ZONEAMENTO ECOLÓGICO-ECONÔMICO
DO ESTADO DE SÃO PAULO

EXECUTIVE SUMMARY
ECOLOGICAL-ECONOMIC ZONING
OF THE STATE OF SÃO PAULO (EEZ-SP)

December, 2022

INTRODUCTION

With about 45 million inhabitants, the state of São Paulo concentrates more than 20% of the Brazilian population and stands out for its economic performance and the diversity of businesses, activities and natural resources. Given the complex range of development expectations and challenges to improve environmental and socioeconomic aspects, it is necessary to plan the territory and promote the articulation between levels of governance, sectoral policies, public and private investments and various social demands, aiming to mediate conflicts and enhance synergies in the territory.

Ecological-Economic Zoning (EEZ) is a technical and political instrument for spatial planning and management that provides subsidies for the development and implementation of public policies, environmental licensing and decision-making by public or private entities. In the State of São Paulo, it is based on five strategic guidelines: Resilience to Climate Change (D1), Water Security (D2), Biodiversity Safeguarding (D3), Competitive and Sustainable Economy (D4) and Reduction of Regional Inequalities (D5). From the elaboration of the diagnosis and the prognosis of the state according to the five strategic guidelines, the EEZ-SP identifies environmental and socioeconomic potentialities and vulnerabilities and subdivides the territory into areas with similar characteristics, for which applicable guidelines are addressed in order to the achieve its objectives.

The coordination of the process of preparation of the EEZ-SP is done by the Secretariat of Infrastructure and Environment of the State of São Paulo (SIMA), through the Coordination of Environmental Planning (CPLA), responsible for the institutional articulation and consolidation of technical subsidies with the State Commission of Ecological-Economic Zoning (CEZEE-SP). One of the assumptions of the instrument is that it is constituted of participatory bases, with the involvement of an extensive range of governmental and non-governmental actors. Thus, the EEZ-SP that is now presented is the result of a broad process of discussion with representatives of state secretariats, municipalities and representative entities of civil society, through meetings, regional workshops, dialogue tables and public hearings, as well as plenary meetings of the State Council of the Environment (CONSEMA) and its Public Policy Commission.

The objective of this document is to describe the premises of the EEZ-SP, its legal basis, the technical support contracted for its elaboration, the work methodology adopted, the main products developed, the assumptions for its implementation and the participatory process that occurred during its conception, as well as the one planned for the implementation stage. In addition to this document, a set of reports and technical notes constitute the EEZ-SP, including:

- Technical Note on the Synthesis Maps for the State of São Paulo;
- Socioeconomic Survey for the Ecological-Economic Zoning of the State of São Paulo;
- Technical Note on the Scenarios for the State of São Paulo, horizon 2040;
- Technical Note on Climate Projections for the State of São Paulo, base year 2040;
- Technical Note on the Integrated Analysis of the State of São Paulo;
- Technical note on Rede ZEE-SP;
- Zoning and Applicable Guidelines for Ecological-Economic Zoning in the state of São Paulo.

This material is also complemented by the State Decree No. 67,430/2022, which establishes the EEZ-SP, and by the map that presents the Management Zones.

1. PREMISES

Ecological-Economic Zoning is a technical and political instrument of planning and territorial planning, laid down by the National and State Environmental Policy (Federal Law No. 6,938/1981 and State Law No. 9,509/1997) and the Climate Change State Policy (State Law No. 13,798/2009), which establishes guidelines for planning and managing the territory, considering the environmental characteristics and socioeconomic dynamics of the different regions. In the state of São Paulo, its elaboration is based on five strategic guidelines, which were established based on an analysis of the main environmental and socioeconomic demands and challenges faced in the state, as well as on the identification of development opportunities. Those are: Resilience to Climate Change (D1), Water Security (D2), Biodiversity Safeguarding (D3), Competitive and Sustainable Economy (D4) and Reduction of Regional Inequalities (D5).

The Climate Change Resilience guideline stands for a state with low environmental and social vulnerability and with the ability of preventing and responding to risk and disaster situations.

The Water Safety Guideline is based on ensuring the supply of water in quantity and quality to different uses over time.

The Biodiversity Safeguarding Guideline aims to protect, conserve and restore associated biomes and ecosystems to ensure biodiversity sustainability and ecosystem services.

The Competitive and Sustainable Economy guideline provides the identification of positive connections between environmental resources and economic activities, in order to consolidate, foster and boost economies.

The Regional Inequalities Reduction Guideline seeks to improve access to goods and services, public programs and policies that promote quality of life and reduce regional imbalances.

These strategic guidelines have been used as a thematic part-section in the elaboration of the EEZ-SP and, in general, are connected to the main global agendas focused on sustainability: adaptation to climate change, implementation of the 2030 Agenda (Sustainable Development Goals-SDGs), ESG (Environmental, Social and Governance) business practices, etc. Regarding the 2030 Agenda, for example, the strategic guidelines of the EEZ-SP are associated with basically all 17 SDGs, specially, with the goals linked to SDGs 6 (Drinking Water and Sanitation), 8 (Decent Work and Economic Growth), 10 (Reduction of Inequalities), 13 (Global Action Against Climate Change), 14 (Life in Water) and 15 (Terrestrial Life). In addition, several of the

indicators worked in the EEZ-SP are directly related to the national monitoring indicators of the 2030 Agenda and will make it possible to evaluate, jointly, the paths towards a more balanced social, economic and environmental development.

The main objectives of EEZ-SP are to support the formulation of public policies, to guide public and private investments according to strategic guidelines for sustainable development and to strengthen the adoption of mitigation and adaptation measures to face climate change. As specific objectives, the EEZ-SP intends to establish guidelines for sustainable territorial development, resulting from the processes of public participation, institutional articulation and identification of sectorial demands; to establish an Integrated Platform for Planning and Management of the Territory, called RedeZEE-SP, composed of an updated and shared territorial information base in a virtual environment for strategic spatial analysis; to support the integration of sectorial policies; to provide greater efficiency to environmental inspection, compensation, recovery, restoration and licensing processes; to promote greater effectiveness in decision-making processes and in the implementation of public and private investments; and to ensure transparency of public administration in the planning and territorial management process.

Based on the continuously updated information sharing strategy, EEZ-SP offers an opportunity to build an agreed vision on sustainable development in São Paulo on a regional scale, on a strategic and multithematic scale, supporting the formulation of public policies and investment planning.

The coordination of the EEZ-SP is in charge of the Secretariat of Infrastructure and Environment, through the Coordination of Environmental Planning (CPLA), responsible for the institutional articulation and consolidation of technical subsidies with the State Commission of EEZ-SP (CEZEE-SP). The CEZEE-SP, instituted by State Decree No. 64,256/2019 and composed by twelve secretariats of the state public administration, is responsible for monitoring the preparation, for contributing with technical subsidies and for endorsing the zoning proposal. The participation of sectors and representative entities of civil society and municipalities is foreseen throughout the process, in the form of consultations with society, preferably articulated with the Watershed Committees (CBHs), and representative entities and institutions.

