

## **DATE OF BIRTH / CITY-STATE / COUNTRY**

July 03rd, 1957 / Recife – PE / Brazil

## **PROFESSIONAL ADDRESS AND CONTACT**

AMEC – Álvaro Menezes Engenharia e Consultoria. Galeria 145, Estudante Ubiracy Norberto Juazeiro de Farias Costa, Street, 193, Sala 08 (104), 1º andar, Loteamento Stella Maris, Jatiúca, Maceió, Alagoas, Brasil. ZIP CODE 57.036-780.

Mobile: +55 (82) 9 9608 7956

Phone: +55 (82) 3028 4168/3338 1917

e-mail/website: [ajmcs@gmail.com](mailto:ajmcs@gmail.com); [www.amecengenhariaeconsultoria.com.br](http://www.amecengenhariaeconsultoria.com.br)

## **PROFESSIONAL QUALIFICATION**

- APMG Certification PPP Professional (CP<sup>3</sup>P) Foundation Examination. December /2022
- Master's degree in water resources and sanitation – Federal University of Alagoas/UFAL (2016-2018).
- Post-Degree in Technical Engineering Surveys and Evaluation of Goods – Paulista University/UNIP (2008-2009).
- Post-Degree in Water Resources Utilization – Federal University of Alagoas/UFAL (1991/1992).
- Bachelor's degree in civil engineering – Federal University of Alagoas/UFAL (1976-1981).
- Private Partnership for development: Implementing Solutions in Brazil. An online learning initiative of Inter-American Development Bank through EDX – 2017/September.
- Course for Public and Private Managers of Sanitation Services – BFz Fortbildungszentren der Bayerischen Wirtschaft Beruflichen (September/2002)
- International Training Course in Water Supply Engineering II – Japan International Cooperation Agency/JICA (May-August/1996)

## **PROFESSIONAL ASSOCIATIONS**

- Regional Council of Engineering (CREA-AL)
- Brazilian Association of Sanitary and Environmental Engineering (ABES)
- National Academy of Economic, Political and Social Sciences (ANE)
- UNESCO – Grupo técnico AUyAH: Aguas Urbanas y Asentamientos Humanos en LAC – Latino America y Caribe.
- Alagoas State Academy of writings engineers (ACEAL)

## **POSITIONS AND MEMBERSHIPS**

- 1) AMEC: Álvaro Menezes Engenharia e Consultoria EPP – General Director / Owner (Current position since 2015);
- 2) GO Associados – Executive Partner for North and Northeast Region (May/2015 – May/2018);
- 3) Cidade Saneada (PPP between COMPESA and BRK Ambiental) – Chairman of the technical committee (March/2015-March/2018)
- 4) DOW Química do Brasil – Technical Promoter for Desalination and Water Reuse (April/2016-April/2018)
- 5) Brazilian Association of Sanitary and Environmental Engineering (ABES)
  - a. National Director: treasurer adjunct (Current position since 2020)
  - b. National Director: 2<sup>nd</sup> Secretary (2016-2020)
  - c. National Vice-president (2012-2016)

- d. Northeast Director (2008-2012)
- e. President of Alagoas State Section (1992-1995)
- 6) ANE – Member and holder of the chair n° 121 (Current position since June 2017)
- 7) ACEAL – Member and holder of the chair n° 19 ( Current position since December 2022)
- 8) Alagoas Sanitation Company (CASAL)
  - a. Chief Executive Officer (2011-2014)
  - b. Member of the Board of Directors (2011-2014)
  - c. Vice President of Operational Management (2008-2010)
  - d. Commercial Director (2007-2008)
  - e. Superintendent of Operational Development and Metropolitan Superintendent (1992-1998)
  - f. Operational Director (1989-1991)
  - g. Chief of the Commercial Section, Manager of the Electromechanical Maintenance, Superintendent of Operational and Development Control (1985-1989)
  - h. Member of the Board of Directors (Union of Engineers of Alagoas representative) (1987-1989)
- 9) Alagoas State Engineer Union – Technical Director (1987-1989/1991-1993)
- 10) Companhia Pernambucana de Saneamento (COMPESA) – Technical Director (1999-2006)
- 11) Garbage Processing Company of Maceió (COBEL) – Member of the Board of Directors (ABES representative) (1994-1998)
- 12) State Council for Environmental Protection (CEPRAM) – Member (ABES representative) (1992-1998)

