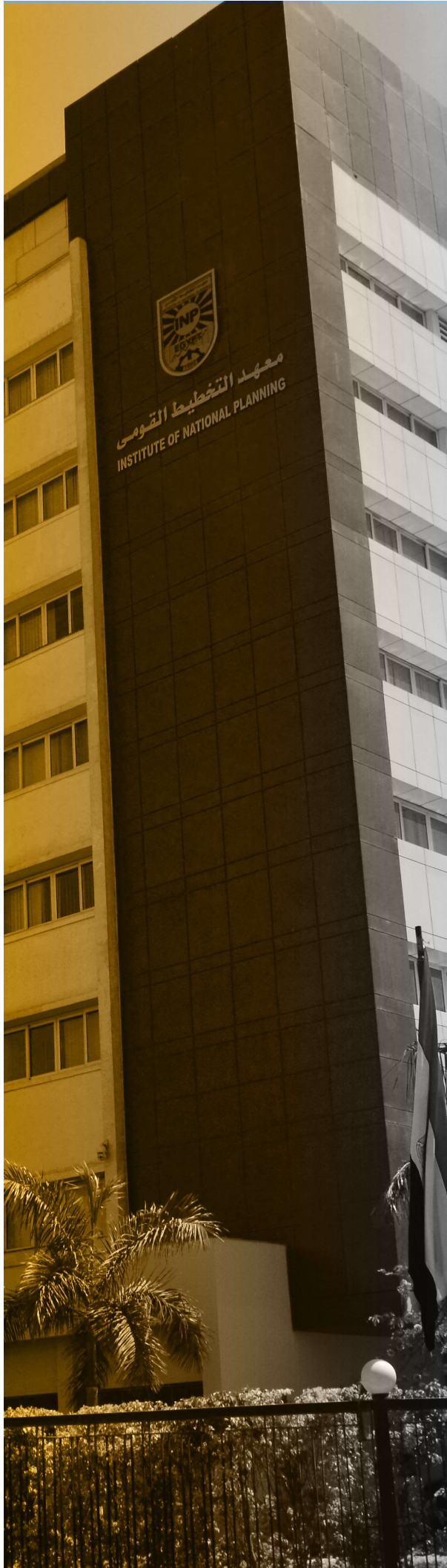
AC	Air Conditioning
CFP	Carbon Footprint
CH <sub>4</sub>	Methane
CO <sub>2</sub>	Carbon Dioxide
EF	Emission Factor
EPA	Environmental Protection Agency
GHG	Greenhouse Gas
GWP	Global Warming Potential
HFCs	Hydrofluorocarbons
INP	Institute of National Planning
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organization for Standardization
Kg	Kilograms
KPIs	Key Performance Indicators
L	Liter
m <sup>2</sup>	Square Meter
MT CO <sub>2</sub> e	Metric Tonnes of Carbon Dioxide Equivalent.
N <sub>2</sub> O	Nitrous Oxide
PFCs	Perfluorocarbons
SF <sub>6</sub>	Sulfur Hexafluoride
SI units	International System of Units
UNFCCC	United Nations Framework Convention on Climate Change

## KEY DEFINITIONS

Activity Data	A quantitative measure of an institute's activity that results in a GHG emission or removal.
Assumed Parameter	A parameter that is not site-specific but based on best practices, global averages, etc. that is more or less representative of the actual value.
Base Year	A historical year used to compare the preceding year's emissions. It can be a calendar year or averaged over several years (Time Series).
Climate Change	Climate change refers to a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings such as modulations of the solar cycles, volcanic eruptions and persistent anthropogenic changes in the composition of the atmosphere or in land use.
Carbon Dioxide Equivalent	CO <sub>2</sub> equivalent (CO <sub>2</sub> -eq) emission The amount of carbon dioxide (CO <sub>2</sub> ) emission that would cause the same integrated radiative forcing or temperature change, over a given time horizon, as an emitted amount of a greenhouse gas (GHG) or a mixture of GHG
Direct Emissions	Greenhouse gas emissions from facilities/sources owned or controlled by the institute.
Emission Factor	A factor allowing GHG emissions to be estimated from a unit of available activity data (e.g., tons of fuel consumed, etc.) and absolute GHG emissions.
Fugitive Emissions	Emissions that are not physically controlled but result from the intentional or unintentional releases of GHGs.
Greenhouse Gas (GHG)	A gas that absorbs and emits radiant energy within the thermal infrared range, causing the greenhouse effect.
GHG Emission / Removal Factors	The specific value used to convert activity data into greenhouse gas emission/reduction values.
GHG Inventory	List of emission sources and the associated emissions quantified using standardized methods.
Greenhouse Gas Emission	The total mass of a GHG released into the atmosphere over a specified period.
Greenhouse Gas Project	Activity(s) that alter the conditions identified in the baseline scenario, which cause GHG emission reductions or GHG removal enhancements.
Greenhouse Gas Report	Stand-alone document intended to communicate a institute's or project's GHG-related information to its intended users.
Greenhouse Gas Source	Physical unit or process that releases a GHG into the atmosphere.
Indirect Emissions	Greenhouse gas emissions from facilities/sources that are not owned or controlled by the institute but for which the activities of the institute are responsible (electricity purchase).