2. LEGAL BASIS

At the national level, the first legal reference that is in relation to the EEZ is identified in the National Environment Policy (Federal Law No. 6,938/1981), which established environmental zoning among its instruments. Since then, several zoning experiences have been carried out in the country, initially in the Legal Amazon region and, later, in other Brazilian states. The initial experiences contributed to the design of a methodology for the elaboration of ecological-economic zoning, materialized by the Ministry of the Environment (MMA) in 2001 in the document entitled "Methodological Guidelines for the EEZ of the National Territory".

The regulation of the process of implementation of the EEZ in national territory as an instrument of the National Environment Policy occurred with Federal Decree No. 4,297, in 2002, which endorsed the "Methodological Guidelines for the EEZ of the National Territory".

The decree established criteria, objectives, guidelines and principles for the formulation and implementation of zoning, reaffirming its role in the organization of the territory, through guidance of plans, works and public and private activities.

At the state level, environmental zoning was treated by the State Environmental Policy (State Law No. 9,509/1997), which reaffirmed environmental planning and zoning as one of its principles. In 2009, the Climate Change State Policy (PEMC) was approved by State Law No. 13,798/2009, in which the state committed to implement the EEZ in the state of São Paulo. This law was regulated by State Decree No. 55,947/2010, updated later by State Decree No. 66,002/2021, in what refers to the EEZ of the state of São Paulo, as discussed below.

In 2012, the "New Forest Code" (Federal Law No. 12,651/2012) reinforced the need to formulate the Ecological-Economic Zoning and determined the five-year deadline for states to prepare it. In addition, State Decree No. 61,792/2016, which regulates State Law No. 15,684/2015 on the Environmental Regularization Program (PRA), defined that the location of the Legal Reserve areas should consider the areas indicated in the EEZ for biodiversity conservation and for the execution of environmental recomposition projects.

To continue the work of the EEZ, the São Paulo Environmental System Working Group (GT-SAP-ZEE) was created through Resolution SMA No. 14/2016, responsible for coordinating and developing activities related to the formulation of the Ecological-Economic Zoning of the State of São Paulo. This group had the participation of more than 130 technicians subdivided into the following thematic groups: Water, Air, Biodiversity, Climate, Soil, Socioeconomics, Demography and Infrastructure, Public Policies, Methodology, Social Mobilization and Ecosystem Services.

In 2019, another important institutional step was taken by the state of São Paulo, with the publication of the State Decree No. 64,526/2019, which instituted CEZEE-SP. The Commission has the tasks of monitoring and contributing with technical subsidies for the preparation of the instrument, assessing and endorsing the proposal for EEZ-SP and monitoring its implementation. It is composed of 12 Secretariats: Secretariat of Government, Secretariat of Infrastructure and Environment, Secretariat of Economic Development, Secretariat of Regional Development, Secretariat of Justice and Citizenship, Secretariat of Agriculture and Supply, Secretariat of Logistics and Transport, Metropolitan Department of Transport, Secretariat of Housing, Secretariat of Health, Secretariat of Tourism, Military House and Civil Defense.

In 2021, two more relevant decrees and related to the EEZ-SP were published: State Decree No. 65,881/2021, which provides support of the "Race to Zero" and "Race to Resilience" campaigns under the United Nations Framework Convention on Climate Change, and State Decree No. 66,002/2021, which establishes the elaboration, implementation, monitoring and review of the EEZ-SP. The second one determines that the institution of the EEZ-SP must take place by decree and that its revision will take place on a regular basis of ten years, as described in the Climate Change State Policy. It also determines that the processes of preparation and review of state public policies, as well as the processes of environmental inspection, compensation, recovery, restoration and licensing, should consider the guidelines and strategies presented by EEZ-SP.

3. TECHNICAL SUPPORT CONTRACTED FOR EEZ-SP

The resources allocated for the elaboration of the Ecological-Economic Zoning of the State of São Paulo are linked to specific programs focused on the environmental planning instruments of the Multiannual Plan (PPA) since 2012 and, mostly, to the loan agreement 8272-BR, of 09/24/2013, signed between the Government of the State of São Paulo and the International Bank for Reconstruction and Development (IBRD).

With SIMA resources, SEADE Foundation was hired to produce a panel of indicators for characterizing and monitoring the socioeconomic dynamics of the State of São Paulo in 2017.

The contract signed with the IBRD has the Department of Highways (DER) as executive agency, with the collaboration of the Secretariat of Logistics and Transport (SLT), SIMA, the Secretariat of Government (SG), the Secretariat of Finance and Planning (SEFAZ) and the Environmental Company of the State of São Paulo (CETESB), integrating the State Policy of Climate Change (PEMC), the Logistics and Transport Masterplan and the Natural Disaster Prevention Program.

The State Decree No. 60,651, of 07/15/2014 established the Transportation, Logistics and Environment Program of SIMA, with the objective of contributing to the improvement of transport and logistics efficiency and security of the state of São Paulo and, at the same time, supporting land use planning and integrated territorial management, improving environmental monitoring and surveillance and implementing actions aimed at reducing risks of natural disasters.

The program is supported by 3 components, and Ecological-Economic Zoning integrates sub-component 2.1. – Support for sustainable land use planning and territorial management (SEFAZ and SIMA/CPLA), with the purpose of providing guidance for public investments and development strategies. Within the scope of this project, the following contracts were carried out, executed between 2015 and 2020: consultancy to characterize the dynamics of occupation of the territory; specialized consultancy for the development of a methodological proposal applied to EEZ-SP; contract of operational support to build the proposal of Ecological-Economic Zoning for the State of São Paulo and hiring consulting services for the evolution of the architecture and technological platform of DATAGEO for the construction of virtual environments of network-based territorial analysis (RedeZEE-SP).

We highlight the importance of allocating resources to the EEZ-SP project, to enable the implementation and maintenance of RedeZEE-SP and coordination strategies with CEZEE-SP, dialogue tables, technical visits and training, among other activities necessary for the dissemination and appropriation of the instrument. In addition, resources should be allocated for the development/implementation of plans, programs and projects of the other Secretariats of State that are in accordance with the strategic guidelines, objectives and applicable guidelines of the EEZ-SP.

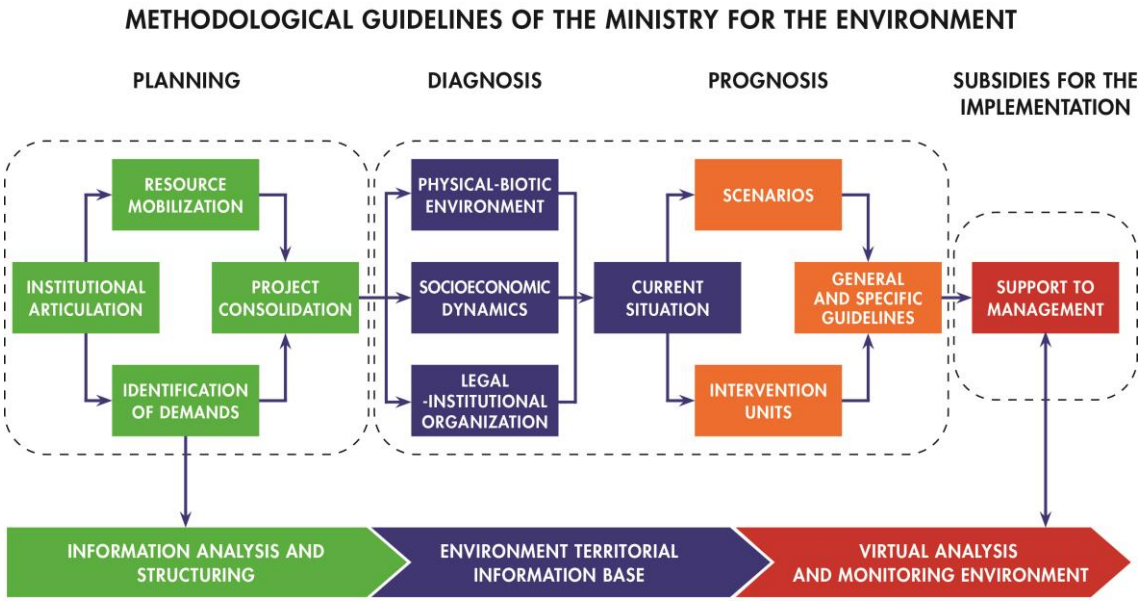
4. METHODOLOGY OF ELABORATION AND PRODUCTS

