PROPOSITIONS

1. Large nature conservation organisations can only stay relevant in future conservation finance networks through programming and switching.
   (this thesis)

2. When nature conservation organisations talk like bankers, the public sector responds with increased financing.
   (this thesis).

3. To bring balance to environmental economics, markets should make ecological sense of nature, rather than nature making economic sense of markets.

4. Capitalism is not the root of nature's problems; indifference is.

5. Populism will be the downfall of the democratic state.

6. The quality of life of a PhD candidate increases when every paper written comes with a new baby.

Propositions belonging to the PhD dissertation, entitled

Networks and Flows of Conservation Finance: the case of World Wide Fund for Nature (WWF)

Nowella Anyango-van Zwieten

Wageningen, 12 June, 2020

Networks and Flows of Conservation Finance: the case of World Wide Fund for Nature (WWF)

Nowella Anyango-van Zwieten

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Thesis

submitted in fulfilment of the requirements for the degree of doctor

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To Pieter, Chloë and Philip

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I do not believe in serendipity. And I do not believe in coincidences. I am convinced that each one of you is a blessing bestowed on my life. And that the moments I shared with you were all orchestrated. Towards this goes my greatest gratitude.

Table of Contents

List of Tables

List of Figures

List of Abbreviations and Acronyms

ADB	Asian Development Bank
AE	Accredited Entity
ARPA	The Amazon Region Protected Areas
ASEAN+3	Association of Southeast Asian Nations plus China, Japan, and Korea
BIOFIN	The Biodiversity Finance Initiative
BRICS	Brazil, Russia, India, China and South Africa (emerging national economies)
CBD	United Nations Convention on Biological Diversity
CI	Conservation International
COD	Centre of Development
COP	Conference of Parties
DEFRA	United Kingdom's Department for Environment, Food and Rural Affairs
DFID	United Kingdom's Department for International Development
ECAs	Export Credit Agencies
EU	European Union
FIRME	Financial Institution for the Recovery of Marine Ecosystems
FUNBIO	Fundo Brasileiro para a Biodiversidade (Brazilian Biodiversity Fund)
GAA	Governments and Aid Agencies
GCF	Green Climate Fund
GEF	Global Environment Facility
IIED	International Institute for Environment and Development
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IUCN	International Union for Conservation of Nature
KfW	The German Development Bank
LDN	Land Degradation Neutrality
MDGs	Millennium Development Goals
NBSAPs	National Biodiversity Strategy and Action Plans
NET	Network Executive Team
NGO	Non-Governmental Organisation
NO	National Office (currently Country Office)
ODA	Official Development Assistance
OECD	The Organisation for Economic Co-operation and Development
PA	Protected Area
PES	Payments for Ecosystem Services
PFP	Project Finance for Permanence
PO	Programme Office (currently Regional Office)
PSFI	Private Finance Sector Initiative
PSP	Public Sector Partnerships
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SDG	Sustainable Development Goals
SIDA	Swedish Aid Agency
TEEB	The Economics of Ecosystems and Biodiversity
TNC	The Nature Conservancy
UNCCD	The United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Convention on Climate Change
USAID	United States Agency for International Development
WCS	Wildlife Conservation Society
WCS	World Conservation Strategy
WWF	World Wide Fund for Nature (or World Wildlife Fund in the United States of America)


1

CHAPTER 1.

General Introduction

1.0 Introduction

The call to save global biodiversity[1] has never been stronger. On 17 December 2011, the United Nations launched 2011-2020 as the UN Decade of Biodiversity with the vision that "by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people."[2] That vision is soon to be replaced by a Post-2020 Global Biodiversity Framework. However, the current reality is dire. The recently released Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Global Assessment Report (IPBES, 2019) shows a sharp increase of species extinction rates in the past 50 years that will continue into 2050 and beyond, unless curtailed by transformative changes in the conservation, restoration and sustainable usage of nature. Conservation efforts to combat this decline require significant increments in financing, a recurring issue that has been discussed in all UN Convention on Biological Diversity (CBD) forums since its inception in 1992.

However, funding from public coffers dwindled in the aftermath of the 2008 financial crisis, increasing the urgency to seek finance from private sources. This was voiced at the 10th Conference of Parties (COP 10) in Nagoya, Japan by the then French Ecology Minister Chantal Jouanno (Black, 2010:paragraphs 15-17):

> "If you think that to solve the problem of biodiversity only public funds can be sufficient...It's just a dream, because the amounts necessary are so huge...It needs to be private funds too - and not only voluntary private funds but... binding funds...You are making profits from the use of biodiversity; so it's logical and it's legitimate that those profits return to biodiversity"
>
> (BBC News interview 29 October 2010).

These sentiments have been echoed within nature conservation circles for years, as witnessed during all three Earth Summits since 1992 and the IUCN Word Conservation

[1] The Convention of Biological Diversity (CBD) defines biodiversity as the "variety and variability of animals, plants and micro-organisms, at the genetic, species and ecosystem levels."
[2] https://www.cbd.int/doc/strategic-plan/2011-2020/Aichi-Targets-EN.pdf

Congresses since 2008 (MacDonald, 2010a, 2010b). They recognise the importance of public funds while also emphasising the need for increased funding from private sources.

Historically, the rise of public funding for nature conservation was given an impetus by the 1980 World Conservation Strategy (WCS) (MacDonald, 2010b). Jointly published by World Wide Fund for Nature (WWF), International Union for Conservation of Nature (IUCN) and United Nations Environment Programme (UNEP), it aligned conservation, development and sustainability in the concept of sustainable development (Roe, 2008). The ensuing national conservation strategies brought coherence to funding from governments and opened up substantial global flows of finance into nature conservation, notably from the United States Agency for International Development (USAID) and later from the Global Environment Facility (GEF) (Adams & Hutton, 2007). However, the beginning of the 90s was marked by a slowing world economy and difficult economic times for developing countries steeped in external debt (UN DESA, 1990; 1991; 1992; 1993; Patterson, 1990). This ushered a paradoxical situation in the 1990s in which there was a "sharp decline in the amount of money available for conservation programmes overall", with funding dropping by almost 50%, while '"at the same time' financing of the largest nature conservation organisations was going through a "vertiginous growth spurt" (Chapin, 2004:18 & 22). Specifically, the budgets of the five largest nature conservation organisations grew to command over 50% of globally available conservation funding (Igoe, Neves, & Brockington, 2010). For example, the combined revenues of The Nature Conservancy, Conservation International and WWF-US grew from "US$635 million in 1998 to US$899 million in 1999 to $965 million in 2000" (Chapin 2004:22). The revenues of the Nature Conservancy alone grew from annual incomes of US$110 million in 1990 to over US$800 million by 2005 (Birchard, 2005). In 2018, its revenue stood at US$1.29 billion, with assets exceeding US$7 billion (TNC Consolidated Financial Statements FY18).

In 1992, 192 nations met at the Earth Summit in Rio de Janeiro to estimate the costs of biodiversity conservation (Miller, Agrawal, & Roberts, 2013). Following this meeting there

was an emergence of publications attempting to estimate "the funding gap", that is the discrepancy between available conservation funds and global conservation needs. James, Gaston, and Balmford (1999) found a 40% gap (approximately 4.3 to 6.6 billion dollars a year)(Gutman & Davidson, 2007), Balmford et al. (2002) estimated a 78% - 85% gap (approximately 35 to 38.4 billion dollars a year)(Gutman & Davidson, 2007), and Vreugdenhil (2003) estimated a 9%-13% gap (approximately 1 billion dollars a year)(Gutman & Davidson, 2007). A decade after Rio, little progress had been made to closing this gap and in 2004 the CBD's target was that "by 2008, sufficient financial, technical and other resources to meet the costs to effectively implement and manage national and regional systems of protected areas are secured, including both from national and international sources..." (CBD, 2007:paragraph 4). Needless to say, this target was not met and neither was the target made by CBD member states to stop the rate of biodiversity loss by 2010 (Polasky, 2012).

As the urgency for new and additional financing to close the gap increased, greater attention was given to the pursuit of private funds, using innovative, often market-based and experimental, financing mechanisms expected to gradually build on or replace existing financing mechanisms emanating from governments. By 2007, World Wide Fund for Nature (WWF) had identified more than 60 different conservation finance mechanisms ranging from what they classified as traditional flows (such as bilateral aid, tourism, debt-for-nature swaps, green lotteries and foundation grants), to what they then considered new initiatives (such as round-ups, sister parks, international green investment funds) (Gutman & Davidson, 2007). Another classification of the mechanisms is based on whether they are direct market (e.g. direct ecosystem service fees, direct biodiversity fees, cap-and-trade market, offset market and bioprospecting), indirect market (e.g. greening commodities that link biodiversity to traditional markets for other products like coffee), other market (e.g. natural capital levy, auctioning of emission allowances, maritime levy, financial transaction tax and levy on insurance premiums) or non-market mechanisms (i.e. philanthropy, domestic budget allocation, Official Development Assistance, debt for nature

swaps, agricultural subsidy reform and fossil fuel subsidy reform) (Parker, Cranford, Oakes, & Leggett, 2012). Pirard and Lapeyre (2014) have classified the market based instruments under five generic names based on the characteristics of the instruments and the nature of the markets: direct markets, tradable permits, reverse auctions, coasean-type agreements, regulatory price changes and voluntary price signals. All these mechanisms range from untested or piloted ideas, ideas that bloomed and faded, to age-old ideas that have been used in conservation for decades. They also reflect the multitude of activities, discussions and increased complexity of conservation financing.

The attempts to decrease the funding gap and search for innovative financing mechanisms have been subject to intensive societal and scientific debates. On the one hand, scholars view conservation NGO's as integral to a "conservationist mode" of production that intertwines wildlife and biodiversity with capitalism (Brockington & Scholfield, 2010). By viewing large NGOs through the lens of capitalistic conservation, their funding is seen as a means of "accumulation by conservation" (Buscher and Fletcher, 2015) that is largely achieved through the "spectacle of nature" (Igoe et al., 2010) - a concept derived from Debord's "spectacle" (Debord, 2014 [1967]). In this context it means that "conservation NGOs, as well as the foundations, government agencies and for-profit companies that support them, consistently use image and dramatic performance to conjure spaces for effective conservation interventions cum profitable investments" (Igoe et al., 2010:377). On the other hand, efficiency-oriented scholars have an instrumental view on conservation NGOs, perceiving that the NGOs act as critical conduits for channelling funds to the places with the greatest conservation needs (Armsworth et al., 2012). According to supporters of this last perspective, efficiency is the most important attribute in funding and therefore the pursuit of private sector funds using innovative, often market-based and experimental, financing mechanisms, is encouraged.

Though divergent, both perspectives make significant contributions to the growing body of literature on conservation finance. The critical social science literature provides useful

insights into the new developments in the organisation and activities surrounding conservation finance, while the efficiency-oriented literature contributes to the debate with ideas and concepts exported from other disciplines. However, by ignoring the social and political contexts, efficiency-oriented scholarship borders on naivety. And by fixating on hegemony and the evils of capitalism, critical social science might lose sight of other important ways of analysing conservation finance. Indeed capitalism is more pervasive today than ever before, but it is not "the only game in the global town" (Castells, 2013:29).

The aim of this thesis therefore is to find an alternative way of investigating conservation finance that seeks to understand the intricate workings of nature conservation organisations, while remaining sensitive to the dynamics of the contemporary society in which they operate. Conservation finance scholarship is still at a nascent stage and the scale and scope of discussions, experimentations and consequences are still poorly understood. Scholars place conservation NGOs, particularly the largest international ones, at the centre of conservation finance research (Armsworth et al. 2012; Igoe and Brockington 2007) and argue that significant flows of funding are traced in networks with these large NGOs (Brockington and Scholfield 2010; Duffy 2008; Holmes 2010; Igoe and Brockington 2007). Thus, this thesis aims to contribute to addressing the knowledge gap by also focusing on the funding of large nature conservation organisations, using WWF (globally known as World Wide Fund for Nature and in the USA, as the World Wildlife Fund) as an example.

WWF is among the top best-funded conservation organisations in the world with a global income of €721M in 2017 (WWF 2018). It runs over 1,300 projects in more than 100 countries, and has about 5 million supporters worldwide. It therefore represents global biodiversity conservation at the international level better than other large conservation organisations. In comparison, The Nature Conservancy, though nearly doubling WWF's income as shown above, has a funding base that is much more oriented to the USA. Conservation International, though very prolific at seeking alternative sources of finance,

has a much smaller funding base and revenue, as shown by its income of only €158M in 2017 (Conservation International, Annual Report FY2017). Moreover, WWF is also at the forefront of large nature conservation organisations that publish grey literature on conservation finance and dominate these discussions at global events. My central research question therefore is:

RQ: How does WWF, as an example of large nature conservation organisations, maintain and expand funding for global biodiversity conservation?

In academic literature research on conservation finance is typically narrowed down to specific topics of interest. These range from a focus on specific financial mechanisms, their combinations or comparisons (for example, Buckley 2010; Gockel and Gray 2011; Pattanayak et al. 2010), in specific geographical regions or ecosystems (Baral and Dhungana 2014; Bos et al. 2015; Brockington and Scholfield 2010; Hermoso et al. 2016), involving specific actors (Armsworth et al. 2012; Larson et al. 2016) or coming from specific academic perspectives (Ando and Shah 2016). Fewer efforts have been made to find broader trends. While important details and useful information have come out of these studies, there is still much need for studies that provide broader overviews. Today a critical moment of reflection is needed as we approach the end of this UN Decade of Biodiversity. Wider trends are necessary for outlining broader directions, unveiling underlying assumptions and providing inspiration for alternative and productive ways of carrying out both conservation research and practice. I contribute towards this through my first research sub-question, by broadening the scope of literature that discusses conservation finance and seeking dominant themes that emerge out of recent publications. My first research sub-question therefore is:

Research sub-question 1: What major themes on funding for biodiversity conservation are covered by academic literature published between 2010 - 2016?

This research sub-question is addressed in chapter 2. An important attribute of conservation finance that emerged was the importance of networks and the central role of the largest conservation organisations in them. Network conceptualisations have, however,

scarcely been used by social scientists in analysing conservation finance. Yet they have been extensively used in studies of global financial networks, financial organisations, economic crises and emerging markets (Acemoglu, Ozdaglar, & Tahbaz-Salehi, 2015; Clemente, Grassi, & Pederzoli, 2020; Elliott, Golub, & Jackson, 2014; Gai & Kapadia, 2010). In a study of the work of conservation organisations in sub-Saharan Africa, Brockington and Scholfield (2010) found the close relation between conservation finance and development finance posed a challenge in analysis when unbundling both funds to arrive at "pure" conservation funds. To resolve this problem of distinction, Brockington and Scholfield (2010:7) have therefore called for a "study of networks of organisations." Their conclusion corresponds to the findings of my research sub-question 1 above[3]. I therefore decided to make use of network theory as postulated by Manuel Castells. Castells has used his network theory to analyse a wide spectrum of global phenomenon including financial markets, foreign direct investments, organisational transformations, supra national organisations, global media networks and the global criminal economy (Castells, 2010a; 2010b; 2010c; 2013). He argues that "networks, as social forms, are value-free or neutral. They can equally kill or kiss: nothing personal" (Castells 2000b:16). I argue – also based on the findings of chapter 2 - that a more detailed understanding of the networking activities of conservation organisations will lead to a perspective that is more congruent with the tough reality in which they operate, as well as a more nuanced perspective on why changes happen. Castells' network analysis facilitates in-depth investigation while remaining context-sensitive. Funding of large conservation organisations does not happen in a vacuum but is embedded in the various contexts in which these organisations operate, for example the economic downturns mentioned above. Specifically, this thesis makes use of two key concepts of network-making power: programming and switching. These concepts are introduced below and explained in more depth in chapter 3 and again in chapter 4.

[3] The research design used in answering research sub-question 1 intentionally eliminates data that does not explicitly refer to biodiversity finance. However, it was not feasible to similarly "unbundle" the data from WWF when answering research sub-questions 2 and 3. Therefore, the rest of the analysis covers conservation finance in general and might also include elements of climate finance.

Making use of these concepts, Chapter 3 analyses public sector funding. The public sector is an important source of funding for biodiversity conservation. Above, I briefly mentioned the history of the growth of public funding for nature conservation. The Nature Conservancy (TNC), Conservation International (CI) and WWF-US benefitted from USAID increasing their spending in developing regions from US$240 million in 1998 to about US$490 in 2002 (Corson 2010:589). Today's WWF's public sector funding constitutes about a fifth of the organisation's income (see also chapter 4). WWF has found that their offices with a public sector finance strategy "bring in five times more funding than those that don't – and have a much greater influence on the institutions that drive change" (WWF, 2014:26). The second research sub-question therefore is:

Research sub-question 2: How does WWF use networking to maintain and expand funding from public sector sources?

As discussed above, international fora express the urgency to seek finance from private sector sources as there is a widespread belief that public sector funds are not sufficient to cover conservation needs. Conservation organisations, spearheaded by WWF, have voiced the necessity to give priority to the pursuit of private sector funding. A few studies have made attempts at estimating the sum of global private sector funds that go into nature conservation (Dempsey & Suarez, 2016; Hamrick, 2016; Huwyler, Kaeppeli, Serafimova, Swanson, & Tobin, 2014a; Parker et al., 2012) but to my knowledge, no studies have been done to find how much private sector financing goes to a specific large nature conservation organisation. The third research sub-question addresses this gap by investigating the extent of corporate sector income:

Research Sub-question 3: What is the extent of corporate sector income into WWF and how does WWF maintain and expand it?

Initially this thesis set out to delimit funding to those directly targeting biodiversity conservation. This is also referred to as biodiversity finance (Bishop & Hill, 2014; Parker et al., 2012; Rubino, 2002) although its usage varies amongst scholars, with some only using

it to mean financing from markets. In this thesis I adopt the usage of the term from OECD[4] and The Biodiversity Finance Initiative (BIOFIN)[5], an initiative of the United Nations Development Programme (UNDP), to refer to biodiversity finance as funding from all sources directed at the conservation and protection of biodiversity. This definition informs the selection of data used to answer research sub-question 1. However it was not feasible to adhere to this strict definition in answering research sub-questions 2 and 3 because the data from WWF came bundled together with elements of climate finance and development finance. I therefore resorted to the more common (although also varied) usage of the term conservation finance (Castro, 2003; Clark, 2012; Huwyler, et al. 2014b; Kay, 2018; Levitt, 2005; Polasky, 2012) and use it in this thesis to mean funding from all sources directed at all forms of endeavours, including those of nature conservation organisations, that chiefly target the conservation and protection of biodiversity.