Inventory Boundary	An imaginary line encompasses the direct and indirect emissions included in the inventory. It results from the chosen organizational and operational boundaries.
IPCC	The Intergovernmental Panel on Climate Change is an intergovernmental body of the United Nations responsible for advancing knowledge on human-induced climate change.
Mobile Combustion	The burning of fuels by transportation devices such as cars and buses.
Operational Boundaries	The operational boundary determines the emissions associated with operations, classifies emissions as direct or indirect, and categorizes the different scopes of GHG emissions.
Organizational Boundaries	The boundaries that determine the operations owned or controlled by the reporting company, depending on the consolidation approach taken (equity or control approach).
Other Indirect Greenhouse Gas emissions	GHG emissions, other than energy indirect GHG emissions, which are a consequence of an organization's activities, arising from greenhouse gas sources that are owned or controlled by other organizations.
Scope 1 (Direct Emissions)	A reporting organization's direct greenhouse (GHG) emissions that occur from sources that are controlled or owned by the organization itself.
Scope 2 (Indirect Emissions)	A reporting organization's indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling.
Scope 3 (Other Indirect Emissions)	A reporting organization's indirect emissions other than those covered in Scope 2.
Stationary Combustion	Burning of fuels to generate electricity, steam, heat, or power in stationary equipment such as generators, etc.
Refrigerant	A refrigerant is a substance or mixture, usually, a fluid, used in a refrigeration cycle.



# EXECUTIVE SUMMARY

Climate change is a real threat to humanity; its effects on society, the economy, and the environment are undeniable. It is predicted that the global temperature increases from human-made greenhouse gases (GHGs) will continue. The increase in GHG emissions will result in more climate extremes and widespread damaging effects across the planet. The effects that scientists predicted would occur in the future are observed now, such as sea level rise, droughts, and wildfires. However, the intensity of these effects depends on the amounts of GHGs emitted.

The Institute of National Planning (INP) started to act through its first Carbon Footprint report, which will be a base year for future reports. This report shows the Carbon Footprint estimates for INP located in Nasr City, Cairo, Egypt. The reporting period is between July 1<sup>st</sup> 2021 till June 30<sup>th</sup>, 2022. Scope 1 and Scope 2 GHG emissions were calculated using the standards and guidelines of the Intergovernmental Panel on Climate Change (IPCC), GHG Protocol Corporate Accounting and Reporting Standards, and met the requirements of ISO 14064-1:2018.

As INP is committed to transparency when it comes to reporting its emissions, the current report covers 4 essential greenhouse gases quantified during the calculation process of INP's greenhouse gas inventory. These GHGs are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and hydrofluorocarbons (HFCs). Other GHGs were excluded due to their negligible contribution to the total GHG emissions. Emissions for each GHG are reported in metric tons of CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e).

The report concluded with recommendations in terms of

- (1) improving GHG inventory completeness and occurrence; and
- (2) decreasing the carbon footprint of INP.

The GHG report will work as a comprehensive guide for managing and mitigating GHG emissions within INP building.



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# ABOUT


## THE INSTITUTE OF NATIONAL PLANNING

The Institute of National Planning was established by Law No. 231 of 1960 as a public institution with an independent legal entity. INP is the first institute to support planning and development in the Arab region, and indeed in the Middle East and North Africa. The establishment of the institute is aimed at promoting research, development, and planning studies and the means of implementing them and assisting the concerned authorities in the country to implement them.

To cope with scientific developments in the world, the institute's law and executive regulation are developed with the passing of "Law No. 13 of 2015." Under this law, the mandates of the institute are defined as follows:

- Carry out research and studies in all fields that contribute to achieving the objectives. Develop planning cadres by organizing training programs in planning and development fields and awarding certificates of success.
- Grant scientific degrees (Diploma, Master, and Ph.D.) in fields of planning and development, whether individually or in cooperation with other similar scientific entities within the country or abroad.
- Allocate scholarships and remunerations to encourage research and studies.
- Delegate commissions and internal and external scientific missions.
- Hold scientific conferences, seminars, and meetings.
- Issue and publish research, studies, reports, and scientific journals, and translate and write books and references related to INP objectives.
- Evaluate drafts and decisions related to planning and development.
- Help in spreading the culture of planning and development in society.
- Provide consultation to private or public entities at the national or international level.