## CONTRACTOR/CONSULTING ACTIVITIES

- SIGLASUL: Study contracted by IFC - International Finance Corporation, to increase private sector participation in SABESP - Companhia de Saneamento de São Paulo, through the sale of the majority of the São Paulo State Government's shares in a privatization process. AMEC and COBRAPE are carrying out engineering studies to define the investment plan, making after technical due diligence for the engineering area. August 2023 to July 2024.
- PREFEITURA MUNICIPAL DE PARAGOMINAS/PA: Specialized technical consulting for technical, institutional financial and juridical modeling to the water supply and sewage services at the municipality of Paragominas Pará State, according to Federal Law 14,026/2020 (New Legal Framework of Basic Sanitation). March to December 2023.
- AEGEA. Preparation of Work and Operation Plans for the development of sanitary sewage PPPs in 24 municipalities of the State of Ceará in partnership with SANECOTROLER. Period: December 16, 2022, to September 17, 2023.
- SIGLASUL. Elaboration of the Action Plan for the new public operator, developing on the elaboration of the capital structure proposal, compatible with the cash flow of the new operator considering and including, the need for own capital, contracting or extending debts and/or capitalization if needed; elaboration of a Transition Plan, which must point out the main actions that must be implemented during the first months of the project execution; elaboration of the proposal for adjustments in the organizational structure and outsourcing contracts. Provision of services necessary to structure the privatization project, through private participation in the provision of public services of water supply and sewage in all the municipalities of the State of Sergipe. Period: June 22, 2022, to December 2023.
- INFRAWAY. Specialized technical consultancy to support the contractor in the preparation of the technical engineering studies for the Sanitation Project in the Northeastern Region of Minas Gerais, comprising 96 municipalities and coordinated by the State of Minas Gerais, CODEMGE, IFC and BNDES, according to the scope defined in the Bidding Notice - Terms of Reference, referring to the structuring and promotion of PPP for water supply and sanitary sewage. Period: February 14, 2023, to August 14, 2024

- MD Consultants/Mozambique. Consulting services, related to the Market Analysis of Sanitation Services and Fecal Sludge Management in five cities and one town, denominated: Pemba, Lichinga, Nampula, Chimoio, Xai-Xai and Massinga, in the Republic of Mozambique. Period: July 19, 2022, to February 28, 2023.
- Bahia Nickel Mining. Development of referential engineering project, with CAPEX estimation and institutional modeling for implementation of water adduction system and contracting models with partnerships. Period: August 15 to October 21, 2022.
- CAF - Corporación Andina de Fomento. Elaboration of a Sectorial Document about Sanitation Services in Brazil. Period: September 5 to November 30, 2022.
- Serviço Autônomo de Água e Esgotos de Sento Sé/BA. Elaboration of the technical engineering studies with diagnosis, prognosis, referential project, and determination of CAPEX (Investments) and OPEX (Operational Costs). Period: July 28, 2022, to September 15, 2022.
- CSBIOENERGIA: Identify the costs and market prices that would be incurred for the disposal of sludge from the Sewage Treatment Plant Belém/Curitiba to a sanitary landfill as an option to not destinate the sewage sludge for CS Bioenergia S/A. Period from July 19, 2022, to September 30, 2022.
- SEEO: Diagnosis and engineering modeling, with analysis of bidding documents, including the public notice, business plan, specifications, aiming at AEGEA's participation in the bidding process for the PPP of CAGECE - Companhia de Água e Esgotos do Ceará to build and operate a new sanitary sewage system for 24 municipalities, with a CAPEX of R\$ 6.8 billion; Period July 15 to August 30, 2022.
- AEGEA: Consulting of engineering services to study the consumption profile of industrial connections in Manaus - AM. Work done in partnership with SEEO, aiming at knowing the consumption profile of clients and non-clients of Águas de Manaus, detecting, and estimating consumption and revenue for 430 industries; Period May and June 2022.
- ABES/RS – Brazilian Association of Sanitary and Environmental Engineering/Rio Grande do Sul Office. Course about PPP – Private Public Partnership applied on sanitation services. Online system: 44 hours.
- EQUATORIAL ENERGIA SA - Consulting services for the preparation of advisory studies in blocks "B" (comprising 34 municipalities) and "C" (comprising 27 municipalities) in the State of Alagoas, aiming at the bidding process for contracting the private operating company to manage water supply and sanitary sewage services, including a population study, definition of CAPEX and OPEX to support the engineering modeling. October 2021 to December 2021.
- PREFEITURA MUNICIPAL DE FLEXEIRAS - Specialized technical consulting for technical, institutional financial and juridical modeling to the water supply and sewage services at the municipality of Flexeiras in Alagoas State, according to Federal Law 14,026/2020 (New Legal Framework of Basic Sanitation). Since October 2021.
- PREFEITURA MUNICIPAL DE CORURIBE - Specialized technical consulting for technical, institutional financial and juridical modeling to the water supply and sewage services at the municipality of Coruribe in Alagoas State, according to Federal Law 14,026/2020 (New Legal Framework of Basic Sanitation). August 2021 to February 2022.
- PREFEITURA MUNICIPAL DE MARAGOGI/ALAGOAS - Specialized consulting to assist the Municipality of Maragogi, to analyze and evaluate the impacts and solutions for the basic sanitation services - water supply and sewage - in the municipality of Maragogi, Alagoas, in view of the environment arising from law no. 14,026/20 (new regulatory framework), its regulatory decrees, and the pertinent state legislation. August 2021 to February 2022.
- CESAN - Companhia Espiritossantense de Saneamento. Development of Terms of Reference to hire a company, to provide engineering services to reduce NRW and water loss, through actions based on PBC - Performance Based Contract for the municipalities of: Serra, Cariacica and Vila Velha in the State of Espírito Santo/Brazil. July 2021 to December 2021.
- CESAN - Companhia Espiritossantense de Saneamento. Development of Terms of Reference to hire a company, to provide engineering services to reduce NRW and water loss, through actions based on PBC - Performance Based Contract for the