The document "Methodological Guidelines for the EEZ of the National Territory" (MMA/SDS, 2006), mentioned above, as well as the conceptual foundation established by Bertha Becker and Cláudio Egler (SAE/PR; MMA, 1997), served as the basis for the elaboration of the

methodology for the formulation of the EEZ in the state of São Paulo. This document defines the methodological guidelines and minimum operational procedures for the elaboration and implementation of the EEZ in the national territory, consolidated in the Project EEZ Brazil, subdividing its execution into four stages of work: planning, diagnosis, prognosis and implementation subsidies.

The planning stage is the starting point to guide the necessary political and institutional articulations for the feasibility of the project, including the identification of technical, financial, institutional and social demands, as well as the mobilization of the financial and human resources necessary for its implementation. The diagnostic stage involves the data collection and correlation, as well as the achievement of analytical synthesis that meet the objectives established in the planning phase. The prognosis stage elaborates, from the correlation of the information, the current situation and the trend and desired scenarios, the integrated units and the planning zones. The implementation stage includes the consolidation of a management support system that provides, among others, the continuous updating and dissemination of information, the implementation of development strategies established by the EEZ and a continuous monitoring of the situation of the zones. The main activities of Project EEZ Brazil and its articulations are materialized in Figure 1.

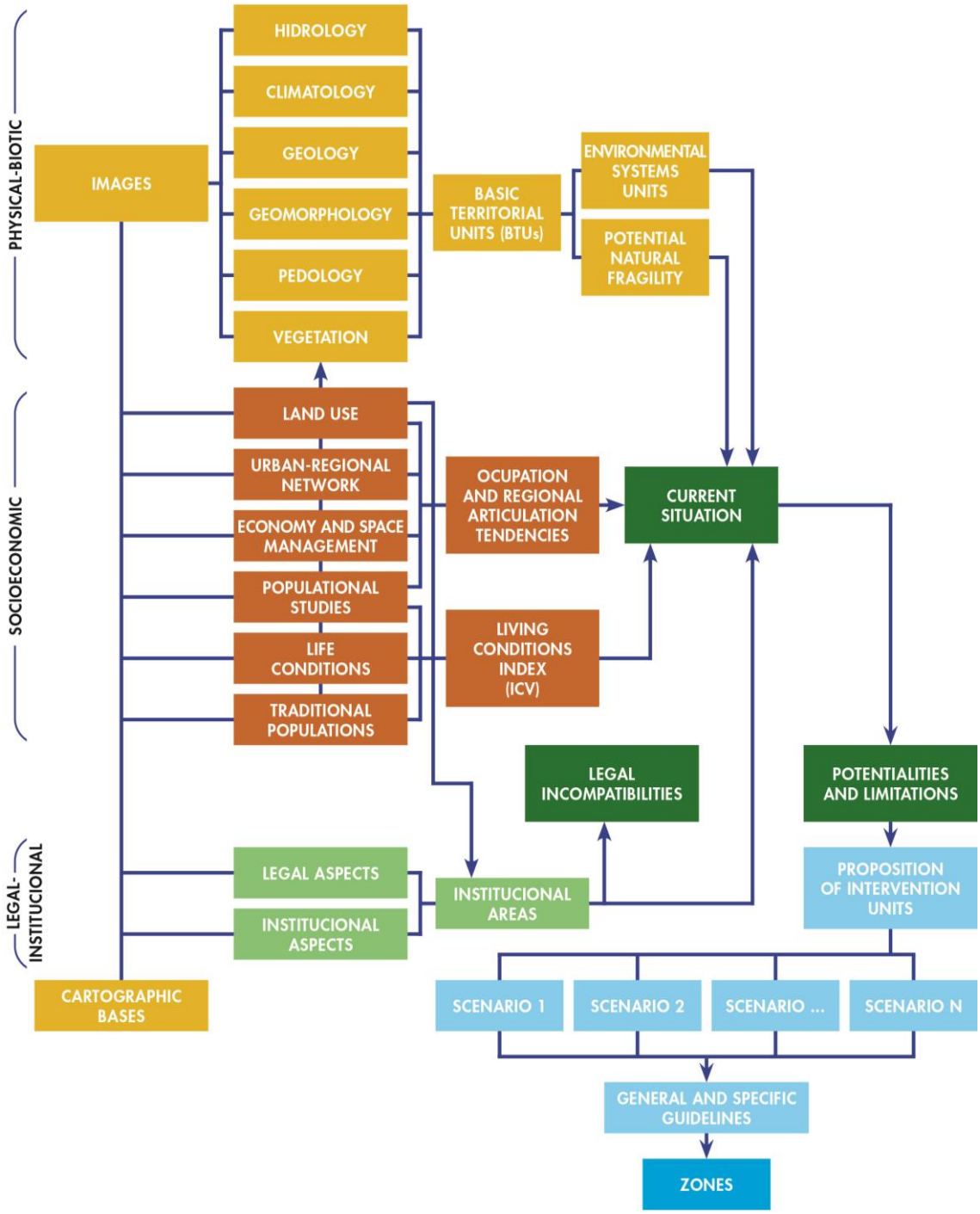
FIGURE 1. DEVELOPMENT STEPS AND ACTIVITIES PLANNED FOR THE FORMULATION AND IMPLEMENTATION OF EEZ IN THE NATIONAL TERRITORY



Source: MMA (2006), adapted by SIMA (2022).

The regional and state initiatives of EEZ must adopt the general guidelines of Project EEZ Brazil, although they can adopt other levels of detail, in the indication of priority areas, in the management of basins and sub-basins, in the diagnosis of conservation units and in the subsidy to sectoral management plans. The technical-operational procedures of regional and state EEZ projects are represented in the flowchart of Figure 2 below, evidencing the basic themes, the intermediate synthesis of the diagnosis, the synthesis for interpretation of the potentialities and limitations, the prognoses and the legal and programmatic indications.

FIGURE 2. TECHNICAL-OPERATIONAL PROCEDURES FOR THE EEZ OF THE NATIONAL TERRITORY



Source: MMA (2006), adapted by SIMA (2022).

