

Science Culture Construction

A Paradigm for Green Development and Biodiversity Conservation

A SYNTHESIS FROM

The Journal of Latin American Sciences and Culture (JLASC)

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CORE FOCUS

This presentation synthesizes key findings from JLASC on the Science Culture Construction (SCC) framework, a systematic approach to integrate scientific principles into society to address global challenges like climate change utilizing AI.

1. The Imperative for a New Science Culture

Why traditional approaches are insufficient.

2. The Science Culture Construction (SCC) Framework

Defining the core concept and its mission.

3. Method: Pillars and Challenges of SCC

The foundational elements and obstacles to implementation.

4. Key Initiatives Driving the SCC Vision

Exploring the roles of JLASC and collaborative networks.

5. Global Impact and Future Directions

Evidence of collaboration and the path forward.

Introduction: Why We Need a Science Culture, Not Just Science Communication

● The Challenge We Face

Global crises, particularly climate change, demand unified, science-informed societal action, not just technological fixes.



The Reality Gap

Public understanding and action are often hindered by a deluge of misinformation and a disconnect between scientific findings and daily life.

This leads to public inaction and obstructs the acceptance of climate science.



The Transformative Solution

Science Culture Construction (SCC)

A systematic process to integrate scientific ideas, habits, and evidence-based actions into the core of institutions and society.

Defining the Science Culture Construction (SCC) Framework

CORE CONCEPT

SCC is the acquisition and embedding of scientific ideas, habits, and actions within academic institutions and, crucially, society at large.

Mission

Driven by Andean Road Countries for Science and Technology (ARCST)

- **Engage Public:** Foster broad engagement in Green Science and science popularization.
- **Conserve & Develop:** Actively promote biodiversity conservation and sustainable Green Development.
- **Collaborate:** Drive innovation and international partnerships across sectors and borders.

KEY INSIGHT

SCC establishes clear pathways to disseminate knowledge, drive innovation, and defend our world from threats that science can mitigate.

Visual Identity



Fig. 1: The official logo of the Science Culture Construction (SCC) initiative, representing interconnectedness and a structured approach.

Method: Foundational Pillars of the SCC



Pillar 1: Media and Information Literacy (MIL)

MECHANISM

Equips citizens with critical skills to evaluate media, identify climate-related misinformation, and engage responsibly with information.

ROLE

The bedrock for building both scientific and climate literacy.



Pillar 2: Climate & Scientific Literacy

MECHANISM

Develops public understanding of the causes, impacts, and mitigation strategies for climate change through formal curricula and public engagement.



Pillar 3: Cultural Relevance

MECHANISM

Integrates indigenous knowledge, local traditions, and culturally specific examples into science education.

GOAL

Make scientific concepts accessible and resonant, bridging modern science with traditional wisdom to enrich public discourse.

The Core Challenges to Implementation



Accessibility & The Digital Divide

Problem:

Significant disparities in access to quality education, internet connectivity, and scientific resources, especially in Latin America and the Caribbean.

Infrastructure



Misinformation Proliferation

Problem:

The spread of false narratives via online platforms undermines public trust in scientific institutions and paralyzes climate action.

Trust Crisis

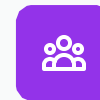


Integration into Education Systems

Problem:

A recognized need for climate literacy often fails to translate into concrete changes in curricula, teacher training, and assessment methods.

System Reform



Overcoming Cultural Gaps

Problem:

Addressing resistance in communities with practices or beliefs that conflict with modern perspectives on sustainability and collective responsibility.

Cultural Dialogue

Key Initiative: The Journal of Latin American Sciences and Culture (JLASC)

Primary Role

Serves as a central hub and dissemination platform for the Science Culture Construction initiative.

Primary Functions

- **Knowledge Exchange:** Fosters dialogue and shares information among academics, researchers, and the public.
- **Science Popularization:** Aims to make science accessible to advance societal development and well-being.
- **Promotion of Paradigms:** Actively promotes core SCC concepts.

Core SCC Concepts Promoted by JLASC



Media and Information Literacy (MIL)

Critical engagement with media and information sources



Science Literacy

Understanding and applying scientific knowledge



Biopochito AI

Implementing AI to foster the scientific spirit in children and learn about them and about the natural World.

Overarching Goal

To build a global community with a shared, sustainable future, rooted in scientific understanding.