- municipalities of: Vitória, Guarapari and Viana in the State of Espírito Santo/Brazil. September 2020 to March 2021.
- GLASTEC/JOPLAS/TECFIBRA - Technical and managerial consulting services, for the analysis and monitoring of sanitation services in the Metropolitan Region of Maceió City, after BRK Ambiental was hired to manage the water supply and sewage services in Alagoas. November 2020.
  - CONDOMINIUM CAVIÚNA (MACEIÓ/AL) - Study and report on loss of water and leakage detection with water balance and nighttime outflow assessment in the building. March to November 2020.
  - CAGECE – Companhia de Água e Esgotos do Ceará. Coordination of the course about non-revenue water and water losses, including the subjects and instructors: Water losses and Non-Revenue Water - Institutional framework and Management models/Álvaro Menezes; Social Mobilization/Vivianne Barbosa; Practice and Performance Based Contracts/Adoniran Lopes; Cases and examples of good practices/Airton Sampaio. Time: 08 hours, by online mode.
  - Independent Engineer hired by “Águas do Guamá Rede de Distribuição e Saneamento Consortium”, providing services as consultant to analyze the development of the assets lease agreement regarding water losses and non-revenue water in Belém do Pará City/Brazil. The contracted area had 818.000 inhabitants (2010) and CAPEX around R\$ 267 million. January 2020 to December 2022.
  - Advisor hired by Equatorial Energies, to provide services as consultant on an exclusive basis, to conduct the processes of review, validation and approval of technical and engineering studies, objects of technical-operational and environmental diligence related to the CASAL Project, concession for the Metropolitan Region of Maceió City/Alagoas/Brazil. April 2020 to September 2020.
  - Independent Engineer hired by BTG Pactual Bank, since January 2020 to December 2022, providing services as consultant to analyze the development of the assets lease agreement regarding water losses and non-revenue water in Belém do Pará City/Brazil. The contracted area had 818.000 inhabitants (2010) and CAPEX around R\$ 267 million.
  - NGINFRA - Núcleo de Gestão e Infraestrutura, hired as a General Coordinator to develop a study on PMI 06/2019 - AGRESE (Public Services Regulatory Agency of the State of Sergipe), in charge to manage engineering, economy, legal and institutional studies and reports to propose a solution for the 73 municipalities operated by DESO - Companhia de Saneamento do Estado de Sergipe/Brazil. (November/2019-February/2020);
  - CAF – Corporación Andina de Fomento, hired as a consultant in order to develop and provide a presentation regarding a study with in-depth analysis of experiences in the aggregation of water service providers and sanitary sewage. This study involved the analysis of experiences of PPP - Public Private Partnership and Performance Contract for loss reduction in CASAL - Cia. de Saneamento de Alagoas/Brazil and COMPESA - Cia. Pernambucana de Saneamento, Recife City/Brazil. (September/2018-January/2019);
  - G-ADVISORY CONSULTORÍA TÉCNICA, ECONÓMICA Y ESTRATÉGICA, S.L.P. Hired as a consultant for "Consultancy and collaboration service for the execution of a technical Due Diligence of the Águas do Guamá Contract in Belém, State of Pará/Brazil", providing the following services: Accompanying visits to the site; Drafting reports on the visits and other issues related to the object of the work; Evaluating oral and written consultations related to the object of the work; Attending to meetings in person or by telephone with both Consortium Águas de Guamá, and G-Advisory and IDB Invest. Project of Assets Lease for loss reduction in the South and North Units of Belém do Pará/PA/Brazil. (November-December/2018);
  - G-ADVISORY CONSULTORÍA TÉCNICA, ECONÓMICA Y ESTRATÉGICA, S.L.P. Hired as a consultant for "Consulting and collaboration service for the technical Due Diligence of BRK Ambiental - Região Metropolitana de Recife/Goiana/Brazil SPE S.A", providing the following services: Accompanying visits to the site; Drafting reports on the visits and other issues related to the object of the work; Evaluating oral and written consultations related to the object of the work; Attending to meetings in person or by telephone with both Consortium Grande Recife BRK/RMR and IDB Invest. Projeto