As established in the "Methodological Guidelines for the EEZ of the National Territory", the methodology of elaboration of the EEZ-SP was structured in the stages of planning, diagnosis, prognosis and implementation subsidies, described below, with the necessary adaptations to the São Paulo context and its specificities.

Planning

The planning stage was a stage of process preparation, including the definition of objectives and strategic guidelines, the construction of institutional articulations, the mobilization of technical and financial resources, bibliographic research and the structuring of the database necessary for the formulation and implementation of EEZ-SP (Territorial Information Base / RedeZEE-SP). Thus, in the planning stage, the five strategic guidelines that structure the EEZ-SP were defined: Resilience to Climate Change (D1), Water Security (D2), Biodiversity Safeguarding (D3), Competitive and Sustainable Economy (D4) and Reduction of Regional Inequalities (D5). These five guidelines, considered as major objectives of the EEZ-SP, served as a guide for the development of all subsequent stages of preparation of the instrument.

Also at this stage the Working Group was established within the scope of Sistema Ambiental Paulista (São Paulo Environmental System) - GT-SAP-ZEE, with the objective of coordinating the development of the diagnosis and other stages of the EEZ-SP. The GT-SAP-ZEE brought together more than 130 technicians and leaders of the various institutions of direct and indirect administration of the system, subdivided into thematic groups (GTs) Water, Air, Biodiversity, Climate, Soil, Socioeconomics, Demography and Infrastructure, Public Policies, Methodology, Social Mobilization and Ecosystem Services. These GTs worked on the identification and systematization of data, information and indicators to constitute the Territorial Information Base (BIT), in the creation of subsidies for the definition of the methodology for the elaboration of the instrument, in the construction of the social participation strategy and in the establishment of criteria for hiring work support consultancies.

Also during the planning stage, there was the mobilization of SIMA resources with the partnership of the International Bank for Reconstruction and Development (IBRD), in order to hire specialized consultancies for the characterization of the dynamics of occupation of the territory, for the development of a methodological proposal applied to the EEZ-SP and to provide operational support for the construction of the EEZ-SP proposal, as pointed out. In addition, seminars and round tables were held with the objective of improving the construction of the instrument's methodology and its operationalization, such as the "Ecological-Economic Zoning Seminar - Basis for Sustainable Development of the State of São Paulo", the round table "The Process of Construction of Ecological-Economic Zoning in Brazil: case studies", with the participation of representatives of the states of Minas Gerais, Paraná and of the Federal District, and the "Ecological-Economic Zoning Seminar: Reflections on Environmental Licensing and Territorial Planning", with technicians of the São Paulo Environmental System. All these activities enabled the development of subsequent stages of work.

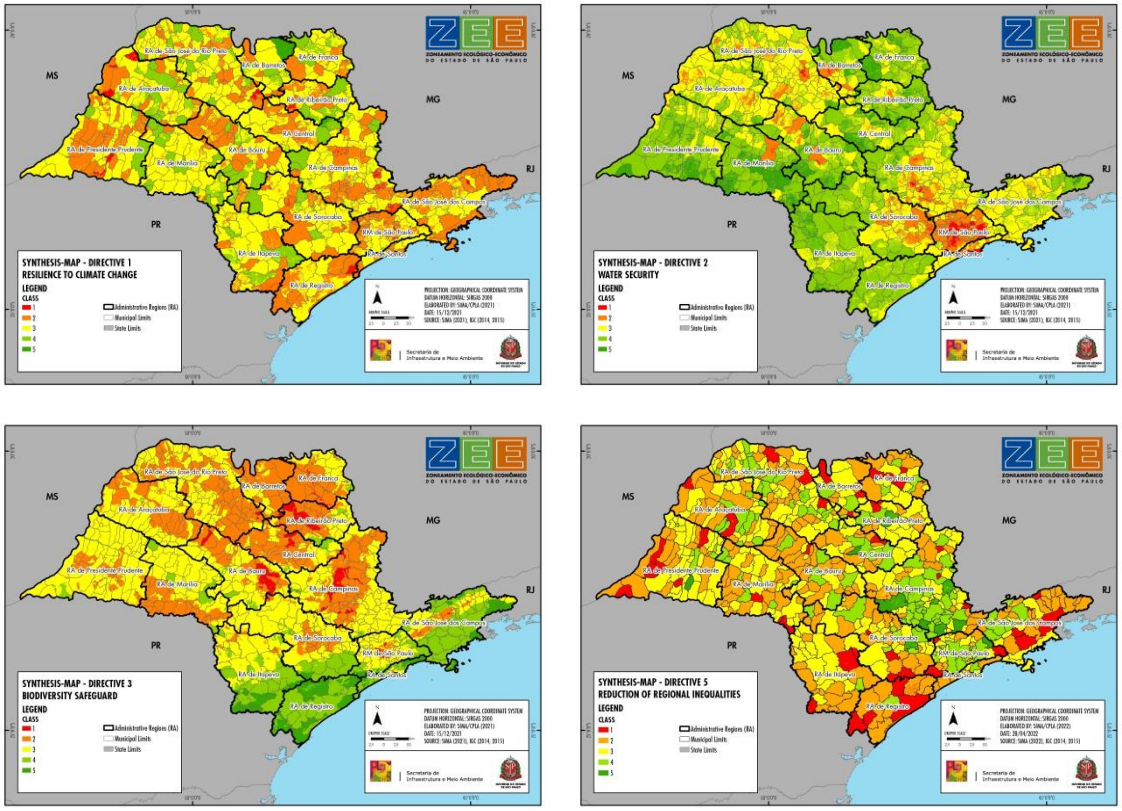
Diagnosis

The diagnosis of the EEZ-SP started from the survey and systematization of data, indicators and information of the three dimensions pointed out in the Methodological Guidelines for the EEZ of the National Territory (physical-biotic environment, socio-economics and legal-institutional aspects), with the objective of characterizing the environmental and socioeconomic potentialities and vulnerabilities of the state. Thus it showed the situation of the state of São Paulo in relation to the cutout of the five strategic guidelines that guide the EEZ-SP project,

from the elaboration of synthesis maps for the guidelines on Resilience to Climate Change (D1), Water Security (D2), Biodiversity Safeguarding (D3) and Reduction of Regional Inequalities (D5), and a technical report for the Competitive and Sustainable Economy (D4) guideline.

The synthesis-maps are the result of the spatial crossing of indicators represented cartographically, portraying the state situation in relation to the four strategic guidelines mentioned (Figure 3). The synthesis maps of the strategic guidelines D1, D2 and D3 are structured in the dimensions "current situation", "pressure" and "responsiveness", while the synthesis map of D5 is structured in critical factors of analysis.