Although also discussed in Chapters 3 to 5, below I now first briefly introduce the conceptual framework followed by the methodology used in this study. I close this chapter with an outline of the rest of the thesis.

1.2 The Sociology of Networks and Flows

In 1996 Castells adopted the concept of global network society[6] by analysing major structural transformations during the last two decades of the 20th Century. He defines a network as a set of interconnected nodes (Castells, 2013). A network society is therefore one whose social structure "is made around networks activated by microelectronic-based, digitally processed information and communication technologies" (Castells, 2013:24). By social structure Castells means "the organisational arrangements of humans in relations of production, consumption, reproduction, experience, and power expressed in meaningful communication coded by culture" (*ibid*). Castells considers ICT advancement as a pre-

[4] https://www.oecd.org/environment/resources/biodiversityfinance.htm
[5] https://www.biodiversityfinance.net/index.php/about-biofin/what-biodiversity-finance

[6] Earlier, Jan van Dijk (1991) had used the title Network Society in his book *De Netwerkmaatschappij* (in Dutch).

requisite, and not determinant, of new forms of institutional arrangements. Although networks have always been the "backbone of society", they were previously limited to private life because of their ineffectiveness to achieve the threshold necessary to oust the then more dominant and effective vertical structures (Castells, 2013). Castells does not therefore consider it new that today's society is based on networks, but what is unprecedented is the preponderant network capabilities based on advancements in information communication technology that transcend boundaries (Castells, 2010a). By riding on the global characteristic of digital technology, economic, political, cultural and other activities – like in this case maintaining and expanding nature conservation finance - also became global, again not because ICT determines society, but because it significantly enhances already existing networks to perform at the "size, complexity, and volume of flows" necessary to break away from previous limitations (Castells, 2013:22).

The manifestations of these changes are reflected in the state, market and civil society in some of what Castells terms as the network state, network enterprise and network economy. A significant break from previous limitations is evidenced by the organisational shift from hierarchical bureaucratic structures into more efficient networks characterised by improved flexibility, scalability, and survivability: "Flexibility is the ability to reconfigure according to changing environments and retain their goals while changing their components, sometimes bypassing blocking points of communication channels to find new connections. Scalability is the ability to expand or shrink in size with little disruption. Survivability is the ability of networks, because they have no single centre and can operate in a wide range of configurations, to withstand attacks to their nodes and codes because the codes of the networks are contained in multiple nodes and can reproduce the instructions and find new ways to perform. So, only the material ability to destroy the connecting points can eliminate the network" (Castells, 2013:23). Today, the most dominant human activities such as economic, political and cultural processes are organised around networks (Castells, 2000b).

Every network has a goal that determines the meaning and function of each of its nodes. Important nodes are called centres and the more relevant a node is to the network the stronger it is in interaction with other nodes, while the reverse is true to the point of possible expulsion when a node becomes redundant. After all, the network logic is inclusion and exclusion which results in the network having a planetary reach and affecting people everywhere while at the same time excluding most. The network, not the node, is therefore the basic unit of analysis (Castells, 2013:20). In conservation finance nodes may include conservation NGOs, ministries of governments, international organisations, business organisations and other financiers.

Networks interact with other networks in constant cooperation and competition. Competition in the global economy is organised through strategic cooperation of segments of firms, governments, non-governmental organisations and others. Protocols of communication specify the rules of communication within and between networks. Within networks, they set its acceptable rules. Between networks they are "codes of translation and inter-operability…" that facilitate interactions (Castells, 2013:20).

Important positions in networks are held by programmers and switchers (Castells, 2013). Programmers constitute the network by programing/reprogramming it according to its goals. They play a decisive role by using ideas, vision, projects and frames to generate programmes. Switchers connect the network to other networks by sharing common goals and combining resources and setting up strategic cooperation to keep off competition from other networks (Castells, 2013:45). Switchers and programmers are social actors and are often networks themselves. Together, they occupy what Castells refers to as the "space of flows." The space of flows is characteristically global and elitist, and is the space of strategic dominant activities which dominate economic, political and symbolic life through flows of capital, information, technology, organisational interaction, images, sounds and symbols (Castells, 2010a). It is a dynamic structure that typically dominates activities and people external to the networks, so that "the global overwhelms the local – unless the local

becomes connected to the global as a node in alternative global networks constructed by social movements" (Castells, 2013:26).

Four things constitute the space of flows (Castells, 2010a). First, there is technological infrastructure of information systems, telecommunications and transportation lines that facilitate interaction between networks. Secondly, there are nodes and hubs that structure connections and key activities. Nodes are sites of strategically important functions in the network while hubs are communication exchangers that coordinate smooth interaction of all elements in the network. Thirdly, there are habitats for social actors that operate the networks. These are secluded spaces or global corridors of separation that define elites as cosmopolitan and people as local (Castells, 2010a). They are also the spatial organisation of the "technocratic-financial-managerial elites" around their dominant interests and functions while disorganising interests of other groups to only fit within this dominant framework (Castells, 2010a:445). They are therefore spaces of segmentation and disorganisation. Finally, the space of flows is constituted by electronic spaces, both interactive and one-directional. It is the fundamental spatial configuration that provides material support of the network of communication.

However, "we are not in a world of pure global networks" (Castells 2000a:156). Castells also conceptualises the spatial form that is local and regional that he refers to as the "space of places." It is where most social experiences and interactions take place (Castells, 2010b). In conservation finance, these could refer to the projects to which funds are channeled and where actual conservation happens. The space of flows determines the places connected to the network and their characteristics and functions. It "redefines the meaning, structure, and culture" of the place (Castells 2010a:444), links up different places and "assign to each one of them a role and a weight in a hierarchy of wealth generation, information processing, and power making that ultimately conditions the fate of each locale" (Castells, 2010a:445). Therefore, places "do not disappear, but become integrated in international networks that link up their most dynamic sectors" (Castells, 2010a:412).

This also holds in finance as exemplified by Wall street investments banks that have worldwide presence - notwithstanding "empty offices" in some places (Ho, 2009) - yet "conduct most of their financial transactions in a limited number of them" (Inda and Rosaldo 2008:34).

Domination within and between networks depends on what Castells calls "the old question of the industrial society...and the cornerstone of classical political economy: what is value?" (Castells, 2013:29). He notes that this has always been the domain of global financial networks, but today the "truly supreme value (such as preserving our planet, our species, or else serving God's design), as a prerequisite of everything else" is a set of specific ideas (*ibid*).

This thesis operationalises the concepts of programming and switching through an analysis of WWF's public and private sector funding. The analysis traces WWF's organisational-wide public sector funding strategies through three distinct but sometimes overlapping phases, beginning with the establishment of its first organisational-wide strategy in 1998. The analysis highlights major changes in strategy and discourse, changes to WWF's internal public sector networks, and changes to connections with external networks. The analysis also takes note of external influences, WWF responses and how much income WWF received from the public and private sectors on average. This conceptual framework is also used in analysing WWF's best-funded project - the Amazon Region Protected Areas Programme (ARPA) - to exemplify how WWF carries out private sector funding based on market-based principles. The analysis covers the goal of the network, the central nodes, the connections to public and private sources of funds, and the amounts and sources of financial flows.

1.3 Methodology

This thesis begins exploratively with a thematic analysis of literature in order to answer research sub-question 1 (chapter 2). The intention was to find dominant themes within recently published academic literature on the topic of conservation finance, and from there to deduce patterns that would guide the conceptual framework for the rest of the work. 64 peer-reviewed articles were selected. Thematic analysis is a qualitative research method in which patterns (themes) within data are identified, analysed and reported (Braun and Clarke, 2006). It is highly suitable for processing data from a wide spectrum of sources with the intention of drawing out common themes (Guest et al., 2011). I conducted this process both deductively and inductively as detailed in chapter 2. The complementary usage of both inductive and deductive approaches was to enhance the understanding of the topic (Schutt, 2018).

The second stage of this thesis was informed by Manuel Castells' network analysis whose key goal is to "ground analysis in observation" by using a broad range of data sources and being context sensitive (Castells 2010a:27). The research on WWF was conducted variously: through a single case study methodology (Yin, 2018), through participant observation, document analysis and through interviews. This follows the well-established methodology of triangulation (Mathison, 1988; Murray, 1999) and was useful for attaining validation. Overall, participant observation was a key method of data collection for answering research sub-questions 2 and 3. Participant observation refers to a "a qualitative method for gathering data that involves developing a sustained relationship with people while they go about their normal activities" (Schutt, 2018:526). The researcher's role falls within a continuum of activities from complete observation with no participation with the observed, to complete participation as an overt participant (*ibid*). In total, I was based as a guest researcher at the WWF Dutch office on a part-time basis between October 2014 and June 2019, having been granted permission to execute independent scientific research by the organisation. The Dutch office is one of the top five WWF National Offices in terms

of income, represents about one sixth of all WWF supporters worldwide and enjoys more flexibility than other offices in allocating unrestricted finances. It also houses a segment of the WWF international staff. The guest researcher position gave me access to the organisation's institutional archives and staff members, at the global level. These were the main data sources for the document analysis and interviews that I conducted: 15 interviews to answer research sub-question 2 and 27 interviews to answer research sub-question 3, and a total of more than 300 documents – both internal and publicly available documents - including financial statements, presentations, reports, correspondences, white papers, minutes of meetings, strategy documents, websites and publications. I also had numerous informal conversations with staff, including those visiting the Dutch office from other WWF offices, attended several webinars, was part of the WWF-Netherlands Protected Area (PA) finance team and attended a WWF global workshop on Protected Area Finance hosted by the UK office in December 2015. Advanced drafts of two chapters were sent for review to senior WWF staff members working on public (chapter 3) and private sector (chapter 4) funding. Specific details on how each research question was addressed and analysed is discussed in the following chapters. In chapter 5, I also reflect on my positionality.

1.4 Outline of Thesis

The rest of the thesis flows as follows. Research sub-question 1 is addressed in chapter 2. Chapter 3 provides details on the structure of WWF and addresses research sub-question 2 by focusing on WWF's funding from public sources. WWF has found that their offices with a public sector strategy attracted more funding from other sources and had more influence in the institutions that drive change. However, in so doing WWF has also found itself much deeper involved with private sector financing. Chapter 4 answers sub-question 3 by looking at financing from the corporate sector.

Chapter 5 concludes this thesis by positioning the synthesised findings within cross-cutting issues that emerged throughout the study. It contributes to current debates on funding

future nature conservation and proposes an alternative way of structuring conservation networks that is grounded on historical evidence and pragmatic about the future. The chapter includes reflections on the concepts and methods used, and the context of WWF. Finally, I make recommendations for WWF and other large nature conservation organisations.

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2

CHAPTER 2.

Topical Themes in Biodiversity Financing

This chapter is under review as:

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Topical Themes in Biodiversity Financing: A Review of the Literature.

Journal of Integrative Environmental Sciences

2.0 Introduction

In biodiversity conservation there is an urgent plea for innovative, often international, market-based and experimental financing mechanisms that are intended to gradually build on or replace existing financing mechanisms emanating from governments and NGOs (Huwyler et al., 2014). In academic and grey literature these new developments are typically narrowed down to topics such as specific financial mechanisms, their combinations or comparisons (for example, Pattanayak et al., 2010; Buckley, 2010; Gockel and Gray, 2011), in specific geographical regions or ecosystems (Brockington and Scholfield, 2010; Hermoso et al., 2016; Baral and Dhungana, 2014; Bos et al., 2015), involving specific actors (Armsworth et al., 2012; Larson et al., 2016) or coming from specific academic perspectives (Ando and Shah, 2016). Fewer efforts have been made to find broader trends. Exceptions are studies that have tried to capture the scope of global financial mechanisms by classifying them according to the degree to which they are innovative or traditional, market or non-market-based, taxes, subsidies or voluntary (Emerton et al., 2006; Gutman and Davidson, 2007; Pirard and Lapeyre, 2014; Parker et al., 2012). While important details and useful information have come out of these studies, there is still much need for studies that provide broader overviews. I argue that biodiversity finance at its current stage requires moments of stepping back from the numerous efforts and discussions taking place, to keep track of key changes and major developments. In this paper, I contribute to this effort by presenting results of a thematic review of recent research on financing for biodiversity conservation to highlight dominant themes and therefrom to unveil some underlying assumptions and suggest alternative ways of investigating biodiversity finance.

Below, I first explain how I searched and reviewed recent peer reviewed literature and then provide descriptions of the three topical themes that emerged: underfunding, distribution of finances and innovative financial mechanisms. The principle finding is that the main challenge in biodiversity financing is not only underfunding but that quite often available funds do not go where they are most needed. Conservation networks play a

crucial role in determining where finances are distributed and set the agenda and activities that facilitate connections to key sources of biodiversity financing. I therefore argue that networks are at the heart of biodiversity financing. In the final sections I reflect on some network dynamics and consequences. I discuss how conservation finance networks often face mismatches between investor and conservation needs (and capacities) and provide space for agendas of powerful players outside biodiversity conservation to influence it in directions that do not prioritise conservation needs over other interests. The findings of this paper open up new ways of studying and understanding biodiversity finance that take cognisance of the complex social networks that determine how and where finances flow.

2.1 Methods

The focus of this study was on financing directed at conserving biodiversity. Using the Scopus database, I searched for papers containing the terms "biodiversity finance", the combination "conservation finance" and "biodiversity", or their variants (e.g. financing, funding, funds). Broad terms were used to avoid narrowing down to specific financial mechanisms, regions, actors or disciplines and to distil broad patterns from representative literature.

Peer reviewed papers were selected because they imply quality of research and theoretically put a check on organisational and personal biases. The search was limited to the period 2010 to 2016 to capture recent discussions. 2010 was an important year for biodiversity with the United Nations declaring it as the beginning of the Decade on Biodiversity. In both peer reviewed and grey literature, several updates on funding estimates required to sufficiently conserve biodiversity have also been done since 2010 (CreditSuisse and McKinsey, 2016; IUCN, 2012; Parker et al., 2012). This search was carried out in June 2016.

I retrieved 150 papers out of which I retained 110 peer-reviewed articles based on relevance after screening titles and abstracts. After screening full texts of these remaining

papers, I retained 64. The papers that were excluded did not focus on biodiversity or funding for biodiversity. Examples were articles focussing on climate, heritage and agricultural conservation that had no linkage to biodiversity conservation. The number of retained papers was lower than expected probably because of the choice of selecting literature using broad terms. It also indicates that academic writing on conservation finance is often specific and not broad in scope, especially in comparison to grey literature from sources such as conservation practitioners, professionals and alliances.

Using thematic analysis and assisted by Atlas.ti, I performed line-by-line coding of full texts into pre-specified codes informed by prior study of both academic and grey literature (e.g. financial mechanisms, sources of funding, targets of funding) and emerging codes (e.g. allocation, discourse, coalitions). Thematic analysis is a qualitative research method that refers to, "identifying, analysing, and reporting patterns (themes) within data" (Braun and Clarke, 2006:79). This method is well suited for processing data from a wide spectrum of sources while staying focussed on topics (Guest et al., 2011:17). After assembling and reassembling the codes into different categories and extensively reviewing the process with two other colleagues, three main themes emerged as discussed below.

2.2 Topical Themes in Biodiversity Finance

2.2.1 Underfunding

Underfunding continues to dominate recent discussions but with added gravity and specificity. Recent estimates show that the global conservation funding gap has escalated from previous calculations (e.g. James et al., 2001; Bruner et al., 2004; Emerton et al., 2006; Balmford et al., 2002) to current estimates reaching as high as 7 trillion dollars per year (Bos et al., 2015). Bos et al. (2015) argue that this is the "resultant gap" between the economic costs of environmental degradation estimated globally at $7.3 trillion USD per year and increasing (TEEB, 2013) and the available global funding for biodiversity and ecosystem services estimated between $36-38 billion USD per year (Parker and Cranford, 2010) and $51 billion USD per year (GCP 2012). New findings also emphasise that

underfunding is not just confined to developing countries, but is a problem of every country, region and ecosystem (Waldron et al., 2013). Waldron et al. (2013) concluded that underfunding is so ubiquitous that all 124 countries in their study were underfunded. The funding gap is exacerbated by an accelerating increase in habitat destruction and species extinction (Buckley et al., 2016). However, discussions on underfunding are tempered by reports showing increases in certain kinds of financing. For example rigorous studies done by Miller (2014) and Bare et al. (2015) found increases in conservation aid both globally and regionally. Miller (2014:349) even suggests that some concerns for decreased funding of international aid for conservation "may be overstated" because the proportion of global biodiversity-related aid increased in tandem with the increase of international aid between 2000-2008. Bare et al. (2015) found an increase of conservation aid to sub-Saharan Africa between 1996-2008.

Related to underfunding are concerns that data on financing of biodiversity conservation are not always available or reliable, specifically that quite often required data are not accessible, only available as aggregates, not recorded at all, or not recorded in standard ways that can be compared over time, between organisations or countries (Zentelis and Lindenmayer, 2015; Bos et al., 2015; Bare et al., 2015; Miller, 2014). Other sentiments are that not everything that should be measured is being measured, for example, willingness to pay, opportunity costs of forfeiting development for conservation, or ecosystem services (Ando and Shah, 2016). To tackle these challenges, several researchers recommend standardisation, transparency and accountability (for example, Githiru et al., 2015; Lung et al., 2014; Larson et al., 2016; Pilgrim and Bennun, 2014; Hermoso et al., 2016).

However, there is a general consensus in identifying underfunding as the main problem but not in defining it. The difficulty in defining it is evident from the wide discrepancies in measurements of the funding gap. This is not just about methodological differences (Feger and Pirard, 2011) but much more about defining adequate funding. The assumption is that

an adequate level of funding not only exists, but that it can be objectively measured and quantitatively attained.

2.2.2 Funding Distribution

A second dominant theme in the literature goes beyond discussions on the inadequacy of financing to emphasise funding distribution and allocation. To optimise limited finances, recent studies show an increase in the sophistication and detail of objective prioritisation protocols for effective conservation planning and targeting of threatened species, endangered species, species richness and their habitats (for example, see Cimon-Morin et al., 2013; Lin et al., 2014). However, in practice funding distribution remains quite inconsistent with conservation needs (Larson et al., 2016; Holmes et al., 2012).

