

Hortensia I. Broce

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EDUCATION:

- **Bachelor in Science – Environmental Studies**, February, 1980
George Washington University, Washington, D.C. Included courses in biology, with emphasis on ecology, economics, statistics and geography.
- **Master in Science – Environmental Science**, May, 1982.
State University of New York, College of Environmental Science and Forestry, Syracuse, New York. Included courses on natural resources and environmental management.

LANGUAGES

- Native Spanish speaker
 - Fluent in English
 - Fairly good knowledge of French

EXPERIENCE:

- September 2015 – Present **Environmental Specialist**, Louis Berger, Latin America & Caribe
Environmental supervision of the Panama Metro Line 2 construction project, based on the environmental impact study and the approving resolution issued by the Ministry of Environment.
- March 1999 – July 2015 **Environmental Specialist**, Panama Canal Commission / Panama Canal Authority.
Responsibilities included planning and organizing the program to conduct environmental evaluations of projects to improve the capacity of the Panama Canal. This required the design of baseline data gathering studies, development of terms of reference and cost estimates to contract consultant services, in addition to the evaluation of proposals and supervision of studies. Additional duties involved the coordination of environmental activities related to Canal capacity studies with other Canal Authority units and with other public and private institutions, including non-government organizations.

May 1989 – March 1999 **Environmental / Energy Control Specialist**, Panama Canal Commission.

Conducted environmental evaluations of proposed projects and land use changes in the Canal area, and prepared environmental opinions, policy documents, and agency regulations. Responded to consultations on the application of environmental protection measures and coordinated with other Canal agency units the implementation of environmental guidelines required by U.S. Federal regulations, such as the handling and disposal of hazardous substances.

Coordinated the Energy Conservation Program, which included the preparation of an annual report to the U.S. Department of Energy on electricity and fuel use and activities undertaken to reduce consumption.

- May 1984 - May 1989 **Terrestrial Ecosystem Specialist**, Technical Secretariat of the National Commission on the Environment, Ministry of Planning, Panama.
Assisted in the assessment of local, regional and national environmental problems and in the preparation of reports and documents on environmental issues for the Executive Branch, including the preparation of environmental impact studies.
Conducted reviews of proposed legislation, studies and projects with respect to possible environmental impacts. Presented and promoted legislation to establish protected areas, such as the Metropolitan Nature Park, and to adopt international conventions on the protection of wildlife and other natural resources.
Assisted with the Environmental Education Program, which included the preparation of newspaper, radio and television messages and of educational materials on the environment for public distribution.
- October 1982 - November 1983 **Assistant to the International Program**, National Wildlife Federation, Washington, D.C.
Prepared information packets on wildlife, agriculture and the environment to send to organizations and persons requesting assistance from the Federation.
Assisted in the investigation and writing of articles and reports on international environmental problems, published in the Federation newspapers and magazines.

DEPENDENT CONSULTANT WORK

- 2002 Kokusai Inc.

Environmental Advisor to the project to develop a Solid Waste Management Plan for the Municipality of Panamá.

- 1999 Construcciones, Diseños y Consultorías S.A.

Conducted the **Environmental Inspection** of road rehabilitation projects from La Concepción to Volcán and of the roads in Puerto Armuelles, Chiriquí.

- 1997 Construcciones, Diseños y Consultoría S.A.

Prepared the **Environmental Impact Evaluation** for the project to widen the Inter-American Highway from Río Hato to Antón, Coclé.

- 1995 Consorcio Ingesur Consultoría y Estudios Técnicos y Planeamiento y Desarrollo S.A. Prepared **Environmental Impact Studies** for the Project Studies, Design, Construction Blueprints and Feasibility Studies for the Gatun-Escobal road in Colon and

the Pan-American Highway-Ingenio La Victoria, and Pan-American Highway-San Francisco roads in Veraguas.

PARTIAL LIST OF COURSES AND SEMINARS:

- **Geographic Information Systems for the Environmental Field**, July 1988. United Nations Environment Programme (UNEP). Geneva, Switzerland
- **Environmental Legislation**, November 1993. Government Institutes, Washington, D.C.
- **Environmental Systems ISO 1400/1401**, October 1998. Panama Canal Commission Panama, Panama.
- **Environmental Analysis of Projects**, June 1999. Inter-American Development Bank, and Ministry of Economics and Finances, Panamá.
- **Management Skills**, February 2000. Instituto Centroamericano de Administración de Empresas (INCAE), Managua, Nicaragua.
- **Purchasing Politics and Procedures**, November 2000. Inter-American Development Bank and Panama Canal Authority.
- **Environmental Evaluation of Megaprojects**, August, 2007, The Louis Berger Group, Inc., Panamá.
- **Mitigation Measures Auditing and Follow Up**, May, 2008. Panama Canal Authority, Panama.
- **Equator Principles and International Finance Corporation Standards (IFC)**, September 2014, ERM, Panama.
- **Community Relations and Conflict Resolution**, October 2015, Bioideas, Panamá.
- **Social and Health Impact Evaluation and Management for Large Projects**, December, 2015, International Association of Impact Assessment, Panamá, Panamá.
- **Environmental Auditing**, February 2016, Centro de Produccion Más Limpia, Panamá, Rep. de Panamá.