Cidade Saneada - PPP de Esgotamento Sanitário para RMR - Região Metropolitana de Recife/Pernambuco/Brazil. (October/2018);

- MARUMBI EMPREENDIMENTO IMOBILIÁRIO. Design of a basic and executive engineering project of water supply and sewage system for a Residential Condominium with 417 lots, in Santa Rita Island, in the city of Marechal Deodoro/Alagoas/Brazil. (June-October/2018);
- MARUMBI EMPREENDIMENTO IMOBILIÁRIO. Design of a project to collect water from the Remédios River with 120 L/s of flow, implementation of a raw water pipeline, a Water Treatment Plant, a pumping station for treated water, a distribution reservoir, and the treated water pipelines to be implemented on the Island of Santa Rita, Municipality of Marechal Deodoro/AL/Brazil, to also supply the towns of Barra Nova and Massagueira. (July-December/2018);
- IGUÁ Saneamento. Hired as a project coordinator for the presentation of PMI - Procedure of Expression of Interest, for the concession of water supply and sanitation services, for the city of Limoeiro de Anadia/Alagoas/Brazil (28,000 inhabitants), in charge for technical studies with diagnosis, prognosis and conceptual project, economic studies, term of reference and legal documentation. This agreement was stopped in the diagnosis phase. (December/2017-May/2018);
- ABES - Brazilian Association of Sanitary and Environmental Engineering. Hired as technical coordinator of the course "Regulation in the Sanitation Sector: Theory and Practice". Coordinator and tutor of the courses: Base of Regulatory Remuneration; Regulatory Accounting and Indicators; Benchmarking and Yardstick Competition. (UNIABES - ABES Knowledge Center / Long Distance Learning Course) (2017-2018).
- NGINFRA-WMI-SAGE / GO Associados. Hired as consultant in charge for carrying out workshops, to provide assistance and technical advice for the elaboration of performance-based contracts, about water loss reduction, non-revenue water and energy efficiency, at the companies EMBASA - Companhia Baiana de Saneamento and COMPESA - Companhia Pernambucana de Saneamento (Pernambuco Sanitation Company) (2017-2018);
- Appointed by GO Associados as institutional coordinator and consultant in charge for the diagnosis, prognosis, and assistance in the modeling of PMI - Manifestation of Interest Procedure, presented by GSINIMA Brazil, as well as providing support to the economic studies, term of reference and bid, for the expansion of the Maceió sewage system, together with teams from GO Associados and GSINIMA Brazil, including definition of CAPEX and OPEX. Estimated population of 447,000 inhabitants (2016-2017);
- GO Associados. Consultant in charge for engineering and economics technical studies, preparation of a term of reference and analysis of the bid documents, to model the concession for the city of São Mateus/Espírito Santo/Brazil to attend the PMI - Procedure of Expression of Interest. Estimated population of 127,000 inhabitants. (2016-2017).
- FIPE / USP - Fundação Instituto de Pesquisas Econômicas/Universidade de São Paulo. Technical consultancy for the elaboration of diagnoses and conceptual projects of water supply and sewage for the city of Teresina/Piauí/Brazil, providing assistance in economic studies, elaboration of a term of reference and revision of the bid, aiming to attend the PMI - Procedure of Manifestation of Interest in sub-concession and advising for the analysis of the technical and commercial proposal from the bid; Consultant for the development of a project to structure SEMAE - Municipal Water and Sewerage Service of São José do Rio Preto/São Paulo/Brazil, in the operational, commercial and planning areas; Technical consultant in charge of the review of the technical notebooks presented by AEGEA in PMI - Procedure for the Manifestation of Interest for the management of water supply and sanitation services in Belém do Pará-Anindeua-Marituba/Pará/Brazil. (2016-2017);
- Ch2m Hill: Consultant by GO Associados, for analysis and proposal of public policies, technical models and operational diagnoses for the National Water Reuse Plan, regarding to the Northeast part of Brazil (2016-2017);
- CNI - National Confederation of Industry. Hired as a Consultant to develop a study about the optimization of the release of FGTS financial resources to accelerate investments in the sanitation sector, with the participation of AESBE - Associação Brasileira das Empresas de Saneamento Básico Estaduais; ABCON - Associação

