



## Analysis

# Understanding the impacts of the 2007–08 Global Financial Crisis on sustainable forest management in the Brazilian Amazon: A case study

Natalia P. Canova\*, Gordon M. Hickey

Department of Natural Resource Sciences, Faculty of Agricultural and Environmental Sciences, McGill University, 21,111 Lakeshore Road, Ste-Anne-de-Bellevue, Canada H9X 3V9

## ARTICLE INFO

## Article history:

Received 13 June 2011

Received in revised form 18 May 2012

Accepted 23 July 2012

Available online 21 September 2012

## Keywords:

Global Environmental Crisis

Forest certification

Tropical forestry

Governance

Globalization

## ABSTRACT

In 2007 and 2008, the world experienced a significant Global Financial Crisis (GFC). Several factors were perceived as drivers of the crisis, however, its dynamics and consequences for natural resources and the environment remain largely unknown, particularly in Brazil. Combining grounded theory and case study methodologies, this research explores and contrasts the perspectives of highly knowledgeable stakeholders on how the GFC impacted sustainable forest management in the Brazilian Amazon, using the State of Pará as a case study. Our findings indicate that the GFC cannot be considered as a unique phenomenon impacting SFM and that it is intimately linked to other political, social and environmental events unfolding within Brazil and at the global level. Decreased deforestation was perceived to have occurred due to restrained production, increased risk aversion, increased public awareness and enhanced government efforts towards law enforcement. The forest-based exporting segment was seen to suffer the most severe impacts of the crisis. Environmentally friendly initiatives were perceived to offer forest product differentiation in the market; while investments in non-market-oriented initiatives were restrained. Our results suggest that in times of economic crisis, forest policy-makers need to focus on both formal and informal forest economies in order to promote sustainable forest management objectives.

© 2012 Elsevier B.V. All rights reserved.

## 1. Introduction

In 2007 and 2008, the world experienced a remarkable Global Financial Crisis (GFC) that started in the U.S.A. and quickly spread to affect the global economy (Foster and Magdoff, 2009). Several factors were perceived as drivers of this crisis (Goodhart, 2008), however its dynamic and long-term consequences, in particular its impact on natural resources, remain largely unknown. The GFC is known to have affected developing countries through a decrease in commodities demand, reduced exports and investments, and unstable economic scenarios (World Bank, 2009). Importantly, economic downturns and environmental degradation are often perceived as consequential (Ma et al., 2009; Nilsson, 2009; Sunderlin et al., 2001); therefore it can be assumed that the GFC had impacts on various initiatives to promote environmental protection and sustainable natural resource management in a range of contexts. It is from this starting point that our research sought to better understand and qualify the impacts of the GFC on sustainable forest management in the Brazilian Amazon. Further, as financial and economic crises are often occurring at different levels (Mishkin, 1996), and in roughly 10-year cycles (Nilsson, 2009), this paper seeks to provide insights that will assist forest managers and policy-makers to

better understand recent trends in sustainable forest management, and some future prospects for policy during financial crises.

### 1.1. The 2007/2008 Global Financial Crisis

Considering its multifaceted drivers (Goodhart, 2008; Reinhart and Rogoff, 2009), understanding the causes of the GFC is not simple. Although it started in the United States in 2007, its dynamics and consequences were felt globally. The resulting global economic contraction affected both developed and developing countries (World Bank, 2008). By the end of 2008, global industrial production had reduced 20% and global GDP had declined for the first time since World War II (World Bank, 2009). Developing economies experienced falling exports to developed nations, unemployment transfers (International Labour Organization (ILO), 2009), a reduction of capital flow, capital withdrawal and credit dry up, triggering a fall in production and investment in most sectors (Lin and Martin, 2010; World Bank, 2008). In addition the potential introduction of trade barriers and economic nationalism were considered threats to globalization (Nilsson, 2009). Tighter credit availability compromised government expenditure while poverty was seen to increase in many regions due to the impacts on food and fuel prices (World Bank, 2008). Reduced economic growth led to increased unemployment in many sectors. According to the ILO (2009), in 2008, global unemployment increased by 14 million people. Job losses in formal, mostly export-oriented industries,

\* Corresponding author. Tel.: +1 438 8851438.

E-mail address: [natalia.canova@mail.mcgill.ca](mailto:natalia.canova@mail.mcgill.ca) (N.P. Canova).

likely resulted in an increase in the number of informal workers (ILO, 2009), potentially intensifying the social pressures on natural resources, particularly in developing countries.

### 1.2. Economic Downturns and Forest Resources

In the global forest sector, reports on the impact of the economic crisis have found that the sector faced a decrease in demand and prices, a lack of profitability, and decreased investment (Nilsson, 2009; Presas, 2009). While insightful, these reports present global perspectives on the consequences of the GFC, shedding little light on the impacts at sub-national and regional levels. Studies conducted in Indonesia (Sunderlin, 1999; Sunderlin et al., 2001) have indicated that policies to improve tropical forest conservation and management are often based on the assumption of political and economic stability and that some of the most important changes in the conditions affecting tropical forests can occur when there are unpredictable political and economic conditions.

Economic downturns can have positive or negative implications for forest resources, depending on the broader context. A study on the impacts of the 1997 financial crisis on Indonesia's forests found a reduction in the pressure being placed on forest resources due to declines in demand and prices for timber, an associated slowdown in road construction, and a decline in government spending on direct settlement programs (Sunderlin, 1999). Conversely, pressure was found to increase due to the dismissal of forest workers, the bankruptcy of timber mills, and increased workforce migration from urban to rural areas (Sunderlin, 1999).