There are many examples of this. Singapore receives significant conservation aid despite having low biodiversity needs and a relatively strong economy (Miller, 2014). EU LIFE-Nature funds privilege globally non-threatened species over 72% of globally threatened species (Hermoso et al., 2016). Northern and Central European countries with low or very low conservation needs receive high or very high funding compared to countries in southern Europe with high or very high conservation needs but low or very low funding (Lung et al., 2014; Hermoso et al., 2016). In spite of richer biodiversity, the global South attracts much less biodiversity finance than the North, with Africa, Latin America and the Caribbean, and Asia (excluding China) each receiving only 6-7% of overall biodiversity finance (Parker et al., 2012). A closer examination of where available funds end up exposes a tendency to concentrate in certain territories while ignoring others. Globally, 40% of conservation aid goes to 10 countries only (Miller, 2014) and in Africa, 63% of the aid also only goes to 10 recipient countries (Bare et al., 2015). Also, vertebrate species are preferred over plants, fungi or others and receive 80% of all funds (Hermoso et al., 2016). Developed nations generate and retain most of the finance (Larson et al., 2016; Dempsey and Suarez, 2016). This also occurs within countries. For example, a study of the distribution of financing within The Nature Conservation in the USA, shows that funds are

spent close to the regions from where they are fundraised (Larson et al., 2016). In short, spending on financing tends to occur closer to source, not need.

It therefore appears that in spite of advanced prioritisation protocols, other factors carry more significant weight in determining how financing is actually distributed. I have classified these other factors into these two broad categories: political and economic factors.

Beginning with political factors, donors seem to favour countries in which they have geo-strategic interests be they geographic, military or political (Ahrends et al., 2011; Miller, 2014). For example a bad relationship with donor countries could lead to no financing (e.g. the war between Iraq and some key donor countries), while political and national security concerns have been found to be important determinants for environmental aid allocation (e.g. by USA in Egypt and Israel) (Miller, 2014; Figaj, 2010). However, environmental aid is limited in its usefulness as a tool for advancing geostrategic interests compared to other much more effective tools such as defence, diplomacy and development (Miller, 2014; Figaj, 2010). Decisions to allocate financing is also affected by perceptions of "good governance" in a recipient country (Miller, 2014; Bagley, 2010; Bare et al., 2015). However, it is important to note that in practice these aspects are not always linked to desirable conservation outcomes as shown by Bare et al. (2015) who in their study found high democracy scores in sub-Saharan African countries were associated with increased forest loss in the short-term. They argue that this could be a symptom of "countries in the early stages of the forest transition" (experiencing land use transitions and agricultural expansion) or the result of a "peace dividend" in countries getting out of war (Bare et al., 2015:6). Also, recipient countries with higher political leverage tend to exercise greater bargaining power not only in securing more financing, but also in negotiating for conditions that favour economic development and other national priorities (Miller, 2014). Other political factors that I found include social pressure from citizenry or power relationships between key actors (Wang and Berman, 2014; Borgström et al., 2016).

On economic factors, "finance begets finance", to borrow the phrase from Ahrends et al. (2011). This means that acquired funding usually attracts additional funding so that more is given to those who have, not those who have not. An important factor that contributes to this is existing infrastructure which is linked to cost-effectiveness, accessibility and logistical feasibility. Conservation investments tend to be made in places with established road networks, field stations, institutional contacts and proximity to human populations (Ahrends et al., 2011; Ando and Shah, 2016; Hermoso et al., 2016; Gubbi, 2010). Yet the counter-effect of this is that these are also often places that are accessible to greater threats such as destructive land-uses and invasive species (Ahrends et al., 2011; Gubbi, 2010). Also, there is an inclination to target places that have been tried before by others and are therefore deemed less risky, and where there is an indication of commitment by recipients demonstrated by attracting other donors (Ahrends et al., 2011). Other economic factors that play a role in determining where finances end up are the economic leverage of a country (based on its GDP), return on biodiversity gains per dollar invested in biodiversity conservation, socio-economic factors and research niches (Larson et al., 2016). While organisations like World Bank and IMF target the least developed countries to disburse biodiversity funds, the bulk of biodiversity finance flows typically take on a "home bias" so that the greater part of it still remains in wealthier nations (Hickey and Pimm, 2011). Holmes et al. (2012: 602:602) write "there are economic, political, cultural, historical, biological, and practical reasons why current spending patterns may not align with priority sites".

2.2.3 Innovative Financial Mechanisms

The third dominant theme in the reviewed literature is innovative financial mechanisms. The main argument here is that to close the funding gap discussed above, new and additional financial mechanisms are required to supplement existing funding. Below, I elaborate on three key attempts made towards innovative financing: attracting private and

often market-based finances, finding new forms of public financing or making a new financial mechanism out of combinations of different mechanisms.

First, there is an increased emphasis on markets as new sources of private financing. In essence, this means shifting funding prioritisation from frequently used indicators based on threats to new indicators based on benefits that can be derived from the ecosystem. Payments for Ecosystem Services (PES) exemplify these endeavours. Connected to market-based mechanisms is the emergence of businesses as new players in biodiversity conservation as investors, financial experts and third party partners: as investors the expectation is straightforward, injecting private finances into biodiversity conservation (Bos et al., 2015; McFarland, 2015); as financial experts providing much needed knowledge and expertise required to manage market-based mechanisms (Bos et al., 2015; Ando and Shah, 2016; Dempsey and Suarez, 2016); and as third-party partners in ensuring transparency, accountability and high standards are maintained (Githiru et al., 2015; Little et al., 2014; Bode et al., 2011; Chow, 2015). Some also see business as the new conservationists taking over management from government, and bringing improvements in productivity and efficiency. For example, there are debates on whether better regulation and management of biodiversity and its habitats should not move away from state parastatals to joint management between business and other actors such as non-governmental organisations, tour operators, private land owners and indigenous communities (Borie et al., 2014; Whitelaw et al., 2014; Bruner et al., 2004; Rosendal and Schei, 2014). But others critically view this as shifting government responsibility to private sources (Pilgrim and Bennun 2014).

Related to markets and innovative financial mechanisms are new and increased risks, for example, the risk of underperformance of new financial mechanisms, increased uncertainties, non-permanence and poor quality projects (Githiru et al., 2015). To manage and control these risks, there are recommendations for knowledge transfer on risk management from finance theories, for example in the use of biodiversity derivatives and

insurance (Armsworth et al., 2010; Hein et al., 2013; Whitelaw et al., 2014; Little et al., 2014).

However, alliances between conservationists and businesses are impeded by "language barriers". Science is considered to have a critical role in mediating between the two by better informing, engaging and highlighting opportunities for businesses, and nurturing friendly partnerships between conservation groups and business (Bos et al., 2015; Buckley et al., 2016; Armsworth et al., 2010). The coalition between science and business introduces new forms of valuation, for example the "scientific discoveries dividend" where scientific research and discoveries, such as those producing pharmaceutical materials or identifying rare species, are quantified to give a value to the protected area (Whitelaw et al., 2014). The valuation of ecosystem services in itself is seen as a form of translation of environmental issues into "the language of politics and economics" (*ibid*).

Secondly, the reviewed literature shows how creating innovative financial mechanisms also involves finding new ways of dealing with more traditional financial mechanisms and sources, with particular reference to public finance. One way that this is being discussed is through proposals for strategic intra-governmental changes. Governments are envisioning ways of expanding biodiversity conservation beyond the traditional confinement within ministries of environment to attain a "whole-of government approach" (Adenle et al., 2015; Roe, 2013; Rosendal and Schei, 2014). Such visions are motivated in part by the Convention for Biological Diversity (CBD) through its National Biodiversity Strategy and Action plans and the World Bank through its REDD+ programme. The main focus of these new intra-governmental connections is to include ministries with greater political and financial leverage, particularly ministries of finance, planning and economics. The goal is to achieve "mainstreaming of biodiversity" by foregrounding biodiversity in governmental agenda and diversifying funding streams. An example of such a collaboration is the co-financing for biodiversity projects between the UK Department for International Development (DFID) and Department for Environment, Food and Rural Affairs (DEFRA)

(Roe, 2013). Related to these new linkages is the formulation of new policies, such as a requirement to meet additional poverty-related criteria in the DFID–DEFRA case.

Another way that traditional financial mechanisms are being renewed is through governments making connections with other governments to form new intergovernmental networks. Within the biodiversity rich global South, Adenle et al. (2015:107) predict that the "working paradigm of the future" will become the formation of new ties as the "richer South" funds the "poorer South". In addition, recent changes in aid architecture are resulting in new strategic partnerships between donor countries and players in recipient countries. Roe (2013) recommends that these new partnerships should include players from the civil society, parliamentarians and policy makers in developing countries to ensure prioritisation of biodiversity at the national level. However, where networks exist sub-nationally, as in the case of REDD+ among tropical countries, there are aspirations to strengthen national networks for greater success (Lin et al., 2014). New linkages have also been seen in the case of supra-governmental initiatives such as the European Union Habitats Directive for the Natura 2000 network.

Lastly, the reviewed literature also shows that forming innovative financial mechanisms involves new combinations of financial mechanisms. For example, a mechanism often referred to as innovative, PES, is used generically to include a plethora of financing mechanisms depending upon the definition adopted for it. The extent of the mix therefore varies from author to author. Some authors categorise REDD+ as PES mechanisms, for example Hein et al. (2013) who use the widely adopted definition from Wunder (2005), while others consider REDD+ as distinct from PES (Loft, 2011; Rosendal and Schei, 2014; Stadler, 2011). By limiting the definition of PES to benefits to humans, others include tourism but exclude environmental mortgages and derivatives (Cimon-Morin et al., 2013; Whitelaw et al., 2014). These kind of PES mixtures have been referred to elsewhere as PES bundling (Wendland et al., 2010).

2.3 Discussion

The starting point of most of the 64 papers analysed in this review was predominantly lack of adequate finances for biodiversity conservation, but deeper analyses show that quite often available funds are not spent where they are most needed. Biodiversity conservation financing is not unique in this respect. For example, Harrigan and Wang (2011:1291) also found a 'bandwagon' effect in aid allocation, that is, aid from a donor may also attract more aid from other donors. Proposals for better targeting of available finances advocate for increased measurement, standardisation, objectivity and efficiency. However, in practice economic and political relationships seem to play a much stronger role in determining where biodiversity finance is spent. Conservation networks are important for understanding financial flows (Brockington and Scholfield, 2010). Recent studies show an increase in the formation of new conservation networks between states, markets and civil society (Corson, 2010; MacDonald, 2010; Igoe et al., 2010). As networks change, so do the patterns of pooling, mixing and directing financial flows. By following the 'patterns and processes by which money flows into, out of, and around a protected area [for example]... it becomes clear that the "problem" is not simply "there's not enough," although quantity is certainly part of the story' (Johnson, 2009:713). Below I explain three dynamics of networking within biodiversity finance that come out of my findings and reflect on other considerations.

First, I argue that the three topical themes discussed above are linked to the main global agenda and activities that facilitate connection to key sources of biodiversity financing. Underfunding and subsequently the themes of efficient use of available funds and innovative ways of finding new and additional finances reflect, in one form or another, the funding goals and missions of the central nodes in the global biodiversity network (defined here as the nodes that enjoy high connectivity and volumes of financial flows). These include the CBD (see the Aichi biodiversity targets), UNEP (through the Biodiversity Finance Initiative), World Bank (via Global Environmental Facility) and well-funded international conservation NGOs (The Nature Conservancy, World Wide Fund for Nature, Wildlife

Conservation Society, Conservation International). For example, the championing of market-based instruments, particularly PES, is dominant in the Resource Mobilisation Strategy agreed on at the Nagoya conference (COP10) as a key funding source for biodiversity conservation. PES is also among CBD's top list of innovative financial mechanisms that are backed by The Organisation for Economic Co-operation and Development (OECD, 2013). MacDonald (2018) further explains how market-based mechanisms are institutionalised through events, such as the World Conservation Congress, that convene dominant actors.

Secondly, the overriding goal of attaining new and additional financing is carried out by forming strategic linkages to dominant public and private finance networks. I mentioned above new intra- and intergovernmental networks and new networks with business. Perhaps the most championed mechanisms in these new networks are PES and market-based mechanisms, but attempts to form both face difficulties. For example, the bundling of PES often involves funding from traditional sources like the government and World Bank but is still predominantly discussed as a market mechanism. This has raised criticism from others who call it a "subsidy in disguise" that has "little to do with markets" (Fletcher and Breitling, 2012; Pilgrim and Bennun, 2014). In spite of much discussion about market-based mechanisms in practice they have shown poor performance in attracting financing (Dempsey and Suarez, 2016), confirming earlier predictions that public and not private and market-based financing will continue to be the mainstay of financing, especially in the tropics (Balmford and Whitten, 2003). While some do not expect the flows of finances through PES to close the gap in biodiversity funding, others point out that they open up new funding sources and, as seen in Costa Rica, can significantly increase domestic funding (Rosendal and Schei, 2014; Hein et al., 2013). In general, investors have cited lack of "bankable projects" as a key impediment to investing in biodiversity conservation. Through a survey of 128 investors in conservation, Ecosystem Marketplace found USD3.1 billion undeployed at the end of 2015 due to lack of deals (Hamrick, 2016:ix). Surprisingly, I did not find any papers addressing blended finance though the topic is extensively discussed

in practice often to describe the use of public finance to leverage private finances (see European Commission, 2012). An idea behind blended finance is that public funds can be used to cushion and de-risk biodiversity investments especially at the initial stages of the project, thereby providing an incentive for private investor involvement. This trend of linking public and private financing mechanisms and sources of finance is not unique to biodiversity conservation but is also reflected in other domains such as climate change and international development, incidentally both being targeted sources for additional biodiversity finance.

Finally, the new linkages discussed above sometimes happen between disparate networks necessitating protocols of communication. One major incongruence occurs in the identification and valuation of biodiversity, as also noted by the Natural Capital Coalition[7]:

> "When it comes to valuing the natural world, biodiversity has always been a thorny issue. It is a key component of natural capital 'stock'... However, when it comes to quantifying [its] values, biodiversity is often a major challenge..."

Specifically, the findings above include recommendations for science to play the role of mediation and translation between conservation and business networks. Terms such as "Natural Capital" and "Ecosystem Services" exemplify scientifically backed efforts to tackle the above issue using protocols advocated by conservation networks such as The Economics of Ecosystems and Biodiversity (TEEB) and Natural Capital Coalition. Underlying these terms are efforts to deal with concerns over data availability, accessibility, reliability and completeness, and discords in methodologies and definitions. The idea is to increase transparency, quantification and standardisation i.e. to make conservation more efficient and business-like. I also found a growing shift in biodiversity discourses towards benefits that can be accrued from an ecosystem service and the expected returns that can be made from investments. This would potentially drive financial flows towards marketable ecosystem services and further away from biodiversity threats. For example, PES flows

[7] https://naturalcapitalcoalition.org/projects/biodiversity/

would bypass high-biodiversity ecosystems that are not economically profitable but reach new recipients such as landowners and indigenous communities (Hein et al., 2013; Rosendal and Schei, 2014).

2.3.1 Considerations

I now turn to some considerations that arise from the above dynamics. To begin with, while the intention for connecting biodiversity conservation to dominant networks in public and private finance is to inject new and additional financing for conservation, other intended and unintended flows will also be transferred between the networks. This can be seen in the recommendations for more standardisation, measurements and transparency; objectivity and quantification becoming the ideal. Perhaps this is because objectivity is seen to represent neutrality, or probably because this is the language of the new entrant into conservation – businesses and markets. However, these recommendations overlook the additional costs that would be involved and that in practice private financial investors are themselves also reluctant to self-disclosure (Klimpel et al., 2017). In addition, business measurements are not necessarily commensurate with conservation measurements. This emphasis on objectivity and neutrality overlooks the "exercise of power...[in making] critical choices about what to measure and how" (Turnhout et al., 2014:583). Also, by "narrowly revolving around the problem of lacked capital' it produces a 'depoliticized formulation of biodiversity loss" (Dempsey and Suarez, 2016:665).

In addition, transparency is increasingly difficult to attain when mixed financial flows are involved. Financial flows then become even harder to trace, raising the question about long-term effectiveness if they cannot be specifically attributed to on-the-ground biodiversity protection (Borie et al., 2014; Bruner et al., 2004). Already a key difficulty in analysing biodiversity finances arises from the challenge of unbundling funds, for example distinguishing "pure" conservation funds from development funds (Brockington and Scholfield, 2010). Should it even be possible to disentangle mixed flows if the combination proves ineffective in practice, then serious consideration should be given to the impact this

would have, for example, on local livelihoods if biodiversity funding is disentangled from developmental aid.

With a growing diversification of networks linking to biodiversity financing, another key challenge is in attaining standardisation and accountability. A case in point is in South-to-South funding where transfers occur within biodiversity rich countries bypassing the financially richer North (Adenle et al., 2015; Borie et al., 2014). South-to-South cooperation is already occurring in Development both bilaterally (e.g. Azerbaijan, Brazil, China, India, Korea, Kuwait, Singapore and South Africa) and multilaterally (e.g. ASEAN+3 bank, BRICS bank and the Eurasian Development Bank). South-to-South cooperation has been found to change the rules of the game in development aid allocation, notably by erasing neo-colonial interferences in the form of stringent rules about good governance and accountability (Mawdsley, 2012). It has therefore been blamed for supporting "rogue states" and fuelling corruption (Woods, 2008).

Further, prioritising biodiversity by connecting to more dominant networks may prove counterproductive if they result in diluting the biodiversity agenda. Mainstreaming of biodiversity in government could lead to abrogating the conservation responsibilities of environment ministries (Adenle et al., 2015; Pilgrim and Bennun, 2014). Also, incorporating biodiversity financing within mechanisms that focus on issues that attract more attention like poverty or carbon, exposes biodiversity to the risk of marginalisation as has been seen in developmental aid and REDD+.

2.4 Conclusion

Three topical themes recurred in the 64 papers I analysed for recent discussions on biodiversity financing: underfunding, ineffective funding distribution and seeking innovative financial mechanisms. These also represent the main agenda and activities of dominant biodiversity conservation networks. The process of forming strategic alliances with dominant economic, political and social players has opened up new avenues for

thinking up innovative financial mechanisms, although some of these efforts do not appear to go beyond repackaging. An analysis of these new networks has also exposed a mismatch between investor and conservation needs (and capacities) and provided space for agendas of powerful new players in the network to influence biodiversity conservation in directions that might further exacerbate the existing problem of not prioritising conservation needs in allocating available funds.