- Brasileira das Concessionárias Privadas de Serviços Públicos de Saneamento; CAIXA - Caixa Econômica Federal; SNSA - Secretaria Nacional de Saneamento Ambiental and CCFGTS - Conselho Curador do Fundo de Garantia do Tempo de Serviços (2017).
- ABCON - Associação Brasileira das Concessionárias Privadas de Serviços Públicos de Saneamento: Hired as a consultant for drawing up a reference table of prices for services and works in water supply and sewage (2017);
  - ABES - Brazilian Association of Sanitary and Environmental Engineering: Member of the technical team in charge for coordinating and supervising the contract signed with SIGLASUL, to develop studies and a strategic plan for training in regulation, according to ATN / OC - 1428 - BR, executed by and between ABES and the IDB – Inter-American Development Bank. (2014-2017);
  - CETI SA, GO Associados, Energy Markets Consulting: Consultancy for the modernization management plan for SANEAR - Sanitation Service of Colatina/Espírito Santo/Brazil, in charge for the elaboration of the operational, technical, commercial, and business diagnosis and proposal to the final plan (2015-2016);
  - CPD - Companhia Paulista de Desenvolvimento. Hired as an advisor for general modeling studies regarding PPP-Private Public Partnerships and other models of concessions in water supply and sewerage services in Marechal Deodoro City/Alagoas/Brazil. (2016);
  - GSINIMA Brazil: Hired as a consultant to develop technical projects and advise on economic, term of reference and legal studies, for modeling a PMI - Procedure of Expression of Interest for a concession in sanitation services for the city of Marechal Deodoro/Alagoas/Brazil, including term of reference, definition of CAPEX and OPEX. Estimated population of 52,000 (2015).
  - Municipality of Marechal Deodoro-AL: Special advisor in charge to elaborate the Municipal Sanitation Basic Plan for Water Supply and Sewage Services, for the municipality (52.000 inhabitants) (2015);
  - GPS Empreendimentos: Technical consultant for planning and implementation of the water supply and sewage project in the city of Barra de São Miguel, Alagoas (2008-2010);
  - GERENTE Engenharia Ltda.: Technical consultant for design and elaboration of water supply and sewage projects in the PASS – IDB program for 8 municipalities in Paraíba State (1998-1998);

## **ACTIVITIES AS PUBLIC MANAGEMENT IN WATER SUPPLY AND SANITATION SERVICES.**

- CASAL - Companhia de Saneamento de Alagoas: **CEO**, in charge to hire and implement a PPP - Public Private Partnership for 10 (ten) cities in the Agreste Alagoas/Brazil region, to supply a population around 250,000 inhabitants and total investments of R\$ 143 million. Agreement started in 2013. (2010-2014);
- CASAL - Companhia de Saneamento de Alagoas: **Vice President of Operational Management and CEO**, in charge for hiring and implementing a project for a complete sanitation system for the districts of Farol, Pitanguinha, Pinheiro, Gruta de Lourdes, Canaã, Santo Amaro and Jardim Petrópolis, in Maceió, at Assets Lease model, to serve around 90,000 inhabitants, with an estimated investment of R\$ 185 million. Agreement signed in 2014. (2010-2014);
- CASAL - Companhia de Saneamento de Alagoas: **CEO** in charge for preparing and develop the PMI - Manifestation of Interest Procedure to implement a PPP - Public Private Partnership, to build a a complete sanitation system for the region of Tabuleiro de Maceió/Alagoas/Brazil, providing around 300,000 inhabitants with sewage services, using investments estimated in R\$ 295 million. Agreement signed in 2014. (2011-2014);
- CASAL - Companhia de Saneamento de Alagoas: **CEO**, general coordinator in charge to hire a study of due diligence and valuation regarding CASAL's business and accounting situation, aiming at modeling management solutions for recovery of sanitation services in municipalities managed by CASAL. The study for the implementation of a management model with a private partner for CASAL, including the legal studies, was also carried out and concluded. (2012-2014);
- CASAL - Companhia de Saneamento de Alagoas: **Vice President of Operational Management**, coordinator of the emergency program for the recovery of water supply

systems in cities damaged by floods in the Mundaú and Manguaba river basins, in Alagoas. (2010-2010);