FIGURE 3. SYNTHESIS-MAPS OF STRATEGIC GUIDELINES D1, D2, D3 AND D5



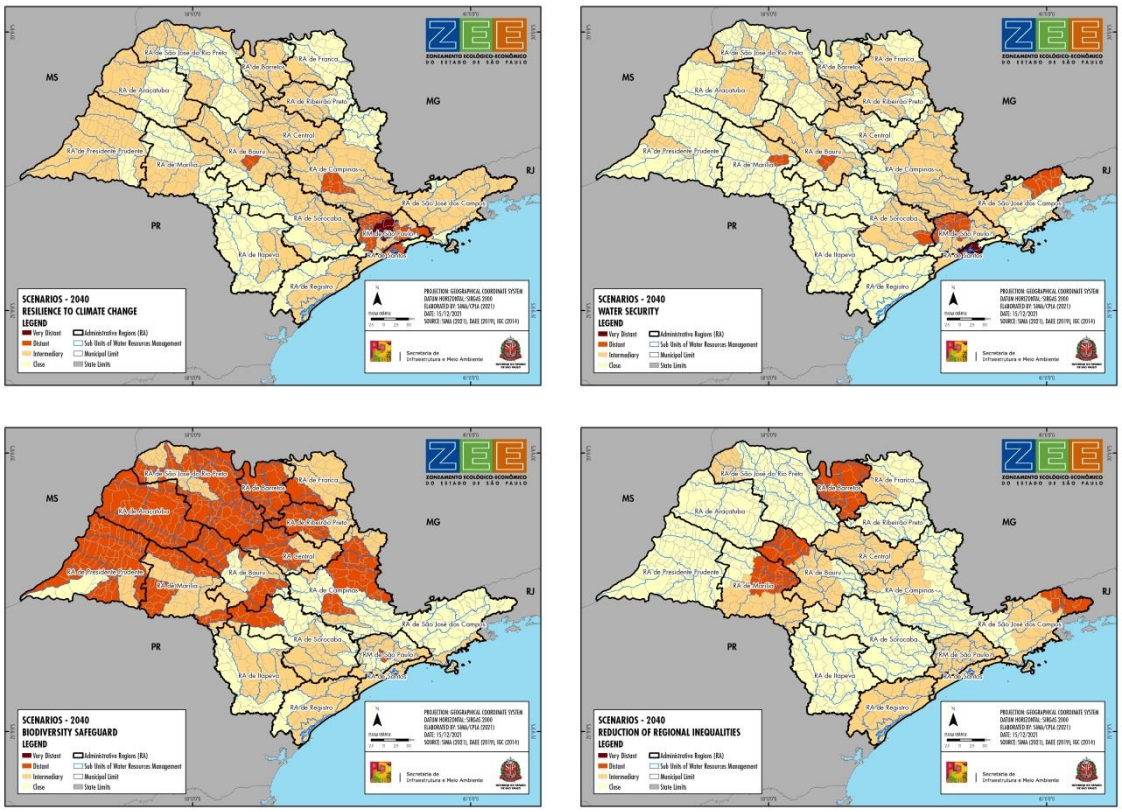
Source: SIMA (2022).

For the diagnosis of the strategic guideline of Competitive and Sustainable Economy, it was decided to prepare a report, instead of a summary map, for the limitation that it would bring to represent and synthesize the diverse economy of the state of São Paulo and its conditions of competitiveness and sustainability. Through the approach of relevant topics, or critical factors of analysis, the report presents a socioeconomic characterization of the different regions of the state and a description of the main economic activities of its 16 Administrative Regions (ARs). This cross-sectional approach contributed to show the state's socioeconomic potentialities and vulnerabilities and, later, to trace its interface with environmental potentialities and vulnerabilities.

Prognosis

The prognosis stage identified trends of territorial dynamics in the long term, from the elaboration of two distinct products: scenarios and climate projections. The scenarios were elaborated for the same strategic guidelines mapped in the synthesis maps, D1, D2, D3 and D5, and portray the trend evolution of key variables for each of the analyzed guidelines, in the time horizon of 2040 (Figure 4).

FIGURE 4. SCENARIOS OF THE STRATEGIC GUIDELINES D1, D2, D3 AND D5



Source: SIMA (2022).

The climate projections, carried out in partnership with Center for Weather Forecasting and Climate Studies of the National Institute for Space Research (CPTEC/INPE), analyze ten climatic factors or elements related to temperature and precipitation in the 2020-2050 horizon, considering the Representative Concentration Pathways 8.5 (RCPs). The climate projections are a great innovation of the state of São Paulo in the context of the EEZ theme and, together with the scenarios, constitute the future lens of the EEZ-SP. Both diagnosis and prognosis should be updated every four years.

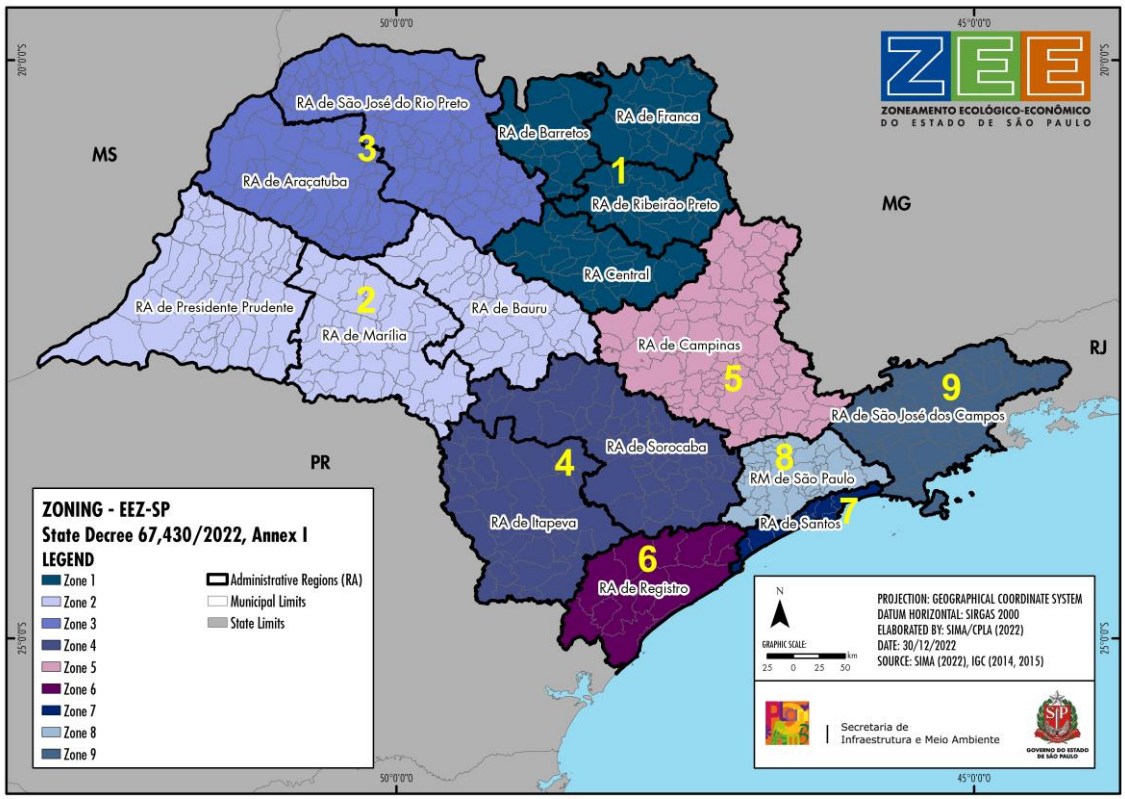
Support to the implementation

In support to the implementation, an integrated territorial analysis of the four products conceived in the previous stages was made, i.e. the synthesis maps, the socioeconomic report, the scenarios and the climate projections. From this analysis, Administrative Regions (ARs) or groups of ARs with environmental and socioeconomic similarities were identified, as well as the main challenges faced by each of them. Together with the analysis of existing or in the process of elaboration sectoral plans and public policies, the results of the integrated analysis

supported the proposition of zoning and the applicable guidelines for the ecological-economic zones.