I also conclude that the focus on underfunding of biodiversity financing can lead to a depoliticising effect as shown by aspirations to achieve greater "objectivity" through better measurements, standardisation, transparency and accountability. However, in practice finances do not necessarily follow objectivity but are driven by networks along economic and political lines, among others. My suggestion for future research is to trace biodiversity financial flows through new networks within different ministries of government, through new South-to-South cooperation, and through new networks between traditional and emergent actors. In addition, a topical issue that did not feature in the papers I reviewed, but which I think needs attention, is blended finance.

Finally I call for more interrogation of underlying assumptions that dominate academic discussions about biodiversity financing. After all, whether underfunding, political will to act or weak institutional arrangements, "whichever threat is conceived most pressing, there is a shortage of time in which to act, an immensity of tasks to accomplish, and the absolute necessity of taking precautionary action to prevent the very worst" (Goede and Randalls, 2009:859).

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3

CHAPTER 3.

Funding for Nature Conservation: A Study of Public Finance Networks at World Wide Fund for Nature (WWF)

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3.0 Introduction

Over the last decades, sources of finance for nature conservation organisations and their projects have changed considerably (Gutman and Davidson 2007; McFarland 2015). Where conservation organisations were traditionally funded by public funding sources, the portfolio of those public funding sources now also includes private sector actors (Credit Suisse et al. 2014). In the pursuit of new financing sources critical to fight biodiversity and ecosystem loss, nature conservation organisations increasingly aim to create networks between states, markets and civil society (Bottema and Bush 2012; Chapin 2004; Duffy 2008; Holmes 2010 and 2012; MacDonald 2010a, b; Tedesco 2015).

Broadly speaking, academic literature on funding for conservation oscillates between focussing on efficiency on the one hand (Armsworth et al. 2012; Bennett et al. 2015; Bos et al. 2015; Larson et al. 2016; Miller et al. 2013) and taking a critical stance on conservation networks on the other hand (Büscher et al. 2014; Corson 2010; Kay 2018). The efficiency-focussed literature is primarily concerned with optimising funding, for example by looking into the efficiency of conservation organisations, the workings of financial mechanisms or the institutional and local contexts within which conservation occurs. The critical stance views conservation networks as largely problematic and fundamentally forged for the purpose of appropriation of value from nature as a mode of capitalistic expansion and accumulation (Büscher et al. 2014; Igoe et al. 2010; MacDonald 2010b; Sullivan 2013).

In general, both sets of literature place conservation NGOs, particularly the largest international ones, at the centre of their discussions (Armsworth et al. 2012; Igoe and Brockington 2007). Significant flows of funding for conservation are traced in the networks of these large NGOs (Brockington and Scholfield 2010; Duffy 2008; Holmes 2010; Igoe and Brockington 2007; MacDonald 2010b). The social sciences have scarcely utilised network conceptualisations to analyse these networks and related financial flows in detail.

We intend to move beyond both approaches by using the network theory postulated by Manuel Castells who has used his perspective to analyse a wide spectrum of global phenomena including financial markets, foreign direct investments, organisational transformations, supra national organisations, global media networks and the global criminal economy (Castells 2000b, 2009, 2010). We argue that a more detailed understanding of the networking activities of conservation organisations offers a perspective that is more congruent with the reality in which they operate, as well as a more nuanced perspective on why changes happen.

This paper therefore aims at understanding how large conservation NGOs utilise networking in their pursuit for funding. Specifically, we examine shifts in public finance networks at WWF since 2010. WWF (globally known as World Wide Fund for Nature and in the USA, as the World Wildlife Fund) was established in 1961, making it one of the most longstanding conservation organisations in the world today. In this paper we use the WWF acronym to refer to the organisation at the global level, unless otherwise stated. In the period covered in this study, WWF operated in more than 100 countries on five continents and had about 5 million supporters worldwide (PSP Manual 2014). It is one of the best-funded conservation organisations in the world; its global income in 2017 stood at €721M (Worldwide Overview FY17). Since 2010, public sector financing has constituted slightly under 20% of WWF's total income, second only to income from individuals (excluding major donors) and small donors that constitute approximately 40% of the total income (Worldwide Overviews FY2010-2017). The third highest income comes from corporations (roughly 12%). Other sources of income include legacies and bequests (~10%), foundations (~9%), and others. It is clear that despite the growing attention for private sector funding (Hamrick 2016), public funding remains an important source of finance for WWF. WWF has found that their offices with a public sector finance strategy "bring in five times more funding than those that don't – and have a much greater influence on the institutions that drive change" (PSP Manual 2014:26). We therefore analyse how WWF has used networking in public finance to expand and influence conservation financing.

In the next section, we first explain the concept of networking and how we operationalised it in this study. We then briefly mention how WWF organises itself as a network organisation. This is followed by a detailed description of how the public finance function of WWF underwent major changes in its goals, strategies, structure, partnerships and discourse over time. We use our findings to discuss how networking has developed within the organisation and reflect on what this means for conservation financing in general.

3.1 Conceptualising Networking

Network theories have been in use for many years in the social sciences, for example economic network analysis for the study of economic phenomena (Freeman 2004), actor-network theory for understanding the socio-material make-up of societal phenomena (Latour 2005) and social network analysis for understanding social ties and interactions (Granovetter 1983). Manuel Castells advances and deviates from these network theories by emphasising that networks are at the core of a significant shift in societal organisation that has altered social structure so fundamentally that we have entered a new type of society that he refers to as "the network society". The network society is characterised by dramatic technological and informational developments at the turn of this millennium. In his famous trilogy, "*The Information Age: Economy, Society, and Culture*" (Castells 2000b), he extensively uses examples from global finance to explain new connections between the state, business and civil society. He argues that the most dominant economic, political and cultural processes are organised around networks.

According to Castells a network is a set of interconnected nodes. What constitutes a node depends on the context. The more relevant a node is to the network, the stronger it is in interaction with other nodes. The reverse is true to the point of possible expulsion when a node becomes redundant. After all, the network operates on the logic of inclusion and exclusion. Networks are enabled by expanding information and communication technology which results in the network having a planetary reach and affecting people everywhere,

while at the same time excluding most. The network, not the node, is therefore the basic unit of analysis (Castells 2009:20).

Networking as used in our analysis refers to what Castells (2009) explains as network-making power. It is a new form of domination and determination that operates under two main mechanisms: programming and switching. Programming is the ability to "constitute network(s), and to program/reprogram the network(s) in terms of the goals assigned to the networks" while switching is "the ability to connect and ensure cooperation of different networks by sharing common goals and combining resources, while fending off competition from other networks by setting up strategic cooperation" (Castells 2009:45). Programming is done by programmers and switching by switchers, both being social actors that hold important sites of strategically important functions (Castells 2009). Programmers play a decisive role by using ideas, vision, projects and frames to generate programmes. Switchers take "control of the connecting points between various strategic networks" (Castells 2009:46). Networks interact with other networks in constant competition and cooperation. Competition in the global economy is organised through strategic cooperation of segments of firms, governments, non-governmental organisations and others. Cooperation between networks is facilitated by the ability to communicate, what Castells refers to as protocols of communication (Castells 2009:20). These are rules of interaction that specify codes of translation and inter-operability. Castells refers to the space in which programmers and switchers operate as "the space of flows" (Castells 2000b).

The space of flows is characteristically global and elitist. It is the space of strategic activities that dominate economic, political and symbolic life through flows of capital, information, technology, images, sounds and symbols (Castells 2000b:442). It is a dynamic structure that typically controls activities and people external to the networks, so that "the global overwhelms the local..." (Castells 2009:26). It determines the places connected to the networks and assigns each place with "a role and a weight in a hierarchy of wealth generation, information processing, and power making that ultimately conditions the fate

of each locale" (Castells 2000b:445). Places therefore "become integrated in international networks that link up their most dynamic sectors" (Castells 2000b:412). Conversely, Castells describes the space that is local and regional, where most social experiences and interactions take place, as "the space of places" (Castells 2000b).

3.2 Methods

A key goal of Manuel Castells' network analysis is to "ground analysis in observation" by using a broad range of data sources and being context sensitive (Castells 2000b:25-27). In this study we deployed a single case study methodology (Yin, 2018) of the Public Sector Partnerships (PSP), a global network of WWF. To gain access we used the WWF Netherlands office as an entry point. The Dutch office is one of the top five WWF National Offices in terms of income, represents about a sixth of all WWF supporters worldwide and enjoys more flexibility than other offices in allocating unrestricted finances. It also houses a segment of the WWF international staff. Between October 2014 and May 2018, the first author was based as a guest at the WWF Dutch office on a part-time basis and granted permission to execute independent scientific research. During that period she followed the work of a team exploring global Protected Area financing and attended numerous meetings, including web-based video conferences, presentations by international WWF staff members visiting the Dutch office, a WWF global workshop on Protected Area Finance hosted by the UK office in December 2015, and three web-based conferences related to this last workshop. She also had numerous informal conversations with staff members. The other two authors were never located at WWF. This enabled the collection of data within a real-life context (Yin, 2018) and to get an insider-outsider balance recognising that "insiders have special advantages" (Kemmis et al. 2014:5), while at the same time creating distance to avoid researcher bias (Verschuren 2003).

We also carried out document analysis of about 260 documents. These documents were collected from WWF files - mostly from the PSP intranet site - and from staff. The data included, amongst others, minutes of meetings, strategy documents, correspondences,

white papers, presentations, reports, financial statements and publications. With the help of Atlas.ti, we followed the standard qualitative analysis method of deductive coding. We read through the documents coding fragments using labels such as goals/strategies, internal nodes/networks, external nodes/networks, connections, financial, role, discourse and flows. Later we analysed and sorted these codes into two main categories: programming and switching. We also conducted 15 interviews which were recorded and which resulted in detailed notes. The interviewees were WWF staff and external consultants, working on PSP financing, fundraising, accounting and programmes. Initially the interviews were used to orientate us to the organisation and PSP, but they also assisted in filling in gaps and in confirming our findings. The trustworthiness (Decrop 2004) of this research approach and the resulting data was safeguarded by the engagement of the first author with this case, credibility was enhanced by systematic and transparent data analysis with tangible products (transcripts, codebook, coded transcripts), and joint analysis of the various data sources (interviews, documents and observation notes) provided validation through triangulation. Finally, an advanced draft of this paper was reviewed by a senior WWF staff member who had worked with PSP for several years. We considered the comments; however, the interpretation of the results is wholly ours. As such, our analysis and the conclusions drawn in the paper do not represent the official position of WWF.

3.3 Findings

3.3.1 WWF as a Network

WWF describes itself as a network organisation. Its composition and structure is dynamic, and our description below is based on the period corresponding to the data collection (2014-2018), and not to more recent organisational changes.

At the time of our research WWF was composed of about 30 National Offices (NOs) and 27 Programme offices (POs)[8]. The National Offices were independent legal entities, each with

[8] Please be informed that since October 2018 these numbers increased to 34 NOs and 35 POs and are currently referred to as Country and Regional offices, respectively.

their own independent (Supervisory) Board. They were subject to the national regulatory frameworks within which they operated. The top 10 National offices contributed about 75% of WWF's gross global income, with approximately a fifth of this income coming from the WWF US office alone (WWF Network Performance 2013). The Programme offices operated under the auspices of WWF-International and WWF-USA. They constituted the local WWF offices mostly in biodiverse rich developing countries. They were partly dependent on National Offices and National Offices' networks for funding because often they were unable to raise sufficient funds in their own countries or regions. This funding was often restricted and short-term, posing their biggest internal challenge. They were mainly funded by the WWF National offices, but under the management of WWF International or WWF US offices. Their main function was to implement the WWF mission in countries and regions where there was no National Office presence. They were also considered "incubators" for new National Offices, as seen in Brazil, Indonesia and Russia (Programme offices in the WWF Network 2010:19). In 2012 funding from external sources grew the fastest in WWF offices situated in Brazil, Russia, India and China (BRIC countries), marking a 25% increase (WWF Network Performance 2013).

At the global level, WWF had four key governing bodies: The Council, the Assembly, the International Board of Trustees and the Network Executive Team (NET hereafter). The Council members, consisting of the chairs and presidents of all the WWF National Offices, drove and championed the global agenda and appointed and advised the International Board directly. The Assembly was composed of CEOs and Programme Office representatives of all WWF offices. They were deeply consulted by the NET and together contributed and developed WWF's global strategies. They appointed NET members and provided annual feedback on NET's performance. The NET and the International Board constituted the two main decision making bodies. The NET reported to the International Board. It developed WWF's long term strategies for approval by the International Board. NET members were selected through a voting process and consisted of the Director General (chair), four members from top contributing NO offices, one representative from Africa,

Asia-Pacific, Latin America and the Caribbean (3 in total), and two representatives elected from the Assembly. The International Board was the highest governance body in WWF and was composed of 13 members. They set WWF's broad direction and conducted careful stewardship of the WWF brand. They also oversaw WWF International, WWF's global secretariat office. WWF has no headquarters.

WWF begun to structurally work with public finance in 1988 with the formation of a forum that was internally referred to as GAA (Governments and Aid Agencies) and as Public Sector Partnerships (PSP) since 2010. In spite of the name change, the core structure of GAA and PSP has remained largely the same although their specific composition and strategies have changed over time, as shown below.

3.3.2 Networking

In order to trace how networking for public finance at WWF has evolved over time, we have identified three major programmes (see Table 1 below). These programmes do not represent clearly distinct categorisations nor sequences, but broad, sometimes simultaneously occurring strategies that emerged out of the findings.

Table 1: Summary of Three Programmes of WWF's Public Finance Networking

	Connecting conservation to international development funding	**Mainstreaming the environment**	**Deeper engagement with the private sector**
Key programme	Increasing income to WWF only	Influencing and leveraging public finance flows for global conservation	Leveraging private funds using public funds
Key switchers	GAA Focal Points GAA Centre of Development	- PSP Focal Points & Focal Points coalitions - PSP Centre of Development	- PSP Focal Points & Focal Points coalitions - PSP Centre of Development - PSFI - Other WWF forums e.g. Landscape Finance Lab
Key nodes	Governments (mostly ministries of environment) and Aid Agencies	- All of government (especially ministries of finance and planning) - Climate change - "Security"-based issues - Emerging economies	Public and private funds
Key financial flows	International aid	Public funds	Loans and grants
Annual income from public sector (2 years after new strategy)	2008: €77m	2012: €112m	2016: €132m
Annual income from corporate sector (2 years after new strategy)	2008: €43m	2012: €62m	2016: €62m

3.3.2.1 Connecting Conservation to International Development Funding

Since 1990 conservation organisations have faced a sharp decline in conservation funding that prompted them to re-strategise on fundraising (Chapin 2004). WWF programmed a GAA strategy which was formally established in 1998 (individual country offices already had a strategy prior to this). The main goal of GAA's new strategy was to increase WWF income by attracting public funds from governments and aid agencies to finance WWF conservation projects (Network Strategy for PSP Engagement 2011-2015). The focus was on saving a specific population of an endangered species and their habitats (Timeline of

WWF's conservation achievements 2011), with special attention to forests and local communities. In 2006 the GAA strategy was reprogrammed and its goal became to increase GAA support, both policies and funds, for WWF global conservation priorities through strategic engagement, policy dialogue and quality management. WWF was concerned that although the total surface area under conservation had grown over 60% between 1992 and 2006, financial commitments from national and international sources to effectively implement this growth had been sluggish, resulting in "paper parks" (Gutman and Davidson 2007).

Essentially, the WWF public finance network included switchers made up of an internal community of practice of GAA staff members from different offices targeting governments and aid agencies for financing. The core of this GAA staff were GAA Focal points, the GAA Centre of Development and the GAA Management Team. GAA Focal points were the key switchers within the organisation and were located in what was referred to as Focal Point offices. They were responsible for making and managing relationships with bilateral donors in their own countries. All Focal Points staff were located in high income OECD (The Organisation for Economic Co-operation and Development) countries, which were also the sites of WWF NOs. OECD countries include the largest funders of international aid. Focal offices for multilateral donors were strategically located in close proximity to the headquarters of multilateral donors. For example, the WWF-European Policy Office is located in Brussels where the European Commission sits while WWF-US has an office in Washington where the US government, World Bank and the Global Environment Facility (GEF) reside. Focal points also acted as gate-keepers between WWF and its key donors. Every WWF office was expected to engage in prior consultation with the relevant focal point before contacting decentralised delegations or embassies of donors in their respective country, and hence before, for example, having any dialogue on policy or submitting a funding proposal. They were also expected to keep the focal point constantly updated on both discussions and intentions. Focal points also aimed at coordinating the relationship

between a donor's central office and its decentralised offices by playing a "value-added advisory role with the GAA" (GAA Manual:11).

The GAA Centre of Development (CoD) was central to the WWF public finance network both in programming and switching. As a programmer, the GAA CoD developed common strategies, practices, standards and work programmes. It was situated in the WWF secretariat in Gland, Switzerland where it also operated as the GAA hub, creating communication platforms, events and organising shared learning. It also had a Business Plan that was updated on a regular basis to guide the organisation in implementing the GAA Strategy. As a switcher, the GAA CoD also coordinated the GAA function across WWF and aimed at building the capacity of WWF to implement organisation wide efforts to engage with governments and aid agencies. It sponsored and supported collaborative efforts, including those made in developing new partnerships.

The GAA Management Team – managing and supporting all GAA staff - served as the steering group for GAA CoD and provided "overall guidance, coordination, facilitation, oversight and monitoring of progress on the implementation" of the WWF GAA Strategy (GAA Manual 2010:14). This team had 9 members, mostly from OECD countries. In addition, others could be invited to Management Team meetings on an ad hoc basis to make specific contributions.

In order to increase global public finance within WWF, GAA largely targeted Official Development Assistance (ODA). ODA funds operated on the nexus of development and environment, influencing WWF to pay special attention to people and nature conservation through its knowledge and expertise. Typically, by functioning as a switcher, WWF was at the same time both recipient and donor. GAAs focus was on connecting to key donors through staff members located in offices in close proximity, for the purpose of increasing grants that would go into conservation projects targeting specific species and their habitats. The networks were simple and more-or-less straightforward.