Key Initiative: Fostering Global Collaborative Networks



The Driving Force: Andean Road Countries for Science and Technology

- **Role:** The originator and main proponent of the SCC initiative since 2018.
- **Strategy:** Gathers support from universities, public and private sectors, and social groups to build momentum.

 Multi-stakeholder Coalition Builder



A Model for Collaboration: International Green Science Center for Latin America and the Caribbean

- **Purpose:** Highlighted in the white paper as a successful model for regional and international partnership.
- **Mechanism:** Connects educational institutions, research centers, and policymakers.
- **Objective:** To pool resources, share best practices, and amplify impact to address shared environmental challenges more effectively.

 Global Knowledge Exchange Platform

Results: A Growing Global Movement for Green Science

EVIDENCE OF GLOBAL REACH

Originating in Latin America, the SCC has successfully catalyzed partnerships across Africa, Asia, and Europe.

KEY OUTPUT

The Declaration on Science and Climate literacy

- A living policy document first established in 2021.
- Continuously updated with insights from global events, ensuring relevance.

STRATEGIC VISION

To position science as a universal and unifying force for creating a sustainable, prosperous world.

Global Collaboration Network

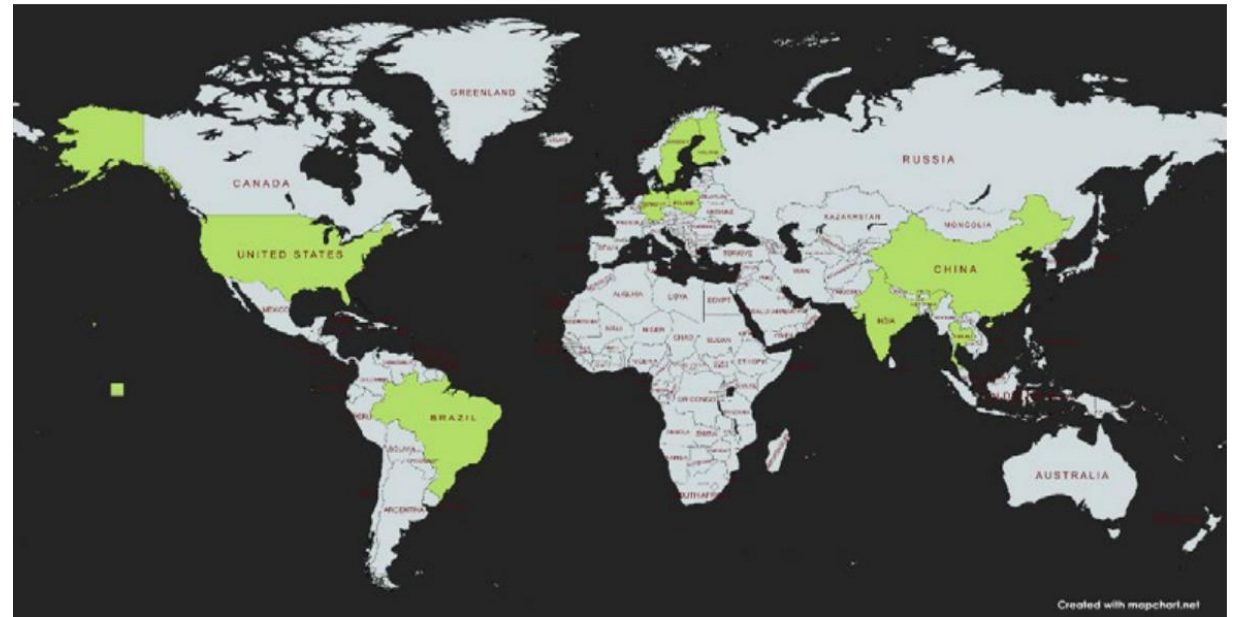


Fig. 2: A world map from the journal issue illustrating the expanding international collaboration network involved in the Science Culture Construction initiative.

Conclusion: A Call to Action for a Sustainable Future

- The **Science Culture Construction (SCC)** offers a vital, holistic framework for embedding science within society to address pressing environmental challenges.

Key Takeaway

Sustainable green development and biodiversity conservation depend on a foundation of **media literacy, culturally relevant science education, and global collaboration.**

Call to Action

An open invitation for **academics, researchers, policymakers, and all citizens** to participate in the SCC initiative.

Next Steps

Continue to refine and expand the **Declaration of Science and Climate Literacy.**

Disseminate key findings and white papers to **all stakeholders.**

Strengthen and build new **cross-sectoral partnerships** to accelerate progress.