- CASAL - Companhia de Saneamento de Alagoas: **Commercial Director and Vice President of Operational Management**, in charge for the technical and operational coordination for a PMI - Procedure of Expression of Interest for the implementation of a PPP - Public Private Partnership for 10 (ten) cities in the region of Agreste Alagoas/Brazil, to supply a population around 250,000 inhabitants. PMI presented by Foz do Brasil and CAB Ambiental. (2008-2010);
- CASAL - Companhia de Saneamento de Alagoas: Modeling and implementation of the Strategic Management Plan for CASAL. **Commercial Director, Vice President of Operational Management and CEO**, in charge for projects such as:
  - a) Increase Revenue with projects to increase the collection efficiencies of private and public customers and increasing billing and collection.
  - b) Reduce Losses with projects to reduce real and apparent losses; innovation and technology at the technical database.
  - c) Modernization of Productive Processes with projects such as implementing energy efficiency; improving operational control in the metropolitan and hinterlands regions; implementing a maintenance management system project. Coordination and implementation of projects. Continued management of the Strategic Management Plan (2007 - 2014).
- CASAL - Companhia de Saneamento de Alagoas: General coordination to development of PRAC - Revitalization Program for the Commercial Area of CASAL, as **Commercial Director and Vice President of Operational Management** for projects aiming at developing and implementing of better services to increase the company's revenue and collection, such as: PRCC - Project for the Recovery of Customers and Revenue; CASAL Legal - Awarding project for costumers which did their payments in time; SYSTEMATIZATION OF SUPERVISION; COLLECTION SYSTEMATIZATION; TARIFF UPDATING - Project to modernize the tariff structure; OFFICE FOR BIG COSTUMERS; OPTIMIZATION OF WATER METERING; UPDATING COMMERCIAL DATABASE IN THE 10 LARGEST CITIES OF CASAL SYSTEM; CONCENTRATED ACTION IN COMMERCIAL SECTORS; POORS AREAS AND SLUMS; (2007 - 2010);
- CASAL - Companhia de Saneamento de Alagoas: Modeling and implementing an agreement to reduce losses and increase revenues in commercial sectors of Maceió, under a performance payment contract with SABESP - Companhia de Saneamento de São Paulo. As **Vice President and CEO**, coordinated the negotiation and technical work groups for the preparation of terms of reference, contract model, investment calculation and cash flow. Coordination of the implementation of the project and its execution. Relationship with the community and marketing plan for the obligation to use CASAL water and cancellation of the use of water trucks and own deep wells. Structuring of a contract to reduce real and apparent losses, with SABESP's participation as an investor, this company being remunerated with the results resulting from the gain obtained with the increase of revenues in Maceió. Implementation of all activities related to updating commercial database, reducing leaks, implementing sectorization and macromasurement and DMA – District Metered Areas, water metering and control. (2008-2012);
- CASAL - Companhia de Saneamento de Alagoas: Programa de Relações Institucionais da CASAL. **Metropolitan Superintendent of Maceió**, general coordinator of the Program aiming to establish relations with the company's clients, involving neighborhood associations, schools, and specific groups of large and low-income clients, collecting data and information on how the water supply and sewage services work in the city of Maceió. Likewise, the program aimed at receiving feedback from clients about CASAL's work. (1992–1998);
- CASAL - Companhia de Saneamento de Alagoas: Institutional Reordering Project for operational area of CASAL. **Superintendent of Operational and Development Control** in charge for the management and technical modernization program of the operational area, aiming at reducing losses and increasing operational efficiency. Project developed by the IDB in a technical assistance process by COPASA - Companhia de Saneamento de Minas Gerais. General coordination of the above-mentioned program, involving the projects of macromasurement and pitometry; micro water metering; integrated system of costumers's services; billing and collection; operational control; energy efficiency; commercial clients database; technical database;