3.3.2.2 Mainstreaming the Environment

Around 2010, WWF shifted its programme to influencing and leveraging public finance flows, rather than merely increasing income. It was marked by a name change from GAA to PSP (Public Sector Partnerships) in 2010 and a new objective to increase the effectiveness and impact of WWF's strategic engagement with the Public Sector Finance architecture and institutions, "... thereby improving WWF's ability to influence and guide [Public Sector Finance] institutions, policy and financing decisions in support of WWF's mission" (Network Strategy for PSP Engagement 2011-2015:2). The idea behind this was that policy guides budgets and by influencing governments to foreground the environment in their development agendas, there would be bigger budgets for the environment in general and subsequently for WWF's conservation priorities. WWF therefore saw its role as influencer, and related as a knowledge and technical expert, capacity builder, technical assistant, think tank and disseminator of lessons (PSP Induction course 2014; PSP Manual 2014). In other words, WWF programming involved influencing goals within and beyond conservation networks using information, knowledge and expertise as part of an ambitious agenda for global conservation.

However, WWF itself also increasingly became prone to being programmed by networks both within and external to conservation networks, transforming the goals, strategies and structure of WWF itself.

First, environmental mainstreaming - by integrating environmental issues in all governmental and societal sectors - became a dominant discourse not only in development organisations but also in conservation organisations. PSP invited the International Institute for Environment and Development (IIED) and the UK Department for International Development (DfID) to share on the topic during the 2010 PSP Focal Points Forum held in the UK. In response to this discourse, donors such as the Asian Development Bank begun to demand environmental mainstreaming to be included in WWF proposals. Mainstreaming the environment was also at the core of WWFs new strategy mentioned above and implied

linking conservation to, for example, poverty, climate change and ecosystem based adaptation so as to redirect financial flows to conservation priorities. Obviously, this called for collaboration by forming partnerships and coalitions by exchanging information, finding consensus points and overlapping agendas. WWF understood that these collaborations would not only mean sharing work but also sharing results with others. Mainstreaming also led to discussions on upscaling, that is, shifting from projects to programmes, and to broader regional, sub-regional and systemic aspects of biodiversity conservation.

The second contextual change came through the Paris Declaration on Aid Effectiveness (revised in Accra 2008). Essentially this international agreement sought a restructuring of the aid architecture and a reprioritisation of goals and actors. It advocated for developing countries to determine their own development priorities and for donor countries to align with these. ODA funding would therefore flow through recipient countries' national systems and local mechanisms. This threatened to bypass WWF NOs and would rapidly exclude many external NGOs, such as WWF POs, that did not have full legal status or accountability to local national governance, thus excluding them from international aid, WWF's traditional source of financing (Discussion Paper on Eligibility to PSP Funding 2012). In retrospect, this threat did not materialise financially for WWF, and the eligibility of POs for ODA from the EU has only occasionally been an issue. However, it significantly influenced the composition of PSP and the positioning of WWF POs, as discussed below.

The third contextual change was the rise of funding from emerging economies and the idea of economic convergence i.e. that economic growth in developing countries was catching up with developed countries (Andrey and Julia 2014; Islam 2003). This meant that WWF's Programme Offices and other projects, especially in Brazil, China, Russia and India, were now located in countries with the potential to change from recipients to donors, albeit under new funding rules and greater emphasis on economic development (PSP Manual 2014).

Together with diminishing ODA funds, these changes influenced both WWF's public finance network composition and switching tactics. First, some of WWF's Programme offices located in developing countries, and particularly those located in BRIC countries or graduated low middle income economies, increasingly became important nodes in the internal networks with some being promoted to National Office status, for example WWF-Kenya. These countries were connected to PSP by PSP coordinators (previously GAA coordinators) who worked as liaison persons between the PO field offices and the donating NOs, or local government and aid agency donors. The new PSP strategy brought about a significant strategic change in direction, from soliciting donors to influencing recipient countries who in turn would influence donors.

Second, these changes caused a realignment of switchers within WWF and a forging of new multi-sector partnerships with conservation and development partners. In the words of a WWF staff member, it was about engaging *"with policy makers outside the conservation/environment ghetto"*, particularly with decision makers such as Heads of State, Prime Ministers' offices, Ministries of Finance and Planning. WWF also sought strategic engagement with networks from at least four main domains: international development (not limited to environment), climate change, "security"-based issues (such as stability, risk management, food, water, natural resources, ecosystem services) and emerging economies. The following two examples illustrate new connections of WWF within and outside of conservation networks.

Within conservation networks, WWF positioned itself strategically by becoming one of the 18 GEF agencies, which include regional and multilateral development banks and UN Agencies (e.g. UNDP, UNEP). WWF has a long history of working with GEF, having been actively involved in the negotiations leading to its establishment in 1992 and participating in more than 100 GEF programmes and projects thereafter. This new position of WWF as a GEF Agency was the result of years of lobbying by both WWF-US and WWF International offices, to allow NGOs to be included as agencies. The new NGO agencies would be

specifically referred to as GEF Project Agencies. On behalf of WWF, WWF-US became the first GEF Project Agency. It created a GEF Agency Management Unit that worked with and coordinated other WWF offices on GEF projects. For WWF, being a GEF Agency meant at least three new things: 1) WWF would have direct access to GEF funds, 2) it would work directly with governments and international bodies to co-design and implement GEF projects that are in line with national strategies and 3) it could create larger WWF programmes encompassing several countries. In WWF's words it meant "our ability to connect partners at all levels and effect global change has increased dramatically" (WWF US Annual Report 2014:5). Besides being a GEF Agency, WWF also began to work more closely with other GEF Implementing agencies, for example, by positioning a WWF team within Asian Development Bank's headquarters in Manila.

The second example is about WWF's new networks related to climate change. Within WWF it was felt that climate change was overriding environment and that it was imperative to be strongly positioned in climate change networks. In 2015, WWF's Network Executive Team (NET) decided that WWF should seek accreditation as an International Implementing Entity of the Green Climate Fund (GCF) in the same manner that the organisation had acquired GEF Agency status. GCF is a financial mechanism established under the United Nations Framework Convention on Climate Change (UNFCCC) to counter climate change in developing countries. Its Accredited Entities "carry out a range of activities that usually include the development of funding proposals and the management and monitoring of projects and programmes" that deal with climate change adaption and mitigation (UNFCCC website). They also act as conduits through which GCF channels resources. WWF-US applied and in 2016 was approved as an Accredited Entity (AE) of the GCF on behalf of WWF. A WWF-wide GCF Steering Committee was established by the NET initially with 8 members representing the offices in Asia, Africa, US, Korea, Latin America, Europe, the International Office and a staff member working on Climate Change. This was an interim team because WWF was undergoing network reorganisations at that time. South Korea was included in the membership because the GCF headquarters is located near Seoul. The

NET strongly recommended that the team be chaired by a representative from a developing country. GCF funds are accessible through multiple entities simultaneously and WWF offices were free to request funding from other GCF Accredited Entities so long as they kept the WWF-GCF Steering Committee informed. The WWF-GCF and WWF-GEF Steering Committees hold joint meetings, including sharing online platforms.

To summarise, PSP became more outward looking as WWF realised that influencing and accessing the main (multilateral) funding agencies would be more effective than targeting bilateral aid channels only. It's programme changed in three significant ways. First, WWF increasingly aimed at increasing income for global conservation instead of only seeking its own income. Second, it not only targeted ministries of environment but all of government through powerful ministries that control budgets and policy. Third, WWF was seeking large scale projects and programmes and discouraging the acquisition of small funds. At the same time WWF strategically positioned itself as a significant switcher both within and outside conservation networks and thereby building its influence on global conservation financing.

3.3.2.3 Deeper Private Sector Engagement

Since its inception WWF has worked with corporate sector players. For example, in the 1970s it created the Club of 1001 to build a US$10 million fund, in the 1980s it was actively involved with the corporate sector in promoting the Sustainable Development discourse and during both Earth Summits in Rio de Janeiro in 1992 and ten years later in Johannesburg it was also an active participant in establishing private sector engagement (MacDonald 2010a). However, it was only from 2010 that PSP begun to structurally engage with private sector financing. In 2014, the PSP strategy was reformulated and its strategic goal emphasised using public funds to influence and leverage finance, including private finance.

A major trigger for this new engagement was the emergence of new actors and the dwindling of traditional ones. On the one hand, BRIC and graduated low middle income countries were rising up as new actors and potential financiers of environmental conservation. New bilaterals would include countries such as Azerbaijan, Brazil, China, India, Korea, Kuwait, Singapore and South Africa and new multilaterals were ASEAN+3 bank, BRICS bank, and the Eurasian Development Bank. The dominant discourse within this new group of players was economic growth, with a special focus on infrastructural development. As such, private sector businesses were key partners. On the other hand, traditional public financing through ODA was decreasing particularly following the 2008/9 financial crisis. In many developing countries foreign direct investment surpassed international aid. At the same time the graduation of poor countries to low middle income status made them ineligible for aid.

There was also direct pressure from some of WWF's partners. For example the French Development Agency challenged WWF to start working with loans as a complement to grants and together WWF and the agency piloted a subsidised loan to promote green tourism in Thailand (Workshop at Focal Points Forum 2010). Donors, for example the Swedish aid agency SIDA, found partnerships with businesses to be very interesting and supported such partnerships with substantial funding. In addition, peer conservation organisations that worked complementarily or competitively with WWF were establishing green investment funds, for example, "Verde Venture" by Conservation International, "NatureVest" by The Nature Conservancy and "New Venture" by the World Resource Institute.

The wish to engage with the private sector was occurring more broadly. During this period Millennium Development Goals transitioned into Sustainable Development Goals (SDGs). SDSs are broader in terms of goals, scope and actors. Implementation is taking a more business-like orientation as seen in platforms such as the UN Global Compact and Impact2030. The UN was seeking government support in enhancing the role of the private

sector. In 2010 the World Economic Forum had come up with a report titled, "Global Redesign" which looked beyond public-private partnerships to a "plurilateral Club of clubs" of multinational corporations, nation states and select NGOs. WWF was seen as an important actor in these discussions. For example, through WWF-France, WWF became a member of the advisory board of the Land Degradation Neutrality (LDN) Fund at the request of its initiators UNCCD (The United Nations Convention to Combat Desertification) and Mirova, "a Natixis Asset Management subsidiary dedicated to responsible investment" (Mirova website). WWF's role in LDN also included project sourcing, "in particular through active engagement with private sector project sponsors and developers in France and, at a later stage, overseas" (WWF intranet). WWF-France together with WWF's Landscape Finance Lab (a network-wide forum) identified several "bankable projects". In its position as a GEF Agency, WWF-US secured a US$2m grant from GEF to contribute to LDN Technical Assistance Facility (TAF) (WWF intranet).

The internal WWF PSP network begun to deliberately forge linkages to WWF's Private Finance Sector Initiative (PFSI). PSFI was another of the five policy drivers established within WWF to address environmental impact (both positive and negative) from the private sector (similar to PSP for public finance). In 2014 PSFI joined the PSP global meeting in Paris. An objective of the meeting was "to understand how WWF [was] moving towards an overarching "financing as a driver" approach" (PSP intranet). In addition, external speakers to the PSP Global Forums also increasingly included private sector experts, especially from the financial sector. However, discussions on merging PSP and PSFI did not materialise. Although there were points of convergence, it was felt that each had distinctive attributes and requirements that still required targeted efforts and specialisation.

There were also marked efforts at leveraging private finance using public finance. PSP found the public sector crucial in influencing private sector financing. As mentioned during the PSP 2014 Focal Points meeting, "Public sector sets the bar… and private sector will likely end up following" (PSP intranet). To attract more private funds, several fora were

founded: the Landscape Finance Lab, Project Finance for Permanence, Green Public Funds team, Green Bonds Task Force, Sustainable Finance Programme, Green Finance and Natural Capital Projects, Financial Institution for the Recovery of Marine Ecosystems (FIRME). For example, the ongoing Landscape Finance Lab's goal was to "test and refine models for combining private commercial finance and impact investment with public finance for sustainable development and climate". FIRME was set up to "provide an innovative strategy to harness new forms of private and public finance to support and help achieve WWFs global marine conservation objectives of healthy oceans and human wellbeing" (FIRME Strategy Session 2014). Through its intranet, WWF provided online courses to train staff on private finance, including the course, "Making the Finance Sector Work for you".

Consequently, WWF further developed a business discourse and increasingly used terms such as "green growth", "natural capital" and "ecosystem services". For example, natural capital became a key concept of WWF's Living Planet Report, as explained by its International Director General: "*While it may be an economic metaphor, it encapsulates the idea that our economic prosperity and our well-being are reliant upon the resources provided by a healthy planet*" (Living Planet Report 2014:4). WWF was now saving "the world's most ecologically, economically and culturally important species" (WWF US Annual Report 2014:33). PSP staff was further encouraged to adopt business-like, development/SDG jargon by speaking beyond environmental considerations – which was discussed as insufficient for changing investor behaviour – to emphasise opportunities rather than just risks (WWF Investor-Engagement 2011).

However, PSP faced the challenge of embracing businesses while also chiding business-as-usual, and in this role saw itself as a "critical friend". As explained by a senior staff member,

> "...a lot of money flows into economic activities and sectors that we don't like because they contribute to the destruction of the planet...some [business]

> players...could be our friends [and]...help us bring about the change we want to see happen...but we will have enemies and it won't be an easy task. We will be facing fierce resistance from some players who will see our efforts as a threat to their business"
>
> (Opening speech PSP Forum 2014).

PSP therefore sought friendship with former enemies, for example with Export Credit Agencies (ECAs), which it had previously accused of covering human rights abuses, environmental degradation and causes of indebtedness of developing countries (WWF et al. 2000). ECAs are public or private organisations that facilitate exports from developed to developing countries by providing loans, insurance and guarantees to domestic exporters from their home countries. Today they collectively finance more private-sector projects in developing countries than the World Bank, the total bilateral and multilateral development aid or any other institution (ECA Watch website).

To sum up, to attract private finance PSP further opened up its networks and engaged in new territories where it had less capacity and experience and therefore was more susceptible to external programming. WWF's goal was to transform business-as-usual into sustainable businesses, while at the same time using public finance to leverage private finance. It increasingly adapted itself towards the appropriate business discourse, worked at converting former enemies into friends, and formed internal networks to create "bankable projects" and opportunities that would be attractive for businesses.

3.4 Discussion

Several scholarly perspectives have been used to discuss the place, scale, territory and political economy of large conservation organisations and their presence in poorer countries (e.g. Armsworth et al. 2010; Brockington and Scholfield 2010; Büscher et al. 2014; Widener 2009). In general, most of these studies show that significant flows of conservation finance circulate in these organisations and their networks, without fully analysing these flows and networks. In this paper, we therefore deployed Manuel Castells' network concepts of programming and switching in getting a better understanding of how large conservation NGOs pursue funding. We acknowledge that global networks exist with,

and build on, other macrostructures such as cities as attractors of capital, European or UN institutions and neoliberal states. However, we argue that network concepts can complement such analyses, contributing to a broader understanding by tracing the architecture of the networks involved while at the same capturing the dynamics of their linkages and the contextual environment in which they operate.

Our analysis clearly showed that programming of WWF was often influenced by the changing contexts in which WWF operated. In terms of the networks, communication protocols and (space of) flows, WWF continuously had to change to remain relevant. It had to constantly negotiate and restructure its public finance network, from an inwardly oriented focus on increasing its own income, to the ambitious goal of increasing income for all of global biodiversity by influencing policy. This later developed beyond public finance flows to leveraging private finance using public finance.

First, we found that for PSP broader public sector involvement was increasingly combined with private sector engagement. Initially WWF's public finance networks were basically made of Focal Point staff connecting to bilateral or multilateral donors to increase income to WWF through international aid. However, when the flows of aid to several WWF offices were threatened with a loss of eligibility for funding, WWF responded by expanding and opening up its networks, first by targeting key governmental ministries that control policies and budget, and later by engaging with the private finance sector. WWF increasingly begun to cooperate with organisations and sectors that it had earlier had a more critical stance towards, such as Infrastructural Development and Export Credit Agencies.

Our finding that broader public sector involvement went hand-in-hand with private sector engagement is underexposed in conservation-related literature. Efficiency-focussed literature proposes that deeper private sector engagement is both desirable and necessary for additional financing (Bos et al. 2015; McFarland 2015) and better conservation management (Borie et al. 2014; Bruner et al. 2004; Rosendal and Schei 2014; Whitelaw

et al. 2014). However, there is little discussion in this literature of how the relationship works in practice. Critical scholars reproach large international conservation NGOs for injecting neoliberalism into conservation through their engagement with the private sector engagement. However, our study suggests that governments and governmental organisations contributed to the neoliberalisation of conservation NGOs, a dimension that is often overlooked.

Secondly, when funding streams from traditional sources dwindled (i.e. international aid), WWF responded by strategically repositioning itself in the "space of flows". WWF successfully gained relevance and inclusion in more powerful networks, such as GEF, GCF and LDN, thereby increasing its influence and potentially harnessing new income streams from both within and beyond nature conservation spheres. At the same time we found that for WWF the "space of flows is not placeless" (Castells 2000b:443). By being closely located or connected to central nodes (see Mol and Spaargaren 2005), WWF could access new financial flows and remain wealthy and powerful. Focal point offices are typically located in donor and not recipient countries, initially only within the OECD member states, and later also in emerging and graduated economies. But there are also special WWF focal point offices in locations where regional or multilateral organisations are located, such as Brussels and Washington. When WWF became a GCF agency it ensured its South Korea office was included in the internal GCF team, because of its proximity to the GCF headquarters. Similarly, in 2017 WWF moved its International office in Gland, Switzerland to a building in what is referred to as the "Conservation Hub", where IUCN and others are located (WWF intranet). This selective linkage between the "space of flows" and "space of places" is also found in the world of international finance, as argued by Mol and Spaargaren (2005). Although global finance is discussed as hypermobile and "footloose", it is acknowledged that the "flows of financial capital and information have to be processed at places (the metropolitan cities), that they originate their profit from places and that they have to 'settle down' at places..." (Mol and Spaargaren 2005:98).