The 1986 crisis in Cameroon demonstrated that macroeconomic stability played an important role in determining the way that population, agriculture and labor roles affected forest-clearing activities, resulting in increased pressure on forest resources (Sunderlin and Pokam, 2002). Elliott (2011) examined the impacts of both the 1997 Asian financial crisis and the 2007/08 GFC on environmental sustainability on East Asia and indicated that both crises generated similar patterns of impacts: 1) weakened global demand and prices for commodities and therefore somewhat restrained environmental impacts; 2) vulnerability of government expenditures on environmental protection; 3) urban–rural migration; 4) vulnerability of rural population not only to the impacts of the economic crises but also to environmental degradation and in the availability and access to natural resources; and 5) increased discussion toward a 'green growth' strategy. To date, reports examining the impacts of the 2007/08 GFC have primarily focused on Asia's and Africa's forest resources, forestry industries and trade (Chipeta and Heath, 2009; Ma et al., 2009; Tieguhong et al., 2009). For example, reports have suggested that exports in China, South Africa and Central Africa dropped as a result of the GFC and decreased purchasing power of the main importers of timber such as the USA and the European Union (Chipeta and Heath, 2009; Ma et al., 2009; Nilsson, 2009; Tieguhong et al., 2009). China's domestic demand for timber products was also found to have dropped, resulting in the shutdown of small- and medium-sized forest enterprises and increased unemployment and social instability in forest areas (Ma et al., 2009). In Central Africa, recent studies have found that in times of crisis, communities had a higher reliance on Non-Timber Forest Products (NTFP) for employment and income, thereby increasing the pressure on some species (Tieguhong et al., 2009). Another recent report on the impacts of the GFC on the North American forest sector (Taylor, 2009) focused on the collapse of the housing market as a major threat. Reports assessing the impacts of the GFC in Latin America have been limited to the effects on forest plantations, describing restrained exports and production associated with currency devaluation, and declines in demand and prices (Faleiros, 2009; Tomaselli, 2009). However these reports have not addressed the potential impacts on tropical native forests in Latin America, particularly in the Brazilian Amazon.

Furthermore, no previous study has examined the perspectives and experiences of the stakeholders involved in forest management in Brazil.

### 1.3. Sustainable Forest Management in the Amazon

Sustainable forest management (SFM) is a widely accepted concept that defines the aim of managing forests according to the principles of sustainable development (WCED, 1987). More specifically, SFM involves balancing the social, economic and environmental values associated with forest resources with consideration of these values for future generations (Hickey, 2008). The Amazon Basin is a particularly important forest area for the provision of goods and services, including the regulation of climate and precipitation, biodiversity conservation, provision of timber and non-timber products, among others (Banerjee et al., 2009). It also accounts for 49% of the national territory of Brazil (SFB, 2010).

In Brazil, the term sustainable forest management is often used to describe Reduced Impact Logging (RIL), which refers to a set of management practices that increase the sustainability of timber harvesting, while continuing to meet rising global demand for tropical timber (Ros-Tonen et al., 2008). However, SFM expands the scope of reduced impact timber production to include all the social, environmental and economic aspects associated with forest management, governance and the inclusion of stakeholders (Ros-Tonen et al., 2008).

Although Brazil's forests have historically been harvested using management techniques that neglect environmental and social forest values (Barreto et al., 1998; Holmes et al., 2000), several attempts to promote SFM have been initiated since the launching of the Forest Code in 1965. Initially focused on RIL, new standards and criteria have since been incorporated into the regulatory framework through amendments to the Code (Banerjee et al., 2009), third-party forest certification (May, 2004) and engagement in SFM criteria and indicator processes such as the 'Tarapoto Process' (Carazo, 1997).

While some authors question the profitability of SFM, based on the fact that the products originating from sustainably managed areas need to compete in a market flooded by illegally produced forest products (Rice et al., 2001), others have stated that well managed forests can present much higher profitability when compared to conventional logging (Holmes et al., 2000). Nevertheless, SFM initiatives often require additional planning and initial investments compared to conventional logging practice. It is therefore likely that these initiatives would be affected in times of severe economic slowdown.

### 1.4. Objectives

The main objective of this exploratory study was to better understand the impacts of the GFC on SFM initiatives in the Brazilian Amazon based on the experiences and perspectives of highly knowledgeable and diverse stakeholders. Considering the enormous extent and complexity of the Brazilian Amazon we selected the State of Pará as a case study. The following broad research question guided the study: "How has the Global Financial Crisis impacted SFM in the Brazilian Amazon?" More specifically, the study aimed to engage highly knowledgeable key stakeholders to understand their perceptions of, and experiences with, the impacts of the GFC on SFM in the region.

## 2. Methodology

Following a qualitative research strategy, we sought to: 1) go beyond initial conceptions of the crisis, often provided by figures and statistical data, to generate deeper insights; 2) gain a holistic overview of the context, including its dynamics and its explicit and implicit themes and interactions; and 3) explain how "insiders" understood and took action in response to the circumstances brought about by the GFC (Miles and Huberman, 1994).

Download English Version:

<https://daneshyari.com/en/article/5050018>

Download Persian Version:

<https://daneshyari.com/article/5050018>

[Daneshyari.com](https://daneshyari.com)