From this they apparently conclude that stopping deforestation will help poor people. They then explain that ecosystem services are becoming degraded because they lack sufficient, quantified market value. What is missing in their line of reasoning, however, is engagement with the broader questions of where, how and under what circumstances poor people benefit more from standing forests than forest conversion; how assigning market values to these services affects the poor; or how, in general, governance mediates the links between ecosystem services and poverty.

Having thus implied that conserving tropical forests will *de facto* protect biodiversity and poor people, and/or that they can be protected by safeguards that are not cumbersome, the authors then turn to the argument that results-based finance for forest carbon is the key to forest protection and its associated triple win. For this, they draw on a singular success story: Brazil. They note how Brazil has reduced deforestation by more than 80% in eight years through a combination of increased law enforcement and other governmental and market-based strategies. The authors claim that rapid advances in remote sensing technologies were key to these efforts and that these technologies "support good governance agendas as well". Yet they are conspicuously silent about whether this has benefitted the poor, or whether safeguards played a role in Brazil's strategies. There is certainly some evidence to the contrary, namely that Brazil's approach to reducing deforestation was highly uneven in its social impacts and less damaging to large and high-capacity producers than to smallholders and the rural poor. In general, they overlook how heightened law enforcement intersects with widespread tenure insecurity and complex and restrictive legal systems to exclude poor people from accessing forest resources, and that globally REDD+ has had mixed and limited effects on governance reform.

Not only is attention to power critical for recognizing local winners and losers, it is necessary for understanding the interplay between international and national decisionmaking. According to the authors, Brazil's success was significantly motivated by Norway's promise of up to US\$1 billion of results-based REDD+ finance. They contend that results-based payments create an "equal partnership" because, unlike traditional development aid, they do not dictate how the results should be achieved. But the authors also acknowledge that Brazil's economy is quite large and hence REDD+ finance alone would not be enough to steer it. Given this, wouldn't the main take-home message be that it is not results-based finance for REDD+ that motivates countries to reduce deforestation, but a much broader combination of factors? If so, that would arguably be more consistent with an equal partnership than one where the future of the country's forests is determined by international interest in buying billions of dollars of 'cheap' forest emissions reductions.

Power must also be considered in weighing the pros and cons of public versus private finance. The authors reflect that public donors have provided the majority of REDD+ finance, but that this had totalled less than US\$9 billion by 2014, and is far less than the estimated US\$17-33 billion per year needed to halve global deforestation by 2030. Furthermore, this public finance has been slow to disperse due to bureaucratic requirements, including safeguards. The solution, they argue, is to convince the private sector to unleash the needed billions, perhaps by leveraging public funds to absorb the risk. The authors fail to investigate, however, how privatizing REDD+ funds would impact the relative priorities placed on carbon versus rural development, biodiversity and myriad other tropical forest values.

The most problematic assertion in this book is that existing evidence is sufficient to indicate that results-based REDD+ finance will achieve a triple win. In fact, rapid and large-scale mobilization of finance in the manner prescribed would involve a global experiment of an unprecedented nature and scale, radically transforming the dynamics of power and control shaping tropical landscapes. As an untested experiment

there can be no solid evidence of how it would work.

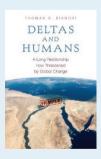
I agree with the authors that much has been learnt since REDD+ was first proposed. Their book enhances this learning with a strong synthesis and original economic and political analysis. The book also provides a wake-up call for urgent action on forests and climate, and the need for major financial and political investment. However, engaging with issues of power and risk would have yielded a more comprehensive and convincing analysis. Neither results-based finance, nor any other single approach could score a triple win for climate, development and biodiversity. Rather, answering the questions posed by Why Forests? Why Now? requires a more nuanced understanding of who gains and who loses in what contexts. It likewise calls for a diverse suite of strategies, tailored to specific contexts, and monitored for impacts across all forestrelated values. Therefore, only by "embracing complexity" (A. Buck and P. Katila (eds) Embracing Complexity: Meeting the Challenges of International Forest Governance; IUFRO, 2011), rather than reducing our focus to the sale of carbon, can we achieve effective and equitable action on climate and forests.  $\Box$ 

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ON OUR BOOKSHELF



## Deltas and Humans: a Long Relationship Now Threatened by Global Change

by Thomas S. Bianchi

OXFORD UNIVERSITY PRESS: 2016. 184PP. US\$59.95

In this book, coastal scientist Thomas Bianchi discusses the long history of human settlements on river deltas, and the changing nature, both seasonal and longer term, of such environments. He introduces the human-delta relationship and considers both how this is threatened by global change, and what is needed for continued sustainability.



## Glacial Shifts, Changing Perspectives: Bearing Witness to Climate Change

by Diane Burko

KMW STUDIO PUBLISHING: 2017. 70PP. US\$40.00

Artist Diane Burko travels the world working with glaciologists who study climate change impacts on glaciers, using this as inspiration. This book (www.glacialshifts.com) presents photography and paintings exhibited at the Walton Arts Center, Arizona, USA (May-September 2017). Three essays explore the exhibit's curation, the history of glacial imagery, and Burko's artistic progression.