Thirdly, in order to be included in the new networks, PSP had to "adapt to [their] logic, to [their] language, to [their] points of entry, to [their] encoding and decoding" (Castells 2000b:405). Broader engagement with the public sector necessitated communication in economic and development terms by opening up the way for PSP to adapt to the business sector and adopt its business discourse. This trend was influenced by initiatives that were increasingly advocating for economic values of nature, for example The Economics of Ecosystems and Biodiversity (TEEB) and Natural Capital Coalition. Both IUCN and CBD established "Business and Biodiversity" platforms. For years, conservation organisations have been increasingly bringing in financial experts into their boards and managements teams to strengthen their capacity in this new area. According to Dorsey (2005) business leaders compose a significant proportion of the board of directors of leading conservation organisations: three-quarters in Conservation International, half in The Nature Conservancy and a third in WWF. The current president and CEO of The Nature Conservancy, Mark Tercek, worked at Goldman Sachs for more than 20 years. In 2017 WWF appointed Pavan Sukhdev, formerly from Deutsche Bank, to head its International Board.

Within efficiency-focussed literature, the above processes are generally deemed necessary to enhance the financial capacity within nature conservation (Bos et al. 2015; Phelps et al. 2011). However, critical scholars are suspicious of them, viewing them as "new, although unequal, interdependencies" (MacDonald 2010b:539), that do not show any improvements in accumulating more private financing for conservation (Dempsey and Suarez 2016) but instead produce deep shifts in the discourses, institutional arrangements, goals and operations of nature conservation (Sullivan 2014). Our analysis illuminates a new angle to these debates. PSP acquired a more business-like profile and discourse when it engaged with broader government, and in that period its financing from the public sector grew at the average rate of 7.5% per annum, had multiplier effects in attracting other funding streams and stronger influence on other institutions that drive change (PSP Manual 2014). At the same time, financing from corporate sources did not increase (see Table 1 above).

This suggests that this new business protocol of communication was successful in attracting increased income from the public sector but not yet from the private sector. Further study is needed to compare this growth in detail to the performance of income from the private sector.

Fourth, we also found that to have access to financing networks and flows such as GEF, GCF and LDN, PSP needed to access other flows as well. Implicit in our study was a multiplicity of these other flows: flows of documents, ideas, personnel and information. For example, we found staff secondments between Asian Development Bank and WWF. Among the internal files that we analysed were documents from several external organisations but some internal documents were also written as white papers to influence other organisations and institutions. Through these flows of information, WWF became more powerful and influential. The emphasis shifted from increasing income through the "flows of power" (pursuing governments and aid agencies) to gaining stronger influence and greater financing through the "power of flows" (Castells 2000b:500). Efficiency-focussed literature renders these new flows as technical. In critical literature the flow of ideas, images and symbols is described as "spectacular performances in conjuring spaces for effective conservation interventions-cum-profitable investments" (Igoe et al. 2010:498), so as to "open new spheres for investment, trade and speculation" (Sullivan 2013:201). We argue that aligning to the changing contexts that WWF found itself in, and the new flows associated with them, was very important to staying relevant and connected to significant financial flows.

3.5 Conclusion

This paper aimed at understanding how large conservation NGOs like WWF utilise networking in their pursuit for funding. Although WWF is often described as a powerful and dominant international conservation organisation (Kay 2018; MacDonald 2010b), our network analysis shows that WWF has to continuously rework and renegotiate its position, and maintain it by being connected to the "space of flows". Our analysis therefore does not

take for granted that wealthy NGOs are by default powerful. Large conservation organisations have to be in the "right networks", speak the "right language", and connect to "relevant flows". In addition, they have to be malleable to changing external forces and demands, so that they are not only switchers but when necessary should be pliable to being switched by others.

We also found that the separation of public and private sector financing is also increasingly becoming artificial since in practice there is much blurring of the spheres. Governments and public institutions are key instigators of business and economic discourse and values in nature conservation. In fact, the new avenue for increased financing for nature conservation seems to be new and additional public funds accessed by effectively utilising private sector techniques and language, a suggestion that requires further study.

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CHAPTER 4.

Turning The Switch: A Network Perspective on World Wide Fund for Nature's (WWF) Corporate Sector Financing

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4.0 Introduction

Historically funding biodiversity conservation, as a type of global commons, has been heavily borne by public funds (Gutman & Davidson, 2007). Funding levels from all sources are estimated between USD36-38 billion p.a. (Bos, Pressey, & Stoeckl, 2015). Meanwhile the economic cost of global environmental degradation is estimated at USD7.3 trillion p.a. (Bos et al., 2015) and global biodiversity populations declined by 60% between 1970 and 2014 (WWF, 2018). Urgent calls are being made to attract private financing through market-based approaches (see Pirard & Lapeyre, 2014 for a summary of market mechanisms), which are defined as those that finance and undertake nature conservation "with the aim of generating profitable returns for its investors" (Dempsey & Suarez, 2016, p. 654:654). They are considered win-win solutions, innovative, promising, flexible, adaptive and cost effective (Borie et al., 2014; Gómez-Baggethun & Muradian, 2015; Rosendal & Schei, 2014; Vatn et al., 2011).

However, studies have shown that funds that come from market sources are minimal, predominantly ad hoc and philanthropic (Dempsey & Suarez, 2016; Parker, Cranford, Oakes, & Leggett, 2012; Vatn et al., 2011). These studies have followed popular buzz by focussing on income generated from market-based instruments, paying little attention to other forms of corporate sector funding. In doing so, scholars, conservationists and financial advisors use two discordant perspectives to explain the low performance of market-based approaches. The first perspective stems from scepticism about the very premise of situating nature conservation in the market (Büscher, Dressler, & Fletcher, 2014; Corson & MacDonald, 2012; Sullivan, 2013). The dominant view here is that such endeavours are not only futile in their ambitions but also damaging in their effects. Large nature conservation organisations, through the Convention on Biological Diversity (CBD), have been accused of enabling the enclosure of a global common by cultivating the terrain "in which conservation serves capital expansion" (Corson & MacDonald, 2012:277). On the one hand, market-based approaches "spark the interest and imagination of investors" (Brockington, 2014:123). However in practice, markets do not work for conservation on

the ground, except in imaginations (Fletcher 2015). Instead they lead to "fictitious conservation" that is, the severing of "actual natures and their conservation through digitalised financial mechanisms" (Büscher 2013:22).

The second perspective is enthused with optimism about the future of market-based approaches (Gutman & Davidson, 2007; Hamrick, 2016; Herrera et al., 2019; Hrabanski, Bidaud, Le Coq, & Méral, 2013; Parker et al., 2012). The premise is that environmental problems are externalities emanating primarily from market failures (e.g. of failing to render visible, through monetarisation, the free-of-charge contribution of ecosystem services to the economy) and should be internalised through two main principles: the polluter-pays-principle and the provider-gets-principle (Gómez-Baggethun & Muradian, 2015). This process requires time and experimentation but eventually, its proponents believe, it will become an important source of funding (Bishop & Pagiola, 2012).

In this paper, we enter this debate by widening the scope of corporate sector financing, which we do through a study of World Wide Fund for Nature (WWF). Our analysis focuses on the global WWF organisation, and not on any specific WWF office. WWF has a long history of engaging with the corporate sector and is also at the forefront of large, international nature conservation organisations that contribute significantly to the production and dissemination of literature that advocate for market-based approaches (Bovarnick, Fernandez-Baca, Galindo, & Negret, 2010; Gutman & Davidson, 2007; Huwyler, Kaeppeli, Serafimova, Swanson, & Tobin, 2014a, 2014b; Huwyler, Käppeli, & Tobin, 2016; IUCN, 2010; NatureVest & EKO Asset Management Partners, 2014; WWF, 2009). Much of this literature is produced in collaboration with the finance sector and reflects how the discourse on market-based approaches increasingly positions businesses as key actors. This also aligns with observations others have made that international conservation finance flows through networks (Brockington & Scholfield, 2010; Chapin, 2004; Holmes, 2010; MacDonald, 2010).

However, in this paper we shall argue that market-based approaches cannot be separated from other financial networks and flows. We therefore approach our analysis using nested layers, metaphorically like pealing an onion, to arrive at the core. We situate corporate sector financing within the broader context of funding from other public and private sources to demonstrate its comparable contribution. We do this in three main ways. First, by showing how funding from all private sources contributed to overall income in comparison to other income categories over the last ten years and also how the top contributing income categories grew in the same period. We draw our findings from financial documents, interviews with key respondents, other internal and published documents and participant observation. Second, we identify key reasons why for-profit investments have been challenging for WWF and third, use its most promising example, The Amazon Region Protected Areas (ARPA), to illustrate how WWF has circumnavigated these challenges. Based on these findings and guided by Manual Castells' network theory, we propose an alternative academic perspective that is grounded on the reality of practice and that goes beyond the market rhetoric.

We now first explain our conceptual framework in more detail and then describe the methods we used to collect and analyse data. Next we will show how corporate finance in general contributes to overall income in comparison to other income categories over the last ten years and how the top contributing income categories have grown in the same period. From this we zoom in to show the global and regional contribution of corporate sector financing, paying special attention to its growth in Latin America where the ARPA project is located. We then focus on income received using market-based approaches and the reasons for its low performance and analyse the ARPA project using the network concepts of programming and switching. Finally, we discuss our findings, and draw our main conclusions with recommendations for further studies.

4.1 Networks and Flows

According to Manuel Castells (2000) our contemporary society, which he refers to as the global network society, has undergone a significant transformation from traditional hierarchical structures to more networked horizontal structuring with the advent of rapid technological advancements experienced at the turn of this century. Organisations increasingly cooperate and network in order to share costs and risks, and to keep up with innovations upon which their survival depends. In the context of conservation finance networks, a network is "a set of interconnected nodes" (Castells, 2009:19) predominantly consisting of nature conservation organisations, governments and corporations. These organisations might cooperate on specific projects for a given time to achieve a specific common goal, and reconfigure their cooperation with each new project. The basis of this cooperation centres on information and knowledge sharing, but could also include sharing capital and labour. In this new organisational form "components of the network are both autonomous and dependent vis-a-vis the network, and may be a part of other networks, and therefore of other systems of means aimed at other goals" (Castells, 2000:187).

The success of networks is based, first, "on their ability to successfully leverage connections to other critical networks" (Castells, 2009:93) both within and beyond their core domains. Castells calls this process "switching". An example are media networks gaining access to private capital by connecting to financial networks through cross-affiliations of board members and executives (Castells, 2009). Switching is not one-directional but leverages connections in both directions, for example from media networks to finance networks and vice versa. The growth and prosperity of networks therefore depends "...on their capacity to set up switches that ensure their connection to pivotal networks in other areas of the economy, politics, and society at large" (Castells, 2009:99). Secondly, the strength of connectivity to other networks depends on a network's relevance to the goals of the connection, so that the more relevant it is the stronger the connection while the reverse is true to the point of possible expulsion. The network logic is inclusion

and exclusion (Castells, 2009:20). Programming is the process of constituting networks in terms of goals and programmes which are generated using ideas, vision, projects and frames to give meaning and function to each connection.

By constantly aligning to the dynamics of programming and reprogramming and strategic switching, networks embed in dominant social structures and are able to gain access to important flows. Castells refers to the spatial form where this domination occurs as the "space of flows". Processes that dominate our economic, political, and symbolic life are expressed through flows (Castells, 2000:442). Relative access to and control of core flows (flows of capital, information, technology, organisational interaction, images, sounds and symbols) distinguishes the wealthy and powerful from others (*ibid*). The space of flows is characteristically global and elitist, exclusive and networked. Its dominance is not "purely structural" but is "enacted, indeed conceived, decided, and implemented by social actors" (Castells, 2000:445).

4.2 Methods

A key goal of Manuel Castells' network analysis is to remain context-sensitive by using a broad range of "data sources that find broad, accepted consensus among social scientists" (Castells, 2000:26). This follows the well-established methodology of triangulation. We used three methods to collected our data: intensive document analysis, interviews and participant observation. We collected data from numerous WWF's internal and publicly available documents including financial statements, presentations, reports, correspondences, minutes of meetings, strategy documents, websites and publications. Through snowball sampling, we carried out 27 interviews in-person, by email and through video conference. Ten of these interviewees were with staff from the WWF-Netherlands office and the others with staff from other top 10 WWF National Offices in terms of income. We gained access through the WWF Netherlands office, which represents about a sixth of all WWF supporters worldwide. All the interviewees were involved in an aspect of financing, e.g. fundraising, specific financing mechanisms, conservation finance, financial accounting or financial strategy. Initially the interviews were used to orientate us to WWF's corporate

sector financing, and later to direct us to relevant documents, to fill in gaps and to check our findings.

Participant observation was carried out between October 2014 and December 2018 by the first author who was based as a guest at the WWF Dutch office on a part-time basis and granted permission to execute independent scientific research. During that period she followed the work of a team exploring global protected area financing and attended numerous meetings, including web-based video conferences, presentations by international WWF staff members visiting the Dutch office, a WWF global workshop on Protected Area Finance hosted by the UK office in December 2015, and three web-based conferences related to this last workshop. She also had numerous informal conversations with staff members.

The financial data was analysed using straight-forward arithmetic to show how corporate sector financing compares with other income categories for the years 2017-2017. Data from document analysis and interviews were used to answer questions that arose from the financial findings including why WWF's corporate sector income had barely grown and how WWF was dealing with this challenge, including through the example of ARPA. An advanced draft of this paper was reviewed by a senior WWF staff member deeply involved in WWF's corporate sector financing. We considered all the comments when improving the draft, however the interpretation of the results is wholly ours. As such, the analysis and the conclusions drawn in this paper do not represent the official position of WWF.

4.3 Financial Flows

4.3.1 Overview of WWF Income (Public and Private) 2007-2017

In this section we present an overview of WWF's income from external sources. Table 2 below displays aggregated data from the global WWF Network between 2007-2017. It shows the percentage each income category contributed to the total donated income per year.

Public sector funding contributed an average of 19% p.a. to total donated income. Public sector funding sources include partnerships with governments (national and local) and with bilateral and multilateral aid agencies. WWF has had a formal global strategy targeting this sector since 1998, with a dedicated team of staff members from different offices working on establishing and growing public sector networks. These staff members purposefully act as "switchers" in the networks by being situated in close proximity to public funders.

Except for this category of public sector funding, all the other categories of income (members and donors, major donors, legacies and bequests, other individuals, corporates and sponsorships, trusts and foundations) are from private sources and generate at least 81% of WWF's income.

WWF's strongest financial supporters are individuals (including Major Donors 5%, Legacies & Bequests 11% and Other Individuals 4%) who contribute about 60% of its income. As a stand-alone category, Members and Donors brought in the highest income making an average 40% contribution per year. This category includes annual subscriptions, fundraising activities and voluntary contributions from small donors (as distinct from major donors, the latter defined by WWF as those contributing above €32,800 p.a.). In the last decade WWF had approximately 5 million individual supporters worldwide (WWF PSP Manual 2014). WWF staff are in constant communication with these individuals through newsletters, phone calls, clubs, campaigns, social media and media events.

Income from the corporate sector contributed an average 11% p.a. to overall income. This represents income earned from philanthropic donations from corporations and sponsorship fees paid by a company or individual as flat contributions in association with WWF's name, trademarks or logo (WWF Worldwide Overview 2018). We differentiate the corporate sector from other private sources, as the former refers to entities that operate in the economy

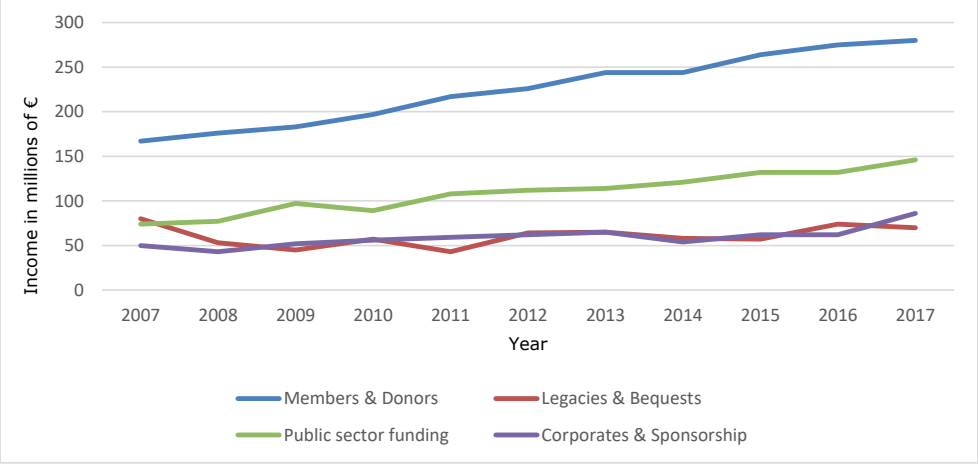
for profit. This therefore does not include income from trusts and foundations which, while often linked to corporations, are typically not run for profit.

Table 2: Income Contribution from Each Category as a Percentage of Total Donated Income Between 2007-2017

Category	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Avg. % p.a.
Members & Donors	37%	41%	40%	41%	42%	39%	41%	41%	40%	39%	39%	40%
Major donors	6%	4%	3%	4%	3%	4%	5%	5%	6%	4%	5%	5%
Legacies & Bequests	17%	12%	10%	12%	8%	11%	11%	10%	9%	11%	10%	11%
Other individuals	5%	6%	6%	5%	5%	5%	4%	5%	6%	4%	-	4%
Sub-total: % from individuals	**65%**	**63%**	**59%**	**62%**	**58%**	**59%**	**61%**	**61%**	**61%**	**58%**	**54%**	**60%**
Public sector funding	16%	18%	21%	18%	21%	19%	19%	20%	20%	19%	20%	19%
Corporates & Sponsorship	11%	10%	11%	12%	12%	11%	11%	9%	9%	9%	12%	11%
Trusts & Foundations	7%	8%	8%	7%	7%	9%	7%	8%	8%	9%	9%	8%
Other sources	1%	1%	1%	1%	2%	2%	2%	2%	2%	5%	5%	2%

Figure 1 below shows the growth of WWF's top contributing categories.

Figure 1: Income Growth 2007-2017 in Top 4 Categories



In this sub-set, in absolute numbers income from the Public Sector increased by 100% between 2007 and 2017 while income from Members and Donors increased by 68% in the same period. Income from Legacies and Bequests and from the corporate sector (Corporates and Sponsorships) hardly grew between 2007-2017. We zoom further into this last income category in the next section.

4.3.2 Corporate Sector Income 2008-2018

WWF had approximately 2500 active corporate engagements with contractual agreements between 2008-2018, but only 24% of these were involved in philanthropic activities (WWF, 2013). This section focusses on this philanthropic income but also recognises that WWF had two other ways in which it engaged with the corporate sector without seeking income: 1) "driving sustainable business practices" by "working with businesses to influence their value chain, industry and own organisation to make direct and indirect impact on the places, species and issues" that WWF cared about and 2) "consumer engagement" by "working with businesses to use their consumer communication reach to drive awareness for WWF conservation priorities and WWF itself" (WWF, 2013:6). Annually, since 2014, WWF reports all its corporate engagements publicly (for example, see WWF-UK, 2017) as a commitment to "full transparency" (WWF, 2013:22) WWF's work with markets is discussed in the next section.