The zoning is composed of nine management zones, consisting of ARs or groups of ARs with environmental and socioeconomic similarities, for which general and applicable guidelines are recommended (Figure 5). The document Zoning and Applicable Guidelines presents, in addition to the zoning and general and applicable guidelines, a synthesis of the socioeconomic characterization of each of the zones, the final result of the synthesis charts and scenarios, the performance of the indicators, the general characteristics of the climate projections and the main challenges to be faced by each of them. The integrated analysis of the diagnostic and prognostic products will be updated every four years and will support the review of the zoning and applicable guidelines, which will be reviewed every ten years.

FIGURE 5. ECOLOGICAL-ECONOMIC ZONING OF THE STATE OF SÃO PAULO



Source: SIMA (2022).

Throughout the process of planning and execution of the diagnosis and prognosis, the structuring of RedeZEE-SP occurred, either from the identification and systematization of data, indicators and strategic information to compose the Territorial Information Base (TIB), or by consolidating a virtual environment of analysis and discussion. RedeZEE-SP is an Integrated Platform for Planning and Management of the Territory focused on the management and integration of territorial information, which allows the articulation of data and the integration of environmental and socioeconomic actors and themes. RedeZEE-SP and its Territorial Information Base will be continuously updated, respecting the periodicity of data, indicators and information used in the EEZ-SP.

In the stages of planning, diagnosis, prognosis and support to the implementation, there was also intense participation of governmental and non-governmental actors. Thus, it is worth mentioning the constitution and activation of the State Commission for Ecological-Economic Zoning (CEZEE-SP) during the period, providing considerable contribution of essential information to the comprehension of the territorial dynamics, including those related to the already planned sectoral policies or the ones that are in execution in the state of São Paulo. In addition to the numerous plenary and bilateral meetings held with the members of CEZEE-SP or GT-SAP-ZEE, already mentioned, several regional workshops were also held with the CBHs and dialogue tables with public and private agents. The process of public participation, which will be detailed in item 6, allowed an improvement of the instrument and the construction of an agreed vision on sustainable development.

5. IMPLEMENTATION

After the stages of planning, diagnosis, prognosis and support to the implementation, the implementation stage of the instrument will begin, a fundamental step to enable the achievement of the strategic guidelines and the applicable guidelines proposed for ecological-economic zones. Like the other stages of the EEZ-SP, the implementation should have broad institutional articulation and public participation and be based on a multi-thematic and multilevel governance system, expanding the legitimacy of the instrument and enabling the achievement of its objectives. The implementation of the EEZ-SP should support the creation and review of public policies, guide the planning of public and private investments and guide processes of environmental inspection, compensation, recovery, restoration and licensing. Monitoring should be followed by the evolution of EEZ-SP products, their incorporation into public policies and the execution of investments, as well as the effective institutional articulation in the implementation of the instrument, as will be seen next.

Institutional articulation and public participation

The governance structure of the EEZ-SP is based on different regional and sectoral forums, among which the São Paulo Environmental System Working Group (GT-SAP-ZEE), the Executive Secretariat of EEZ-SP, the State Commission of Ecological-Economic Zoning (CEZEE-SP), Watershed Committees (CBHs) and State Council of the Environment (CONSEMA). As pointed out, the GT-SAP-ZEE brought together more than 130 technicians and managers from the many organs of direct and indirect administration that make up SIMA, directly involved in the preparation of the diagnosis and prognosis of EEZ-SP. The Executive Secretariat of EEZ-SP is part of this working group (GT), coordinates the work and the articulation between everyone involved. About CEZEE-SP, it is composed of representatives of 12 state secretariats and is responsible for monitoring and contributing with technical subsidies for the preparation and implementation of the instrument. The regional and sectoral forums are represented by the Watershed Committees and dialogue tables, composed of representatives of the municipal governments, productive sectors, universities, research institutes and sectors of civil society. Finally, CONSEMA is the deliberative instance of the EEZ-SP that keeps up with the processes of preparation and implementation of the instrument.

The public participation during the preparation of the EEZ-SP proposal included several meetings with the technicians of the GT-SAP-ZEE, plenary and bilateral meetings with

representatives of CEZEE-SP, as well as regional meetings with the CBHs and dialogue tables with public and private agents, as will be detailed in item 6. Institutional articulation and public participation should be maintained during the implementation of the instrument. In this process, CEZEE-SP should meet annually on an ordinary basis and, at any time, on an extraordinary basis, and prepare periodic reports on the insertion of EEZ-SP in its sectoral public policies. The Executive Secretariat of EEZ-SP, in turn, should continue the dialogue tables with representative entities and institutions, preferably articulated with the CBHs, in order to disseminate the instrument and welcome contributions that promote its improvement. Finally, CONSEMA should monitor the implementation of the EEZ-SP.

In addition to having a governance that enables institutional articulation and public participation, the implementation of the EEZ-SP should be based on an organized basis of territorial information. Here, once again, RedeZEE-SP, an integrated platform for planning and management of the territory, formed by a territorial information base and a virtual environment of analysis and discussion, should be highlighted. In RedeZEE-SP, all data and indicators used in the preparation of the EEZ-SP, as well as those that will be included throughout its implementation, will be made available and accessible to the public consultation. It is important that the whole society, especially public managers, are able to use and disseminate the information of RedeZEE-SP and, in this sense, tutorial videos and training are being designed aimed at the learning of all its functionalities. Thus, it is expected that the implementation of the EEZ-SP will ensure broad access to information, enabling greater transparency of public administration and the exercise of social control.

Subsidies for the development and integration of public policies, to the orientation of public and private investments and support for environmental policies

In several ways EEZ-SP must support the development, review and implementation of sectoral public policies at various scales, guide the planning of public and private investments and guide the processes of environmental supervision, compensation, recovery, restoration and licensing. In strategic terms, the EEZ-SP generates subsidies by providing a regional and multithematic view of the territory, with the identification of environmental and socioeconomic potentialities and vulnerabilities. In operational terms, it happens from the production, organization and availability of widely accessible data, indicators and strategic information, as well as the creation and promotion of environments of discussion and analysis of the environmental and socioeconomic dynamics of the different regions of the state.

As pointed out, the elaboration of the EEZ-SP generated a series of products, such as, synthesis maps, scenarios, technical socioeconomic reports and integrated analysis, climate projections, zoning, applicable guidelines for each ecological-economic zone and the RedeZEE-SP itself. Undoubtedly, all these products constitute rich material to support decision-making and the identification of priority areas and actions for the development and adequacy of sectoral policies, as well as for the realization of public and private investments. They also support the analysis of environmental inspection, compensation, recovery, restoration and licensing processes, as well as support the consolidation and improvement of parameters and criteria for environmental licensing, urban licensing, building approval and granting of concessions for the use of water resources, for example.