These tasks are carried out by the scientific staff. INP includes eight scientific research centers, namely, the Center for International Economic Relations, the Center for Macroeconomic Policies, the Center for Planning Methods, the Center for Regional Development, the Center for Planning and Environmental Development, the Center for Planning and Agricultural Development, and the Center for Planning and Industrial Development, and the Center for Social and Cultural Planning in addition to the administrative Department.



This law also includes a new organizational framework for the scientific centers and their departments. It also allows the establishment of special nature units that undertake specific tasks such as consultation and community service. The law has opened new horizons for the institute's work, as it can offer specialized diplomas, masters and doctoral degrees programs, in addition to various training programs. In parallel with the introduction of the amendment Act a major operation was carried out to renovate the institute's building and equipment. for the first time since it's inception:

- The building was provided with a central air conditioning network, advanced internet networks, both wired or wireless on all floors, and fire and alarm networks.
- The building was provided with cameras for internal and external surveillance, and fingerprint devices and the offices of all INP employees are equipped with computers and electronic printers.
- The water network was changed to reduce water waste resulting from the old dilapidated network. The electricity network was also changed to become more efficient, and LED bulbs were installed throughout the building to reduce electricity consumption.
- Many old electronic devices were replaced with modern ones that consume less electricity

- A modern electronic portal was developed that provides many services, such as the services of the Documentation and Publishing Center at the Institute as well as information on the Institute's activities and events. The portal also provides INP publications to the community of beneficiaries, including faculty members, university students, and researchers in scientific centers based in the country or abroad.

- A number of databases have also been established to serve the Institute's scientific and administrative activities.

- The conference room is equipped , with recording cameras, control rooms, and simultaneous interpretation facility. A VIP lounge was attached to it furnished with a screen projecting on going activities.

- Student facilities have been equipped with projectors and display screens.

- Added an e-learning and distance education hall, which can also be used as a media center if there are activities in the conference hall.

- Refurbished the institute's cafeteria, and provided a gymnasium to serve INP postgraduate students and staff.



### INP SCIENTIFIC ACTIVITIES:

The institute's scientific activities include organizing conferences, seminars, symposiums, and expert meetings, these activities vary in regularity, periodicity, and in the topics and issues discussed.

### INP Publications:

The Institute's publications include scientific reports, collective research published within a series of planning and development issues, the Egyptian Journal of Development and Planning, policy pamphlets, policy papers, selected topics of planning and sustainable development, and reference books.



#### Certificates granted to INP:

- Certificate of Quality Management System ISO 9001 for the year 2015.
- Certificate of Management System for Educational and Research Institutions ISO 21001 for the year 2018.
- The institutional accreditation from the National Authority for Quality Assurance and Accreditation of Education (NAQAA) in 2022.



#### INP's Vision:

Active and sustainable role in planning and developmental issues on the national level, ensuring effective regional and international presence.



#### INP's Mission:

INP is a national think tank that offers assistance in development and planning fields for the decision takers and policymakers at all levels by providing competitive services in research, training, consultancy, and education. It applies the best scientific methods and practices and maintains local and global partnerships and promotes the objectives of sustainable development.



#### INP's Values:

- Institutional Loyalty and Affiliation.
- Adherence to the Academic Code of Ethics.
- Public sector Ethics.
- Teamwork.
- Governance, Transparency, and Accountability.
- Continuous Education.
- Creativity and Innovation.
- Intergenerational Communication.



#### INP's Strategic Goals:

- Strengthening INP's status locally and globally and putting greater emphasis on the risks affecting the development process.
- Developing activities, partnerships, research contributions, and activating the measurement of research impact.
- Improving the competitiveness, quality, and advertising of the training activity according to actual requirements.
- Diversifying and enhancing the quality and reliability of postgraduate studies programs according to the needs of sustainable development.
- Expanding and diversifying the areas of consulting services based on competitive advantages.
- Enhancing quality, governance, and digital transformation in INP's activities, systems, and processes.
- Enhancing financial sustainability and developing additional financial resources to support the expansion of the Institute's activities.
- Developing human capital and managing physical capital according to the best experiences and practices.
- Adopting innovative concepts, practices, and applications to activate INP's social responsibility roles.