A key aim of philanthropic engagement is to generate funds for WWF, but strictly within the restrictions of "risk and reputation management, valuation of brand use, and focus on high profit, low risk companies (no black or grey list company)" (WWF, 2013:6). Black listed companies are those dealing with "weapons, pornography and industries that test on animals" while grey listed companies were those involved in "power production (coal or oil fired plants), automotive, airlines and airplane production, large scale agriculture, extractives (all sub industries), (petro)chemicals and fertilizer, steel and aluminium, shipping and alcohol" (WWF, 2013:14). The guideline for grey listed companies is that WWF staff can work with them while trying to influence and transform them, but to use discretion in receiving funding from them.

In the period 2008-2018 WWF's total gross income grew by about €300m while corporate sector income grew by about €20m (Figure 2 below).

Figure 2: Corporate Income Growth Compared to Gross Total Income Growth of the WWF Network between 2008 - 2018

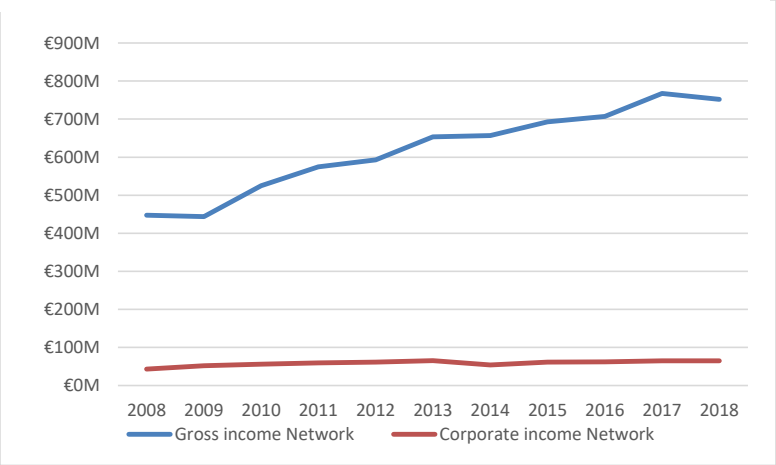


Table 2 below breaks down corporate sector income contributions into world regions. Each cell shows the corporate sector contribution as a percentage of the annual income of a specific world region. The table shows that corporate sector income growth was relatively high (above 15%) between 2012-2015 in Latin America/Caribbean, and was quite low (below 5%) in Africa/Madagascar.

Table 3: Percentage Corporate Sector Income to Gross Total income Per Region Between 2008-2018

Year	North America	Europe	Africa / Madagascar	Asia-Pacific	Latin America/Caribbean
2008	5.0%	9.3%	4.6%	11.4%	4.5%
2009	12.8%	9.8%	4.5%	10.6%	3.9%
2010	8.6%	10.4%	4.6%	9.2%	3.8%
2011	7.0%	9.9%	4.4%	9.4%	6.7%
2012	8.0%	9.3%	7.4%	7.3%	17.0%
2013	6.7%	10.4%	4.3%	6.4%	21.0%
2014	5.4%	9.0%	1.8%	5.9%	18.7%
2015	6.7%	8.1%	2.2%	6.3%	16.9%
2016	6.3%	8.9%	2.4%	7.2%	10.1%
2017	6.4%	8.3%	3.3%	7.6%	9.7%
2018	5.9%	8.7%	2.8%	7.8%	11.9%

In absolute numbers, Europe generated the most income from the corporate sector between 2008-2018. However, corporate sector income did not increase significantly in

any region, irrespective of total income growth at the global organisation (see Figure 2 above).

4.3.3 Market-based Income

Recently, WWF begun to experiment with market-based approaches through "bankable projects". Bankable projects are "investable" (Huwyler, Kaeppeli, et al., 2014b) projects that generate revenue to repay debt (Gavin & Rodrik, 1995) or bring about a return on assets (interviewee 19). They are therefore "concrete investments that could embody abstract financial capital and make its value grow at an acceptable rate..." (Daly, 2011:5). Most of WWF's concrete bankable projects are in the initial testing stages and as such have not yet generated any financial income at the time of our study (Interviewee 13). Moreover, so far, "no one in WWF [is] responsible for tracking and consolidating this type of information" (Interviewee 7 and 23).

Over the years, the main challenges WWF has faced in finding bankable projects have been lack of scale, problems with finding investors at the risky start-up phase, lack of track record, and inadequate financial expertise, including poor knowledge of the investment industry by NGOs. Of these, lack of scale was most often mentioned by the interviewees. It refers to the inadequacy of conservation projects to absorb the size of funds that make investment sense, considering that "it is harder to raise $1 million than it is to raise $10 million" (Interviewee 9). The idea of bankable projects rests on an assumption spelled out in a paper co-authored by WWF: "Both individual and institutional investors have an appetite for conservation finance. The main constraint in satisfying this appetite is the underdevelopment of investable projects with clear risk-return profiles and understandable conservation benefits" (Huwyler, Kaeppeli, et al., 2014b:paragraph 11).

The challenges above are exacerbated by several impediments that WWF faces during its work-in-progress with bankable projects[9]. First, WWF's offices face the legal dilemma associated with a non-profit organisation receiving for-profit returns (Interviewee 18). This also means that "WWF will never be an investee or investor" but sees itself as a broker between "the money and the business cases" (Interviewee 27). Second, as already discussed under Corporate Sector Income, WWF follows a strict guideline on engaging with corporations. For-profit investments are therefore "quite restricted and [if available they would be] clearly identified by the relevant office" (Interviewee 13). One of the interviewees (13) explained that a creative way of circumventing this dilemma would be to create a for-profit subsidiary, but a WWF subsidiary would still shun profits and rather step out of a project once it became profitable. We did not, however, find examples of cases where this had happened. An example of a WWF subsidiary is Impact Ventures at WWF Switzerland, but Impact Ventures "does not generate any money" but focusses on "matchmaking" between investors and projects" (Interviewee 13). There have been "mixed results from these ventures that are not very encouraging" (Interviewee 27). Third, there were internal diverging views on the ethics of market-based approaches (Interviewee 23). While some would have liked to avoid it, others claimed that the conservation world was moving towards market-based approaches making ethical considerations increasingly irrelevant. If WWF "wasn't in the boat" it would be left behind (Interviewee 9).

More generally, WWF found it "unsustainable" to continue relying on fundraising and that "it's no longer about donations.. It's not about public or private or philanthropic finance but about the linkages...[and] combinations of funding streams" (Interviewees 13 and 23). Towards this, WWF prioritised three main activities that target corporate sector financing: impact investing, leveraging WWF's work with public sector financing institutions, and Project Finance for Permanence. Impact investing involves projects that combine environmentally and socially beneficial outcomes in varying degrees. However, according

[9] More recently, WWF rebranded bankable projects to 'Bankable Nature Solutions' to confine its usage to sustainable projects and distance it from the common reference to infrastructural development.

to some interviewees, many of these investments are not-for-profit and not corporate sector oriented (this view was not shared by all the interviewees). They have a "certain connotation for certain people...there are people in the private finance world who if you mentioned impact investments, they roll their eyes and don't take you very seriously" (Interviewee 23). In fact, a WWF consultant advised against designing impact investment projects that relied too much on philanthropy because they would later become too difficult to convert into financial profitability. From previous impact investment work, WWF had learnt that voluntary markets could be very weak (interviewee 23).

On the second main activity, WWF has a strong existing relationship with public sector institutions (Interviewee 13). WWF's main partner was The German Development Bank, KfW, one of the biggest sources of biodiversity finance in the world at that point in time. WWF felt KfW was strong in supporting early conservation trust funds but reluctant in funding communities, so WWF would step in to support communities. Income from the public sector, however, remained largely philanthropic.

Several interviewees mentioned that Project Finance for Permanence (PFPs), the third activity, was by far the most successful in getting corporate sector attention (for more details on PFPs see Redstone, 2011; WWF, 2015). WWF led the process of launching and organising the first and largest PFP, called The Amazon Region Protected Areas for Life Project (in short, ARPA). A senior WWF staff member described ARPA as "quite successful in getting more major donor and philanthropic corporate money than you would see going into a typical conservation project. That's the biggest innovation, bringing [the corporate] sector in." (Interviewee 23). By using the concepts of programming and switching, below we show how ARPA achieved this (for further details on ARPA see WWF 2015 & 2017; FUNBIO 2018).

4.4 WWF's Hallmark Project: ARPA for Life

ARPA represents a network of 117 protected areas, covering 60 million hectares or 15% of the Brazilian Amazon (FUNBIO, 2018). It converges politics, finance and nature conservation in such a way that it became "the largest tropical conservation project in history" (Nance, 2016). It initiated the idea of PFP by borrowing the concept of project finance from Wall Street, in which all essential funding, political and conservation commitments are made in a single deal at the start of a project (Linden et al., 2012). Subsequent funding was contingent on the fulfilment of initial commitments. For ARPA this process of first developing the preconditions took 15 years, between 2002 with the first signing and 2017 when 100% of the protected area implementation target was reached and the "bulk of the actual conservation" commenced (Redstone, 2011:2). ARPA's political commitment was triggered by the 1998 declaration of President Fernando Henrique Cardoso of Brazil to protect 10% of Brazil's Amazon biome (later extended to 15%). This was followed up by subsequent commitments from Presidents Lula and Rousseff (Linden et al., 2012:3-4). This opened the space for high level, nationwide publicity.

The central nodes in the ARPA network are the Brazilian government, WWF and The Gordon and Betty Moore Foundation (hereafter, the Moore Foundation). Each one plays important programming and switching roles. As the lead NGO, WWF's role is to fundraise, "...provide scientific expertise, mediate partner relationships, and handle post-closing implementation" (Linden et al., 2012:13). The Moore Foundation acts as the "anchor funder" by "build[ing] credibility among peer private donors" and high net worth individuals (Redstone, 2011:9). Switching brings in expertise and connections between conservationists, former bankers, and management consultants (Linden et al., 2012). Key switchers at the Moore Foundation have included Steve McCormick, president of the Moore foundation (2007-2014) and former president and CEO of The Nature Conservancy (2000-2007); Guillermo Castilleja, chief program officer for environmental conservation and former executive director of conservation at WWF; and Dan Winterson, program officer for

environmental conservation and former consultant at McKinsey & Company (Linden et al., 2012).

The financial size of ARPA is US$215 million (see Table 3 below). WWF's website shows that it donated at least US$5.25 million, that included US$1 million from the Italian government (Conservation Finance Alliance, 2008) and US$ 500,000 from WWF-Brazil, raised with the Ford Foundation. The funds are managed in a conservation trust fund by FUNBIO (Fundo Brasileiro para a Biodiversidade/ Brazilian Biodiversity Fund). Leveraging of both public and private finance was attractive to corporate sector funders (interviewee 19). For example, some corporate sector donors found it important to have prominent bilateral and multilateral donors on board (WWF, 2015). The corporate sector made a 4.4% contribution to the fund. Nevertheless, corporate sector funding was catalytic in drawing other funds including governmental actions and commitments (Linden et al., 2012:12).

Table 4: ARPA's Sources of Funding

Funding Sources	**Amounts in USD**	**Remarks**
Existing ARPA endowment	60,000,000	
German Federal Ministry for Economic Cooperation and Development (BMZ) through the German Development Bank (KfW)	39,000,000	
Amazon Fund through the Brazilian National Development Bank (BNDES)	35,000,000	
Global Environment Facility through the World Bank	27,000,000	
Foundations:	26,000,000	Includes: Moore Foundation: $14m Margaret A. Cargill Foundation: $7m Bobolink Foundation: $4m
Individuals:	16,350,000	Includes: Roger & Vicki Sant Trust (via WWF): $14m Joseph and Carson Gleberman: $1m Linden Trust for Conservation: $1m Brazilian Private Donors: 210,000
Corporations	9,500,000	Includes $4.5m from Anglo-American (British multinational mining company based in Johannesburg and London - world's largest producer of platinum); unknown contribution from Natura and O Boticário (second largest Brazilian cosmetic company); and other anonymous donations
Inter-American Development Bank	3,000,000	
Total	**215,850,000**	

Sources: WWF 2015 & 2017; Funbio 2018

The Brazilian government committed to 25 years of gradually increasing its spending on ARPA to replace funding from foreign private donors that would diminish over time. At the end of this period, the project is expected to self-finance from domestic sources, both private and public (WWF, 2015). As such, ARPA was also attractive to donors because they could "see greater ROA [Return on Assets] and an exit strategy for [foreign] philanthropy" (interviewee 19). However, in recent news releases the current Brazilian President Jair Bolsonaro has made strong statements, including at the UN climate summit 2019, encouraging intentional deforestation and opposing international efforts to stop raging forest fires in the Amazon. Further research is needed to see if the network attribute of flexibility (Castells, 2009) will play out in sustaining ARPA's longevity.

4.4.1 Reflections on ARPA

Through programming and switching, ARPA has been successful in attaining unprecedented funding, in terms of scale, predictability and longevity. By sharing resources and expertise, WWF, the Moore foundation and the Brazilian government – as autonomous yet interdependent components of the network – successfully used leveraging in both directions to attract public and private funding. The Moore Foundation took a central switcher role in linking the project to "peer private donors" and high net worth individuals. WWF, in the switcher position as lead NGO, mediated the network relationships and linked them to other key funders. The Brazilian government provided the initial impetus through its powerful political declaration and ensuing political commitment through consequent regimes. Each central node in the network was therefore decisive in ARPA's programming and switching. However, we emphasise that the goal was attained in concert and that it is the network, and not individual nodes, that was crucial to the performance of ARPA. Not WWF, nor the other nodes in the network, has ever achieved this level of funding in the history of its existence.

However, it is debatable whether ARPA counts as a bankable project. On the one hand, ARPA formed a network between WWF with corporate sector actors and the Brazilian

government, working through the market principle of private finance. Although the corporate sector contributed only 4.4% of ARPA's funds, this was still successful in leveraging large sums of public finances, including from the World Bank and the German Development Bank (KfW), together the world's largest contributors to biodiversity conservation. On the other hand, all giving to ARPA was philanthropic. There is no investable income with expectations on return on assets, repayment of debt or build-up of interest (Daly, 2011; Gavin & Rodrik, 1995; Huwyler, Kaeppeli, et al., 2014b). Although WWF collaborates with finance sector actors in publishing market-oriented documents, in the ARPA case it networked with a not-for-profit foundation (the Moore foundation) as the most important switcher into the corporate sector. And although it achieved scale, this still did not convert into ARPA becoming a bankable project.

It remains for future research to examine how the financing mechanisms would change if such networks would involve an anchor funder from the financial sector and a large international conservation NGO with no or low-levels of for-profit restrictions. To some extent this can be seen with NatureVest, the network between The Nature Conservancy and JP Chase Morgan. In its hallmark project *Seychelles Debt Restructuring for Marine Conservation and Climate Adaptation*, NatureVest raised impact capital loans (US$15.2 million) and grants (US$5 million) to buy US$21.6 million of Seychelles debt (Kay, 2018; NatureVest, 2019). However, this project is criticised for being a "revamped" debt-for-nature swap (Kay, 2018:169), that "helps the Government of Seychelles meet IMF debt-to-GDP benchmarks and show itself to be a proactive player in its own economic future", but is absent of ecological valuation and opaque in how returns will be made and progress reported (Silver & Campbell, 2018:10).

ARPA's model was replicated to other PFPs. For example, the Forever Costa Rican PFP was instigated by President Óscar Arias' declaration on "peace with nature" in 2007. Forever Costa Rica became the biggest beneficiary under the Tropical Forest Conservation Act of the United States (Bryan, 2010) and attracted 57 million dollars of public and private

finances (Redstone, 2011). Its goal was ambitious, "to expand and secure all of Costa Rica's national parks, wildlife reserves, and protected seascapes and become the first developing country in the world to meet the protected area targets and management standards of the UN convention of Biological Diversity" (Linden et al., 2012:44). The Nature Conservancy was the lead NGO and worked with the United States and Costa Rican governments, the Central Bank of Costa Rica, the Linden Trust for Conservation, and the Moore Foundation (Redstone, 2011). Like ARPA, Forever Costa Rica was programmed on the project finance idea, attracted key corporate sector players as "anchor funders", met legal, regulatory and organisational pre-requisites and "mobilized unprecedented resources and commitments and launched large-scale protection" (Linden et al., 2012:3). In brief, through powerful programming and switching, PFP projects are accessing larger sums of funding than normally is the case. Other PFP projects include the Great Bear Rainforest project in British Columbia (Canadian dollars 120 million) and Bhutan for life (USD 43 million) (WWF, 2015). WWF is currently working on new PFP projects in Peru and Colombia (interviews and WWF website). Linden et al. (2012:2) describe PFPs as the "power of bringing together, in one large and complex deal, all the stakeholders, resources, and commitments needed to permanently conserve a large and well-defined area". PFPs that work effectively are those that follow the network logic of inclusion and exclusion. Linden et al. (2012:13) recommend that a successful PFP should never be too inclusive but should "involve a minimal set of parties to make it happen."

PFPs are an example of regionalisation, the emergence of globally important regions inside the nation state's boundaries. With strategic "space of flows" connections, they can become the dominant way in which long-term funding for vast, often transboundary, ecosystems is generated. PFPs need "large and well-defined areas" (Linden et al., 2012:2). However they cannot be the solution for numerous "space of places" that remain unknown, undesired and un-investable to global investors. It is "extremely helpful if a project location is somewhere private donors know and like" (Linden et al., 2012:12; Redstone, 2011:9). As WWF puts it in its website, "It's very hard to sell conservation to big donors if people

don't already have a real awareness of the country. Brazil and Costa Rica, for example, are known to be important. But if you're talking about lesser-known places in Latin America and Africa, for example, too many people still say, 'Where's that?'" Other important factors for consideration in selecting a site for PFP include "strong national governance and legal structures", "high-level, strong, continuous political commitment" and "high capacity of stakeholders to design and execute" and "strong potential for internal and external funding" (Redstone, 2011). These requirements exempt numerous smaller ecosystems with weaker governance and financial systems. This is unfortunate because project finance has been found to be a strong driver of economic growth in low-income countries and to facilitate good project governance (Kleimeier & Versteeg, 2010), albeit through the privatisation of national and common goods in developing countries (Esty, 2014; Kayser, 2013).

