

Maria Marcela Mesquida

B.Sc. in Renewable Natural Resources Management

Lead Scientist & Architect of Textile Infrastructure

Specialist in Predictive Design, Textile Chassis Engineering, and Sustainability Protocols.

PROFESSIONAL PROFILE

Environmental scientist and educator with over 25 years of experience in complex systems management and resource optimization. My professional trajectory evolved from consulting for international organizations (**The World Bank, IDB**) to the creation of **Textile Architecture**.

Developer of the **LP-DNA™ Protocol**, a *Phygital* framework that integrates digital algorithms, image processing, and technical cartography to transcend traditional tailoring, achieving zero-waste textile production with absolute efficiency.

TECHNICAL EXPERTISE

- **Textile Engineering:** Design of high-efficiency modular chassis and continuous-thread geometry.
 - **Predictive Design:** Software development for chromatic harmony modeling and structural fiber calculation.
 - **Botanical Chemistry:** Natural pigment modeling and protein fixation protocols.
 - **Resource Management:** Production planning under international low-environmental impact standards.
 - **Cartography & GIS:** Application of Geographic Information Systems to technical weaving drafts.
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ACADEMIC BACKGROUND

- **Postgraduate in Digital Image Processing & Aerial Photography** applied to natural resources (Universidad Nacional de La Plata).
- **International Postgraduate in Environmental Impact Assessment** (FLACSO - Latin American Faculty of Social Sciences).
- **Graduate Degree: Licentiate in Renewable Natural Resources Management** (Universidad Nacional de La Pampa).

INTELLECTUAL PROPERTY & INNOVATION (Luna Pastora Studio)

Lead Architect of a technical ecosystem for the professional textile industry:

- **Hardware (Engineering Chassis):** Design of the **Travelling Loom™** (4-in-1 modular system) and **Pampa Loom®**. Optimized for a 50% reduction in production time.
- **Software (Digital Atelier Suite):**
 - **Textile Color Lab™:** Mathematical algorithms for botanical and synthetic color theory.
 - **Interactive Master Draft™:** Technical environment for fiber waste elimination.
 - **Freeform Weave Lab:** Structural simulator for non-linear textiles.

INSTITUTIONAL CONSULTANCY

- **Environmental Consultant (IICA / IDB):** Coordination of Environmental and Social Impact Assessments for large-scale rural infrastructure projects.
- **Technical Assistance (The World Bank / IBRD):** Technical management for biotechnology projects in small ruminants.
- **Project Coordination (PROSAP - IDB):** Managed the execution of the Wildfire Prevention Plan, overseeing 3,200 km of firebreak infrastructure.

LICENSES & AFFILIATIONS

- **Professional License N° 121:** COPROCNA (Natural Sciences Council of La Pampa).
- **Provincial Registry N° 18:** Specialist in Environmental Impact Assessment.

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Location: Santa Rosa, La Pampa, Argentina (Global Distribution)