- leakage control; operational improvements. The coordinator's role was to create a new management model and a new corporate culture. This program also included investments that needed to be controlled and verified by the CAIXA audit (1987-1989);
- CASAL - Companhia de Saneamento de Alagoas: Loss reduction program, under the PECOP - Caixa Econômica Federal's State Program for Loss Control, with the implementation of projects to reduce real and apparent losses. **Superintendent of Operational and Development Control and Operational Director**, in charge for the general coordination of the program that aimed at the implementation and strengthening of projects of Macromasurement, Operational Control, SIPSAP: Integrated System of Costumers Services, Micro water metering, Billing and Collection, Energy Efficiency and Management of Electromechanical Maintenance, for all the systems managed by CASAL. General coordination of the program and direct action in internal and external meetings, reporting and accountability. In addition to meetings of involvement and participation of technicians and management of the company. (1987–1991)
  - COMPESA - Companhia Pernambucana de Saneamento: Programa de Privatização da Cia. Pernambucana de Saneamento. **Technical Director**, member of the group to develop studies, diagnosis, projects, and investments plans and targets for modeling COMPESA's privatization. Engineering technical coordination. Participation in studies for economic and financial modeling and legal studies. (1999–2001);
  - COMPESA - Companhia Pernambucana de Saneamento: Kfw Bank Program for water supply and sewage projects/works in the municipalities such as Moreno, Barreiros, Nazaré da Mata, Escada and Ipojuca. **Technical Director** in charge for the general coordination of meetings with KfW and GTz technicians, consultancy hired to monitor the execution of the international contract, monitoring the management of the Program and services with participation in social actions with the community. Population served around 299.000 inhabitants and USD 40,000,000.00 (1999–2006);
  - COMPESA - Companhia Pernambucana de Saneamento: Programa Águas de Pernambuco for the implementation of projects and structuring works. **Technical Director**, General Coordinator of Studies, diagnosis, engineering projects and execution of works for the implementation of complete sanitary sewage and water supply systems, expansions, rehabilitations, modernizations, and operational improvements to supply approximately 5 million inhabitants and investments of USD 196,000,000.00 in 75 municipalities in the State of Pernambuco/Brazil. (1999–2003);
  - COMPESA - Companhia Pernambucana de Saneamento: **Technical Director**, COMPESA's titular representative in river basin committees such as Pirapama, Ipojuca and São Francisco River inter-institutional forum. Modeling, implementation, and participation in committees and forums, together with technicians from COMPESA, State Planning Secretary, Water Resources and Environment Secretariats, CPRH and State Public Prosecutor's Office. Performance in planning, deliberative and plan approval meetings. (1999–2006);
  - COMPESA - Companhia Pernambucana de Saneamento: **Technical Director**, member of the working group representing COMPESA and coordinator of the company's internal actions related to activities of the programs PROMATA / IDB, coordinated by the Planning Secretariat of the State Government, with the objective of elaborating studies, projects and works for the implementation of rural sanitation systems, as well as PROEST / WB, coordinated by the Planning Secretariat of the State Government, with the objective of elaborating studies, projects and works for the implementation of sanitation systems in the Metropolitan Region of Recife, in partnership with the local municipal administrations;

## TECHNICAL CONFERENCES AND PUBLICATIONS

- **Book – Água que Move Vidas**: collection of articles regarding sanitation, environment, water resources and management of public services (2005);
- **Book – Gestão do Saneamento Básico – Abastecimento de Água e Esgotamento Sanitário**: chapter 5 entitled Part II - Management Model for Sanitation Services. Edited by Dr. Arlindo Philippi Jr. and Alceu de Castro Galvão Jr (2011);
- **Book – Temas de Ingeniería Sanitaria y Ambiental - Visión de Expertos de América Latina y del Caribe**: chapter entitled Corporate Governance and



Governability in Sanitation Companies. Pan-American Association of Sanitary Engineering (AIDIS) publication (2014);

- **Book – Uso Seguro del Agua para el Reuso:** chapter entitled Strategic Planning and Costs for the Safe Reuse of Water. Pan-American Association of Sanitary Engineering (AIDIS) publication (2016);
- **Book – Controle e Redução de Perdas em Serviços Públicos de Abastecimento de Água: Posicionamentos e Contribuições da ABES.** Collaboration as reviewer. Edited by Jairo Tardelli Filho (redactor), Mário Augusto Baggio and Ricardo Rover Machado. ABES publication (2016);
- **Technical notebook – INVESTIMENTOS EM SANEAMENTO COM RECURSOS DO FUNDO DE GARANTIA DO TEMPO DE SERVIÇO (FGTS) – UMA AGENDA DE SIMPLIFICAÇÃO E OTIMIZAÇÃO.** C748i; National Confederation of Industry (CNI); Brasília: CNI, 2017. 43 p.: Il.1. Investments. 2. FGTS. 3. Sanitation. I. Title. CDU: 339,923;
- **Book – Águas Brasileiras** – Marcatto, Fernando S.; Chapter 2 entitled Water Shortage in the Northeast: art, life and reality. Edited by BAUMINAS, Brazilian production of art and culture (2016), ISBN 978-85-69935-01-8;
- **Book – Tratado sobre o marco regulatório do saneamento básico no direito brasileiro** – IBEJI – Brazilian Institute for Legal Studies of Infrastructure (2018), Chapter 5 entitled Brazilian evolution in sanitation services since the Regulatory National Law; Coordinated by Drs. Augusto Dal Pozzo, Rodrigo Bertocelli and José Pimenta.
- BIO Magazine: author of the Management and Operation column since 2010 until 2020;
- ABES Online, Jornal Gazeta de Alagoas (Maceió-AL), Jornal do Comercio (Recife-PE), Diário de Pernambuco (Recife-PE), Meio Norte (Teresina-PI), Tribuna Independente (Maceió-AL), Jornal do Brasil: author of articles related to sanitation, environment, water resources and management of public services;
- Portuguese website – [www.ambienteonline.pt](http://www.ambienteonline.pt): author for the column "Opinião Brasil" writing about sanitation since November 2015.
- Ambiental Mercantil, <https://noticias.ambientalmercantil.com/colunistas-ambiental-mercantil/> Writing about Sanitation Services on the column "Saneamento: de bem com a vida", since February 2023.
- GROUNDWATER VS SURFACE WATER: COMPARISONS OF IMPLANTATION AND OPERATING COSTS IN THE CITY OF MACEIÓ – XVII Brazilian Congress of Sanitary and Environmental Engineering – Natal-RN (1993).
- HOW TO COMBAT WATER LOSSES USING MANAGEMENT MODELS – XVIII Brazilian Congress of Sanitary and Environmental Engineering – Salvador-BA (1995).
- RISKS OF CONTAMINATION IN THE OPERATION OF WATER SUPPLY SYSTEMS FROM DEEP WELLS – XIX Brazilian Congress of Sanitary and Environmental Engineering – Foz do Iguaçu-PR (1997).
- MANAGEMENT SCARCITY OF WATER IN PERNAMBUCO STATE – Wasser Berlin – Berlin/Germany (2006).
- A PRIVATIZATION EXPERIENCE – THE CASE OF COMPESA – XI Alagoas Sanitation Week – Maceió-AL (2006).
- THE ROLE OF THECNICAL AND SCIENTIFIC ASSOCIATIONS IN SOCIETY/THE IMPORTANCE OF INTEGRATION – XV Brazilian Groundwater Congress – Natal-RN (2008).
- ADEQUATE TARIFF: BUSINESS EFFICIENCY AND SOCIAL JUSTICE – 14º ENASB – National Meeting of Sanitation – Porto/Portugal (2010).
- PERFORMANCE BY RESULTS OF STATE SANITATION COMPANIES PROVIDING WATER SUPPLY AND SEWAGE SERVICES IN BRAZIL: A VIEW OF THE

