

NEWS ARTICLE

Good news from Latin America and the Caribbean: national and international restoration networks are moving ahead

Cristian Echeverría^{1,2}, Cecilia Smith-Ramírez^{3,4}, James Aronson^{5,6}, José I. Barrera-Cataño⁷

Degradation of ecosystems is ongoing in Latin America but there is also a strong upswing in conservation and restoration efforts. SIACRE – the Ibero-American and Caribbean Society for Ecological Restoration – is playing a key role in coordinating and promoting this trend at international, national, and subnational levels. In October 2014, SIACRE members organized the first national seminar on ecological restoration in Chile, with participants representing both academic and non-academic sectors. This seminar served as the catalyst for this essay and was an historic event at the national level. Much work has been underway in the science and practice of restoration in Chile, but until now it has been fragmented. This first national seminar enabled helped the principal strengths and challenges that Chile has and must face in the transdisciplinary domain of ecological restoration. Since 2004, various meetings have been organized in the region, in order to communicate the importance of restoration, especially in Mexico, Cuba, Colombia, Brazil, and more recently in Chile and Argentina. Here we trace the history of national and subnational restoration networks in Latin America and the Caribbean, and of SIACRE, and then outline some goals and challenges for the coming years.

Key words: Chile, collaborative networks, SIACRE, Sociedad Iberoamericana y del Caribe de Restauración Ecológica

Introduction

Rates of ecosystem degradation and loss in Latin America and the Caribbean (LAC) are among the highest in the world (Armesto et al. 2007), yet reforestation and, better still, ecological restoration are on the rise as well (Aide et al. 2013; Melo et al. 2013). Important efforts have been conducted in the new millennium to raise awareness about the need to restore degraded ecosystems in the region. For instance, a national inventory and evaluation of restoration projects was undertaken in Colombia (Murcia & Guariguata 2014) for use by policy-makers and the restoration community as a whole. Concurrently, a cluster of restoration networks in LAC has come to life in the last few years.

In 2004, REPARA the *Red* (Network, in English) *Mexicana para la Restauración Ambiental* was formed to strengthen and exchange experiences on restoration of natural ecosystems. In the same year, the first international symposium on ecological restoration in LAC was held in Cuba organized by the Cuban Group of Ecological Restoration (GCRE). In 2005, an international group, including members of REPARA, met in Valdivia, Chile, to launch REDLAN, the *Red Latino Americana de Restauración Ecológica* (Armesto et al. 2007). In the same year, the Colombian national network REDCRE, the *Red Colombiana de Restauración Ecológica*, was created to consolidate the restoration effort in that country. Shortly thereafter, in 2007, RIACRE – the *Red Ibero-Americana y del Caribe para la Restauración Ecológica* – was created in Cuba. Gradually, through the activities of the three groups and meetings organized by RIACRE and Society for Ecological Restoration (SER), that

REDLAN and RIACRE became aware of one another, and the Brazilian group of professionals working in Remediation and Ecological Engineering that had created SOBRADE (*Sociedade Brasileira de Recuperação de áreas degradadas*).

Rapidly thereafter, constructive meetings and exchanges took place, especially at the first international congress of RIACRE, held in Curitiba, Brazil, in 2009 and the second in conjunction with the Fourth World Conference of SER in Mérida, Mexico, 2011. At Mérida, a decision was taken to merge REDLAN and RIACRE to form a new network. In parallel with the goal of merging networks in LAC, the REA – *Red de Restauración Ecológica de la Argentina*, was initiated in Luján, Argentina in 2012.

In 2013, at the third RIACRE international congress in Bogotá, Colombia, SIACRE – *Sociedad Ibero Americana y del Caribe en Restauración Ecológica* – was formally established

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¹Facultad de Ciencias Forestales, Universidad de Concepción, Concepción, Chile

²Address correspondence to Cristian Echeverría, email cristian.echeverria@udec.cl

³Instituto de Ecología y Biodiversidad, Santiago, Chile

⁴Instituto de Conservación, Biodiversidad y Territorio, Universidad Austral de Chile, Valdivia, Chile

⁵Center for Conservation and Sustainable Development, Missouri Botanical Garden, St. Louis, MO 63166-0299, U.S.A.