With regard specifically to the objective of subsidizing and integrating plans, programs and projects, it is important to highlight that the EEZ-SP has already fulfilled its role, by providing strategic discussions and exchanges of information throughout the elaboration and review of different territorial impact policies, such as the coastal EEZ, the Integrated Urban Development Plans for metropolitan regions and urban agglomerations (PDUIs), Sustainable Economic Development Plans (PDES) and Conservation Units Management Plans, among others. The municipal Master Plans, especially their land use and occupation laws, can also use the information and applicable guidelines pointed out by EEZ-SP, detailing, on the municipality scale, the most general parameters established by the instrument. The idea is that these plans, programs and projects can coexist in the territory, respecting their specificities and pursuing their compatibilization.

Monitoring and review

The implementation of the EEZ-SP also assumes the monitoring and revision of the instrument. The monitoring will take place through the monitoring of three dynamics:

1. Evolution of the indicators that make up the EEZ-SP and of the products that characterize the diagnosis and prognosis (including the synthesis maps, scenarios, climate projections and socioeconomic report);
2. Incorporation of strategic guidelines, diagnosis, prognosis, integrated analysis, zoning and applicable guidelines in the development of sectoral public policies and in the execution of public and private investments; and
3. Institutional articulation in the development and implementation of sectoral public policies and in the planning and execution of public and private investments, also considering the use of RedeZEE-SP for these purposes.

An important role will be played by CEZEE-SP in this sense, since it should provide, annually, a report on the insertion of the EEZ-SP in its respective sectoral public policies, a report that should be consolidated and evaluated by the Executive Secretariat of the EEZ-SP.

The data, indicators and information that make up the EEZ-SP will be continuously updated and integrated to RedeZEE-SP, respecting the respective updating periodicity. On the other hand, the documents that characterize the diagnosis and prognosis of EEZ-SP, in addition to the integrated analysis, will be updated every four years, by resolution of the Secretary of Infrastructure and Environment and after manifestation of CEZEE-SP. From the follow-up of the three dynamics mentioned, the monitoring of the EEZ-SP will provide subsidies for the review of zoning and the applicable guidelines of ecological-economic zones, which will occur every ten years, as determined by the State Climate Change Policy (PEMC).

Based on a multithematic and multilevel governance that enables institutional articulation and broad public participation, as well as a system of sharing and constant updating of information, it is expected that the EEZ-SP fulfills its strategic and operational role and effectively contributes to the achievement of environmental and socioeconomic sustainability in the state of São Paulo.

6. SOCIAL PARTICIPATION

The construction of the EEZ is of great complexity and depends on the involvement of public and private agents, as well as institutional partnerships and partnerships with civil society entities. As pointed out, the social participation in the construction of the EEZ-SP was quite intense and was based on the various sectoral and regional forums of the governance structure planned for the process.

During 2016, more than 80 meetings were held with representatives of the GT-SAP-ZEE to identify and systematize data, information and biogeophysical, socioeconomic, infrastructure, public policy and legal-institutional organization indicators, constituting the Territorial Information Base (BIT) of EEZ-SP.

With the objective of discussing and integrating the themes worked by the Thematic Working Groups of the GT-SAP-ZEE, two workshops were held in July and two seminars in September and December 2016. The workshops brought together the thematic coordinators and technicians participating in the working groups and constituted the preparation stage for the seminars. In the "I Integration Seminar of the GT-SAP-ZEE" the preliminary work of the seven thematic groups was presented and the correlations between the themes were identified to define the integration strategy. In the "II GT-SAP-ZEE Integration Seminar" the results of the work of the working groups, documented in the "Final Report of the GT-SAP-ZEE: Subsidies for the Construction of the Environmental Territorial Information Base" were presented and discussed.

From the construction efforts of BIT, the coordinators and participants of the working groups held meetings in the first half of 2017 to support the methodology and operationalization of the stages of construction of the EEZ that would be contracted in the end of the year. The outcome of these meetings was presented and discussed at a meeting in September 2017, which was attended by the Secretary for the Environment of the State of São Paulo.

Between June and October 2018, 12 workshops were held with representatives of the 21 Watershed Committees of the state with the objective of complementing data, indicators and information of BIT, supporting the diagnosis of zoning and initiating public participation in the EEZ-SP process. These workshops, organized with the support of the Executive Secretariats of the CBHs, brought together more than 1,100 representatives and collaborators from the federal, state and municipal government segments, universities and research institutes, organized civil society and non-governmental organizations (Figures 6, 7, 8 and 9).

FIGURE 6. WORKSHOP IN TATUÍ

FIGURE 7. WORKSHOP IN PIRACICABA

FIGURE 8. WORKSHOP IN RIBEIRÃO PRETO

FIGURE 9. WORKSHOP IN GARÇA

Source: SIMA (2021).

In the workshops, the participants highlighted the socioeconomic and environmental characteristics of each region, the conflicts and consensus around the planning and management of water resources, the factors that contribute or hinder the reach of each strategic guideline of the EEZ-SP and the governmental actions, the productive sector and civil society existing or necessary to reach each guideline. In addition to being systematized in tables, the factors were mapped whenever possible by the participants to record their occurrence in the territory. The systematization of these contributions resulted in an analytical framework of correlation between the key elements, which are themes related to the factors that contribute or hinder the scope of each guideline, and the existing or necessary actions for the treatment or resolution of each key element.[1]

After the workshops, dialogue tables were held, which set up meetings with representatives of environmental entities, segments of the productive sector and universities and research institutes (Figures 10, 11, 12 and 13). The organization and holding of the tables with environmental entities and universities and research institutes took place from October to December 2018 and had as objectives: to present the proposal for work to build the EEZ-SP; to enable the exchange of experiences of entities, associations, researchers and teachers and technicians of the São Paulo Environmental System; to share projects, research, developed actions and visions about the territory of the state, seeking to correlate them to the strategic guidelines of EEZ-SP and to replicate them within the project; and to provide data, indicators and information to the diagnosis and prognosis of zoning.[2][3]

[1] For the guidelines 4 and 5, the factors were grouped into themes defined by the Executive Secretariat of the São Paulo Environmental System working group formed for the ZEE-SP project.

[2] Brazilian Rural Society (SBR) on 16/10/2018; State of São Paulo Industry Federation on 18/10/2018; Brazilian Chemical Industry Association (ABIQUIM) on 31/10/2018 and 07/02/2019; Federation of Trade in Goods, Services and Tourism of the State of São Paulo (FECOMERCIO) on 13/12/2018 and 14/02/2019.

[3] The meeting with environmental entities occurred on 26/10/2018 and was attended by representatives of the entities: Institute for the Eradication of Slave Labor National Pact (InPACTO), Ilhabela Sustainable Institute, Retorno das Árvores Association (RDA), Brazilian Council for Sustainable Construction (CBCS), SIADES Institute - Environmental Information System for Sustainable Development, Institute of Democracy and Sustainability (IDS), The Nature Conservancy (TNC Brazil), Argonauta Institute, Coastal Conservation Institute (ICC), Somos Ubatuba Socioenvironmental Association (ASSU). The meeting with universities and research institutes representatives took place on 10/12/2018 and had the presence of professors and researchers of: Institute of Technological Research (IPT/University of São Paulo), Federal University of São Paulo (UNIFESP)/Diadema campus, ABC Federal University, Polytechnic School/University of São Paulo (POLI/USP), Center for Population Studies/State University of Campinas (NEPO/UNICAMP), Geological Institute/Secretariat of Infrastructure and Environment of the State of São Paulo and Faculty of Architecture and Urbanism/University of São Paulo (FAU/USP).