NORTHEAST REGION – XXXIII Pan-American Congress of Sanitary and Environmental Engineering – Punta Cana/Dominican Republic (2010).

- MANAGEMENT INDICATORS FROM STATE SANITATION COMPANIES AT THE NORTHEAST REGION OF BRAZIL – XXII AESABESP/FENASAN Technical Meeting – São Paulo-SP (2011).
- THE CASE OF CASAL (COMPANHIA DE SANEAMENTO DE ALAGOAS): CHALLENGES IN THEORY AND PRACTICE – Environmental and Sanitation Economics Study Group of EAESP – School of Business Administration of São Paulo/FGV – São Paulo-SP (2011).
- CONCESSIONS AND PARTNERSHIPS IN SERVICES OF WATER SUPPLY AND SEWAGE – XV Symposium Brazil-Portugal of Sanitary and Environmental Engineering – Belo Horizonte-MG (2012).
- THE CASAL EXPERIENCE – IFC / IBRD Workshop to launch the Manual on performance contracts for the reduction of water losses and energy efficiency – Brasília-DF (2012).
- TRAINING AND STRUCTURING PARTNERSHIPS: LEGAL AND ADMINISTRATIVE ASPECTS – Infra-Brasil/Expo & Summit – São Paulo-SP (2013).
- MAIN CHALLENGES OF WATER SECTOR IN BRAZIL: IDENTIFICATION AND QUANTIFICATION – 8th Water Conference: Solutions for Sustainability in Water Sector – Lisbon/Portugal (2013).
- WORKING A SOUTH-SOUTH KNOWLEDGE HUB – Second High-level Meeting on Country-LED Knowledge Hubs – Seoul/South Korea (2014).
- SANITATION: PLANNING – 4th Latin American Association of Water and Sanitation Operators (ALOAS) Encounter – Buenos Aires/Argentina (2014).
- HOW MUNICIPALITIES CAN BE PREPARED FOR THE NATIONAL BASIC SANITATION PLAN – Agenda Bahia – Commitment to the Future – Salvador-BA (2014).
- Water Security: a Brazilian vision. Cycle of debates promoted by the World Water Council in Maceió in preparation for the World Water Forum in 2018 (2015).
- THE IMPORTANCE OF INTEGRATED MANAGEMENT TO ACHIEVE QUALITY SERVICES IN SANITATION – X International Water and Sanitation Meeting – Lima/Peru (2015).
- REUSE AS A STRATEGIC ALTERNATIVE FOR THE BRAZILIAN NORTHEAST – XII ETAN – 12th High-Level Pan-American Technical Meeting: A Hydric Alternative for the Brazilian Northeast – Fortaleza-CE (2015).
- SANITATION IN NORTHEAST: CURRENT SITUATION – Regional Meeting for Brazilian Society for the Progress of Science (SBPC) – Crato-CE (2017).

## **LANGUAGES**

- Portuguese: Native.
- English - Speaking: regular; Reading: regular; Writing: regular.
- Spanish - Speaking: regular; Reading: regular; Writing: regular.

December 2022