⁶Centre d'Écologie Fonctionnelle et Évolutive (UMR 5175, CEFE – campus CNRS), Montpellier, 34293, France

⁷Escuela de Restauración Ecológica (ERE), Unidad de Ecología y Sistemática, Departamento de Biología, Pontificia Universidad Javeriana, Bogotá, Colombia

with permanent headquarters and legal standing as an NGO under Colombian law. The principal objective of SIACRE is to promote the ecological restoration and restoration ecology across the region. This seems particularly timely as governments throughout Latin America are beginning to provide funds for ecological restoration, and in some cases, e.g. Colombia, to collect funds through obligatory offsets, for restoration. Concurrently, high quality scientific work and science-policy interface efforts are multiplying, as exemplified in São Paulo state, Brazil. In coming years, we will work for an exponential rise in science, technology, and practice of ecosystem restoration throughout LAC and call for more international networking. Capacity building, education, and outreach are quintessential challenges to meet as well.

It was also decided that SIACRE would help strengthen existing networks in Brazil, Colombia, Mexico, Cuba, and Argentina, and support efforts to establish new networks in other member countries. In October, and November of 2014, three important events took place: in Concepción, Chile, Cuernavaca, Mexico, and, Rio Negro, Colombia. In Chile and México, the first national seminars on ecological restoration were held with representatives of both academic and various non-academic sectors, whereas the latter launched the expansion of the 7-year old Colombian network, spurred by the ongoing work of the *Escuela de Restauración Ecológica* (ERE) at the Universidad Pontificia Javeriana in Bogotá. This new nucleus will serve the Antioquia province, and collaborate with the previously established one based in Barranquilla, Caribe Province, and others that are under construction (Aguilar et al. 2015).

Apropos the Seminar in Concepción, Chile, which served as the catalyst for this essay, this was an historic event at the national level. Much work has been underway in the science and practice of restoration in Chile, but until now it has been fragmented. This first national seminar enabled the principal strengths and challenges that Chile has and must face in the transdisciplinary domain of ecological restoration to be identified. Also, the 1-year-old network *Restauremos Chile* [Let's restore Chile] was launched in the seminar in order to get participants involved in international networks such as SIACRE and SER. The turnout of the seminar was diverse and impressive. The seminar was attended by representatives of the largest forest industry companies in Chile, as well as key actors from national and provincial governments, an non-governmental organization (NGO) working on education in restoration with groups of school children, researchers and students from half a dozen universities (Fig. 1). Reports presented covered a very wide range of the ecosystems and some of the most devastated ecosystems in Chile, from sub-tropical desert in the North, to sub-antarctic grasslands in the South, as well as offshore islands, the Mediterranean-climate type shrublands in the central zones, humid, temperate coastal forests, and Andean mountain ecosystems. Scientific, technological, social, and economic prospects for progress and obstacles to be overcome were discussed for each of them.

The fourth International Symposium of SIACRE will take place in April 2015, in Buenos Aires (see <http://siacre2015.wix.com/congreso>). The theme of the Congress is to support



Figure 1. Some of the participants at the *Restauremos Chile* Symposium held in Concepción, Chile, mid-October, 2014.

decisions and make recommendations to help stop environmental degradation and begin an era of ecological restoration, with a new “Culture of Restoration.” This meeting in Buenos Aires will be yet another milestone in the ongoing process of developing a network of national and subnational networks throughout LAC. We will also continue to work toward closer collaboration with SER and other like-minded organizations around the world.

Both Colombia (Ministerio de Ambiente y Desarrollo Sostenible de Colombia 2012), and Ecuador (Ministerio del Ambiente de Ecuador 2014) have recently ratified national plans for restoration, both of which are now freely available online. Both plans are currently under intense discussion at the national levels, and the program in Ecuador is already well advanced. Thus these two countries join Brazil, where similar discussions are taking place with regards the numerous laws on restoration that already exist in that country (Aronson et al. 2011). We expect that in the future other countries in LAC will follow this example. There is so much to be done, and without government support and guidance it will be an uphill struggle.

On the international scene, we will work to help governments meet their commitments when they ratified the historic Hyderabad call of the U.N. Convention on Biological Diversity (CBD) in December 2012, to begin restoring 15% of all degraded ecosystems in the world by 2020 (CBD 2012). More concretely, national efforts like those underway in Chile, Argentina, Colombia, Brazil, Ecuador, Mexico, and elsewhere in LAC, will strengthen interactions with policy makers, regional administrators, and heads of companies, and communities. Clearly, much greater outreach to the public is needed, on behalf of conservation and restoration as a new cultural paradigm for LAC region. In particular, next steps in the region should be focused on: (1) promoting research on the science and practice of ecological restoration in each country and throughout the LAC region, (2) exchanging experiences and knowledge among researchers and professionals through networking and regular meetings, (3) developing skills and capacities in effective restoration work

among students and professionals by means of specific courses, and (4) communication and outreach regarding the need for much greater investments in the restoration of degraded ecosystems of all kinds.

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