The organization and holding of the roundtables with representatives of some productive sectors took place from October 2018 to February 2019 and had as objectives: to present the proposal of work to build the EEZ-SP; to map the dynamics, conditions and demands of the sectors, correlating them to the strategic guidelines of the EEZ-SP; and to identify the scenarization variables for the zoning.

FIGURE 10. DIALOGUE TABLE WITH REPRESENTATIVES OF ENVIRONMENTAL ENTITIES

FIGURE 11. DIALOGUE TABLE WITH REPRESENTATIVES OF UNIVERSITIES AND RESEARCH INSTITUTES

FIGURE 12. DIALOGUE TABLE WITH REPRESENTATIVES OF THE PRODUCTIVE SECTOR - MINING

FIGURE 13. DIALOGUE TABLE WITH REPRESENTATIVES OF THE PRODUCTIVE SECTOR – SUGARCANE/ETHANOL AND FORESTRY

Source: SIMA (2021).

In 2020 another round of meetings with public officials began. On October 15, 2020, it was held the presentation and inauguration meeting of the members of CEZEE-SP. This was the first plenary meeting of the commission, with broad participation of representatives of the 12 Secretariats of State. Since then, 17 bilateral meetings were held with the Secretariats of State (Figure 14), with the objective of presenting and collecting contributions for the preliminary products prepared up to that time, i.e., the synthesis maps and the state socioeconomic characterization report.

Also in 2020, another plenary meeting of CEZEE-SP was held to present RedeZEE-SP and its functionalities, which was followed by four specific bilateral meetings to discuss the network. The year ended with a final plenary session of CEZEE-SP, to review the bilateral meetings that had happened so far and for the presentation of the work plan for the following year.

FIGURE 14. BILATERAL MEETINGS WITH SIMA AND CEZEE-SP TECHNICIANS

Source: SIMA (2021).

In 2021, there was a sequence of 20 bilateral meetings for the improvement and validation of the diagnostic and prognostic products by CEZEE-SP, including adjustments of the indicators used in the synthesis maps, presentation of the methodology of scenarios and presentation of climate projections, as well as discussions on the construction of specific contexts of each component folder of CEZEE-SP in RedeZEE-SP. In addition to the bilateral meetings, five plenary meetings of CEZEE-SP were held, three of them for the presentation and approval of the synthesis maps, socioeconomic report, scenarios and climate projections; one for the presentation of the Climate Action Plan; and one for the presentation and validation of the zoning proposal and its applicable guidelines. Such meetings brought greater strength and institutional permeability to the ZEE-SP products.

In the same year, two other important meetings of institutional articulation were prepared, one with the Foundation Institute of Economic Research (FIPE) and the other with the Institute of Technological Research (IPT), which revealed the possibility of using the information raised and organized in the context of the elaboration of the EEZ-SP as a subsidy for the formulation of two important state public policies: sustainable economic development plans (PDES), developed by the Secretariat for Economic Development (SDE), in partnership with the IPT; and the Integrated Urban Development Plans (PDUI), coordinated by the Secretariat for Regional Development (SDR), in partnership with FIPE. These meetings of institutional articulation also advanced in 2022, with discussions on the insertion of the EEZ-SP in the Multiannual Plan (PPA), in the Economic Development Plan (PDE), in the public notice of promotion of local productive arrangements (APLs) and of articulation with the PDUIs.

In December 2021, the integrated analysis, the zoning and the applicable guidelines were presented at the 406th CONSEMA ordinary meeting. Besides representing a major advance for the implementation of the EEZ-SP, the presentation at CONSEMA was the framework for the opening of the public consultation of the proposal for Ecological-Economic Zoning of the State

of São Paulo. Between December 15, 2021 and April 15, 2022, the EEZ-SP products were available for public consultation on SIMA's website, open to analysis and submission of contributions.

In the same period, nine virtual regional meetings were held with the 21 Hydrographic Basin Committees of the state, between February 18 and March 18; eight dialogue tables with the productive sector, academic and civil society, between March 29th and April 11; and [4]three meetings at the Public Policy Commission (CPP) of the State Environment Council, on February 25, March 4 and March 22. Held in the context of the public discussion of EEZ-SP, these meetings aimed at discussing the proposal of the Ecological-Economic Zoning of the state of São Paulo, highlighting all its products and its implementation strategies. It is worth noting that the regional meetings with the CBHs had an average of 100 participants each, via Teams platform or YouTube, and about 300 subsequent views of the recordings of each of the meetings.

The public consultation process resulted in about 148 contributions addressing, among others, the need to incorporate additional documents in the analysis, questions about the delimitation of zones by groups of ARs or the need to incorporate other relevant themes into the proposal, such as energy, mining or traditional peoples and communities. A total of 337 contributions were systematized and evaluated, aggregating the forms of the pubic consultation and the manifestations that occurred during the meetings, resulting in incorporations and improvements to all the EEZ-SP products. In June 2022, the 9th plenary session of the CEZEE-SP was held, in which a review of the entire public consultation process was presented.

On August 3, 2022, the Public Hearing of EEZ-SP was held, with 142 participants, 118 virtually and 24 on-site. During the hearing, there were 15 oral and written manifestations, which add to the nine manifestations forwarded in the five working days following the event. The contributions of the audience were systematized and evaluated by the SIMA team, resulting in improvements of the instrument. Finally, on August 31, 2022, the EEZ-SP proposal was presented at the 414th ordinary meeting of the CONSEMA plenary, and was approved by its board members.

In conclusion, from 2016 to 2022 approximately 170 discussion meetings of EEZ-SP were held, including discussions between SIMA technicians, regional workshops with the CBHs, dialogue tables with public and private agents, bilateral discussions with representatives of CEZEE-SP, articulation meetings with other public policies and presentations at CONSEMA, as well as nine regular meetings with CEZEE-SP and a public hearing. In addition to the meetings, the products of the EEZ-SP were open to public consultation for four months, receiving critiques and suggestions. A consistent process of public participation led to the improvement of the instrument, ensuring its legitimacy and ensuring communication and transparency throughout the process.

[4] Representatives of civil society entities, National Association of Municipalities and Environment (ANAMMA), State of São Paulo Industry Federation (FIESP), State of São Paulo Agriculture Federation (FAESP), universities and research institutes, São Paulo Architecture and Urbanism Council (CAU-SP), Faculty of Geography/University of São Paulo and "Participe! video program of the Environmental Education Coordination/Secretariat of Infrastructure and Environment of the State of São Paulo.

BIBLIOGRAPHY

MINISTÉRIO DO MEIO AMBIENTE – MMA. **Diretrizes Metodológicas para o Zoneamento Ecológico-Econômico do Brasil**. Brasília: MMA, 2006.

SECRETARIA DE ASSUNTOS ESTRATÉGICOS DA PRESIDÊNCIA DA REPÚBLICA – SAE/PR. MINISTÉRIO DO MEIO AMBIENTE – MMA. **Detalhamento da Metodologia para execução do Zoneamento Ecológico-Econômico pelos Estados da Amazônia Legal**. Brasília: SAE/PR; MMA, 1997.