4.5 Discussion

Notwithstanding the divide between its proponents and opponents, the actual performance of market-based instruments in nature conservation is widely acknowledged as poor (Dempsey & Suarez, 2016; Vatn et al., 2011). Their application is minimal and largely experimental (Vatn et al., 2011). We found that WWF's significant contribution to the discourse on market-based approaches for nature conservation has yet to translate into financial returns, primarily because its bankable projects are still in the initial stages. We also found that income from corporations into WWF contributed an average of 11% to overall external income in the years between 2007-2017, with minimal growth. WWF's funding from all its income streams including corporate sector sources and the ARPA case largely remained philanthropic. Below we draw on Manuel Castells' network conceptualisations to help to explain this and point to a third perspective that pushes debates about market-based instruments beyond their polarisations.

First, WWF's ability to switch with for-profit mechanisms is constrained by the legal status of many of its country offices, by diverging internal views on the ethics of market-based

approaches, and by an internal set of guidelines that restricts engagement with the corporate sector and controversial market-based mechanisms, such as biodiversity offsets. WWF considers reputational risk one of the greatest it could face. Secondly, there is lack of consensus on the definition of market based mechanisms. So- called market based mechanisms are in practice not fully market-based at all (Gómez-Baggethun & Muradian, 2015). For example, WWF has and continues to be involved with dozens of PES schemes globally. While some regard PES as market-based mechanisms (Hein, Miller, & de Groot, 2013), PES often does not operate as markets in practice (Fletcher & Breitling, 2012). Thirdly, it is also important to note that private funds sometimes go through networks that are not as transparent as public funds. For example, conservation work is also funded and managed by high income net worth individuals such as Paul Lister in northern Scotland under The European Nature Trust, Jochen Zeitz in northern Kenya under the Foundation of Intercultural Ecosphere Safety and Paul Fentener van Vlissingen in Zambia, Malawi, South Africa and Sudan under the African Parks Foundation (Smit, 2017).

We argue that our data points to a third perspective that is based on practice and goes beyond the arguments for or against markets. Proponents and critics of market-based approaches take for granted the presence of markets, but in practice there is little evidence of the working of pure markets (Dempsey & Suarez, 2016; Muradian & Gomez-Baggethun, 2013). These arguments are often dependent on disciplinary and ideological standings and as such "may all be internally consistent with the analytical lenses of each school of thought", but nevertheless foster "self-referential debates" (Gómez-Baggethun & Muradian, 2015:218). Some of the arguments are built on "...ideology rather than on the scholarly investigation of the complexity of a multicultural world" (Castells, 2009:22). What is becoming more widespread in practice is blended finance and networks between governments, NGOs and market actors (Muradian & Rival, 2012; Rode et al., 2019). Muradian and Gomez-Baggethun (2013:1114) call them hybrid governance forms that combine hierarchical and market elements, holding "a higher level of voluntariness as compared to hierarchical structures, but do not meet the requirements of pure markets

(high level of commoditisation, trading, and a price system in place)." PFPs have been recognised as blended finance models (Rode et al., 2019).

Blended finance is the strategic use of public and "philanthropic funds to mobilise private capital flows to emerging and frontier markets" (OECD & WEF, 2015:4). It is constituted by networks aiming to attract private capital investments, attain social, environmental and economic impact, and bring financial returns to private investors (OECD & WEF, 2015:8). It cushions and de-risks investments especially at the initial stages of pioneer projects by stimulating "investment with complementary risk and return appetites" (Rode et al., 2019:7). It is seen as a means of "financing more projects with less public money" by catalysing international private finance (Romero, 2016:59), and as such is particularly attractive to developing countries seeking to attract (foreign) private finance investments, open up new markets and access credit for small local businesses (OECD & WEF, 2015). Blended finance brings the private sector to the centre of development strategies and is becoming the working model of many bilateral and multilateral development finance institutions (Romero & Van de Poel, 2014).

In understanding blended finance arrangements as networks, it comes as no surprise that they operate on the logic of inclusion and exclusion (Castells, 2009). In development finance, blended finance has been found to focus on middle income countries and to give preferential treatment to donors' own private sector firms while excluding pro-poor activities, avoiding wide stakeholder participation and failing on transparency and accountability (Pereira, 2017; Romero, 2013, 2016). Their networks incorporate nodes (governments, private sector actors, NGOs) with sometimes contradictory individual priorities, and if evaluated on any one of them might not have "a great track record" (Romero, 2016:59). These concerns should be addressed carefully when implementing blended finance models. However, when evaluated based on the overall network goal, ARPA as an example, has been lauded for bringing positive environmental outcomes (Watson et al., 2016).

4.6 Conclusion

Although WWF's for-profit income has been low and its philanthropic income from the corporate sector barely grew between 2007-2017, we found that WWF's leading participation in the discourse on market-based approaches was productive when it also involved switching. In the exemplary case of ARPA, WWF illustrated how networking opens up increased private and public sector funding and results in long-term nature conservation. This was achieved in spite of the absence of markets, that is, commoditisation, trading or pricing. By analysing corporate sector funding within the context of a wider portfolio of funds, we found that leveraging of public and private sector funding occurs in both directions, but with a much greater output of public funds. We therefore conclude that the future of innovative conservation financing largely depends on the dexterity with which nature conservationists are able to turn the switch into the space of flows of pivotal public and private sector networks. Increased private sector engagement including adoption of its business discourse has previously been found to go hand-in-hand with WWF's efforts to maintain and increase public sector funding. Practically, this is likely to lead to an increment in blended finance usage for biodiversity conservation, but we advocate for caution in its uptake. Blended finance arrangements tend to favour donor's own private sector firms and to ignore low income countries, pro-poor activities, wide stake-holder participation, and proper accountability and transparency measures. As such they have the potential to reduce the "funding gap" for vast, transboundary ecosystems traversing middle-income countries but will never address the funding needs of numerous "un-investable" space of places that private investors disregard.

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5

CHAPTER 5.

Conclusion and Discussion

5.0 Conclusion and Discussion

> "Nature is in freefall and the planet's support systems are so stretched that we face widespread species extinctions and mass human migration unless urgent action is taken. That's the warning hundreds of scientists are preparing to give, and it's stark.
>
> The last year has seen a slew of brutal and terrifying warnings about the threat climate change poses to life. Far less talked about but just as dangerous, if not more so, is the rapid decline of the natural world. The felling of forests, the over-exploitation of seas and soils, and the pollution of air and water are together driving the living world to the brink..."
>
> John Vidal (2019) (a veteran environment journalist)

This thesis on conservation finance comes at a crucial point in time. The recently released Global Assessment Report on Biodiversity and Ecosystem Services by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES, 2019) provides evidence of the alarming decline of global biodiversity. The report stresses that the current trajectories in achieving most international societal and environmental goals, including the Aichi Biodiversity Targets and the 2030 Agenda for Sustainable Development, will not stall this situation. It recommends transformative changes across economic, social, political and technological domains. The Convention on Biological Diversity (CBD) is taking this into account as it prepares to adopt a post-2020 global biodiversity framework[10]. There is expectation that the framework will also address new and additional financial resources, corporate sector accountability and rigorous safeguards for private sector engagement (Ching & Lin, 2019). The International Union for Conservation of Nature (IUCN) will also be hosting its 2020 World Conservation Congress which hopes to achieve major conservation commitments[11]. In addition, the Paris Agreement on climate change will formally come into effect this year and countries are expected to submit new and updated pledges (IUCN, 2019) that will also have consequences for biodiversity.

[10] https://www.cbd.int/conferences/post2020
[11] https://www.iucn.org/news/secretariat/201805/iucn-director-general%E2%80%99s-speech-signing-ceremony-iucn-congress-2020

This thesis is also positioned within ongoing debates stemming from what others have called the third wave of environmentalism (Devall, 2014; Shellenberger & Nordhaus, 2009). It refers to a period described by the convergence of ecological and economic concerns, making space for market-based solutions and deeper corporate sector engagements with nature conservation. The polarised academic debates discussed throughout this thesis underscore the promises and tensions underlying this convergence and the deepening frustration with failure to secure adequate conservation financing to halt accelerated decline in global biodiversity. Noting the simultaneous expansion of the largest nature conservation organisations in recent decades, this thesis investigates how large nature conservation organisations maintain and expand funding for global biodiversity conservation. It adds novelty to research on conservation finance in three key ways. First, it encapsulates the main academic themes on conservation finance, giving an overview that is wider than the disciplinary or financial-mechanism-focused way in which it is typically researched. Second, it deviates from previous studies by researching conservation finance using the sociology of networks and flows theory á la Manuel Castells. This alternative way of investigating conservation finance presents a perspective that is grounded in the funding realities of conservation networks. Third, this thesis provides rich and new data on the funding activities of one of the largest nature conservation organisations in the world, WWF (globally known as World Wide Fund for Nature and in the USA, as the World Wildlife Fund). The findings are therefore not only illuminating for academicians, but also relevant to conservationists.

In the next section I briefly highlight the main conclusions, then discuss three cross-cutting issues that ran throughout the study and thereafter outline my proposal for an alternative approach to funding. Consequently, I reflect on the wider contexts of the conclusions, the conceptual framework and methodology used. Finally, I give recommendations to conservation networks and finish with suggestions for future research.

5.1 Main Conclusions

This thesis investigates how WWF, as an example of large nature conservation organisations, maintains and expands funding for global biodiversity conservation. I aimed to find an alternative way of investigating conservation finance that would help me understand the intricate workings of large nature conservation organisations while remaining sensitive to the dynamics of the contemporary society in which they operate. Below are the main conclusions of the three research sub-questions that guided me, followed subsequently by the general conclusion to the central research question.

RsQ1. What major themes on funding for biodiversity conservation are covered by academic literature published between 2010 - 2016?

Through a thematic review of 64 peer-reviewed articles, I found three dominant themes recurring around the topic of biodiversity financing: underfunding, funding distribution and innovative financial mechanisms. These themes are interlinked so that the main challenge in biodiversity financing is not only inadequate funding, but that quite often available funds do not go where they are most needed. Instead conservation networks between dominant economic, political and social actors play a crucial role in directing financial flows. These findings inspired me to use a new way of studying biodiversity financing that would take cognisance of the complex social networks that determine how and where finances flow. I therefore turned to Manuel Castells network theory to develop and answer research questions 2 and 3.

RsQ2. How does WWF use networking to maintain and expand funding from public sector sources?

To maintain and expand funding from public sources, WWF has to be in the "right networks", speak the "right language", and connect to "relevant flows". WWF's Public Sector Partnerships (PSP) switched to the "right networks" by incorporating the discourse of environmental mainstreaming and pursuing broader government engagement particularly with dominant governmental ministries that control budgets and policies. It also switched into other domains (Development, Climate Change, "Security"-based issues and Emerging Economies) and powerful networks within and beyond nature conservation

including the Global Environment Facility (GEF), Green Climate Fund (GCF) and Land Degradation Neutrality (LDN) Fund. However, PSP constantly adapted to changing contexts by frequent re-strategising/reprogramming, reconfiguring its internal organisational networks and incorporating business-like discourse and development/SDG jargon. Access in the space of flows of these other networks also required strategic relocation in the space of places and access to informational and other flows. Ultimately, through broader government involvement, PSP became more deeply engaged with the private sector. At the same time WWF's funding from the public sector grew at the average rate of 7.5% per annum. The findings suggest that governments and governmental organisations contribute to the neoliberalisation of conservation NGOs, a dimension that is often overlooked.

RsQ3. What is the extent of corporate sector income into WWF and how does WWF maintain and expand it?

In the years between 2007-2017, WWF's financial flows from all private sources, including the corporate sector, contributed an average of 81% p.a. to overall income. Income from corporations alone contributed an average of 11% in the same period, with minimal growth. In comparison, income from the public sector contributed an average of 19% p.a. WWF's "bankable" projects have not yet generated any financial income at the time of this study. WWF's strongest financial supporters were and still are private individuals (an average of 40% contribution per year), notably through small donations. The main challenges in finding bankable projects are lack of scale, problems with finding investors at the risky start-up phase, lack of track record, and inadequate financial expertise, including poor knowledge of the investment industry by NGOs. These challenges are exacerbated by the following WWF-specific impediments: legal dilemma with a non-profit organisation receiving for-profit returns, strict organisational guidelines on engaging with corporations and internal diverging views on the ethics of market-based approaches. WWF's three main activities that target financing from the corporate sector are impact investing, leveraging with public sector financing institutions and Project Finance for Permanence (PFPs). WWF's hallmark project, ARPA for life (The Amazon Region Protected Areas project), is productive in leveraging public sector funds using programming through

private sector principles and financing, in combination with switching. ARPA exemplifies how such networking opens up increased public sector funding, attracts private sector attention and results in long-term nature conservation.

Central RQ: How does WWF, as an example of large nature conservation organisations, maintain and influence funding for nature conservation?

To maintain and influence funding for nature conservation, WWF uses networking with both public and private sectors. This involves switching to dominant governmental ministries, bilateral and multilateral organisations, emerging and graduated economies and the private sector that relates closely with them. In conformity to the principles, language and goals of these new connections, WWF goes through continuous cycles of programming and re-programming, changing its strategies, goals and discourse. It also reconfigures its internal networks, positions its main switches in strategic locations that are in close physical proximity to the "space of flows" of public and private sector financing, and positions itself in prominent roles within global funds such as GEF, GCF and LDN. This networking process is two-way; WWF remains malleable in its networking endeavours so that it is not only a programmer and switcher, but is also pliable to being programmed and switched by other networks to stay relevant to their goals. Through these processes WWF has been successful in increasing its funding from the public sector at 7.5% p.a., while its income contribution from the corporate sector has remained low at 11% p.a. and stagnant. WWF's most important funding base is private small donors who contribute 40% of its income. In spite of spearheading market-based rhetoric, all WWF's corporate sector income is philanthropic and its "bankable projects" are yet to produce any income. However, through a blended finance model that combines programming and switching with both the public and private sectors, ARPA for life became WWF's best funded project ever, bringing in US$215 million to protect 15% of Brazil's Amazon biome for at least 25 years. Based on these findings, I propose innovations in conservation financing that combine the time-tested reliability of private small donor funding with the potential of blended finance, that would also address both underfunding and poor distribution of conservation funds, for future biodiversity conservation.

5.2 Discussion on Cross-cutting Issues

The debates brought forward by this thesis reflect one side of the ongoing negotiations for the post 2020 Biodiversity Framework of the CBD. Negotiations have been bitterly polarised between proponents of "new conservation" emphasising biodiversity's importance to people and partnerships with corporations and market-based instruments, versus proponents of "traditional conservation" that emphasise protection of nature for nature's sake and an expansion of protected areas to cover at least 50% of territorial and marine areas. Sandbrook, Fisher, Holmes, Luque-Lora, and Keane (2019) observe that these debates largely ignore the view from critical social science that emphasises conservation for the benefit of the people but not through market-based approaches. This thesis enters these debates by highlighting the discussions between critical social science and discussions affiliated to "new conservation" (Sandbrook et al., 2019). Chapter 2 captures the main themes in academic debates, Chapter 3 highlights the debates between efficiency-oriented scholars and critical scholars, and Chapter 4 provides evidence to the arguments from proponents and opponents of market-based approaches. In this section I discuss three key cross-cutting issues that ran throughout these debates and close it with a proposal for an alternative approach in funding future biodiversity conservation.

5.2.1 The Role of the Discourse of Underfunding

The discourse of underfunding of nature conservation has three performative and de-politicising effects. First, the underfunding discourse was constitutive of the "funding gap" in nature conservation. Underfunding has featured in the agenda of CBD since its inception in 1992 (Gutman & Davidson, 2007). Up until this point, the few calculations that had been conducted focused largely on costs of maintaining biodiversity (IUCN/UNEP/WWF, 1991; Pimentel et al., 1997; WCMC, 1992; WRI, IUCN, & UNEP, 1992). However, shortly after 1992, several estimates emerged to find the "funding gap", that is, the deficit between available funds and costs of achieving optimal conservation (see Introduction). This was also a period in which global funding for nature conservation had significantly diminished (Chapin, 2004). The scope of these initial "funding gap" estimates were mainly confined to

protected area funding. Over the years, this scope significantly expanded to include whole landscapes and ecosystem services (see chapter 2). In effect, the "funding gap" has exponentially widened (see chapter 2), growing from estimates as low as 1 billion dollars per year (Vreugdenhil, 2003) up to an estimated 7 trillion dollars per year (Bos, Pressey, & Stoeckl, 2015). The constitutive power of the underfunding discourse to establish the "funding gap" in ever increasing magnitudes aligns with research on the tremendous power of narratives to shape reality (see a review of narrative research by Spector-Mersel, 2010). Narrative truth may be factually grounded and historically accurate but it also recreates this historical truth again and again so that it is never attained (Spence, 1984).

Secondly, the discourse of underfunding popularised alongside the tremendous expansion of the largest nature conservation organisations. This thesis shows how threats to WWF's funding led to re-programming and switching to new public and private sector networks. Other scholars of large nature organisations have made similar observations. For example Chapin (2004:22) recognised the "strong financial support [of the largest conservation organisations] in a weak economic environment." He argued that the explosive growth of WWF, The Nature Conservancy and Conservation International was largely accomplished by an "expansion of their fundraising reach into new areas" (*ibid*). Specifically, this was done through three strategies: "wowing" funders with large scale conservation approaches [programming], targeting bilateral and multilateral agencies [switching], and increased outreach to the corporate sector [switching] (Chapin, 2004:24, my additions in parenthesis). Similarly, MacDonald (2010) backtracked the boom in the 1990s to the emergence of the concept of sustainability in the 1980's World Conservation Strategy (WCS) – co-published by WWF, IUCN and UNEP - and consequently to the sustainable development discourse that linked economic development and conservation. He argues that the "articulation of sustainability, development and conservation expressed in the WCS and subsequent national conservation strategies successfully mobilised donor funds" (MacDonald, 2010:517). I therefore argue that the discourse of underfunding has produced two opposite and contradictory effects, first in constituting and raising awareness of the

"funding gap" in ever expanding measures and secondly in expanding the funding of the largest nature conservation organisations. Depending on one's paradigm, this paradox can be explained as an example of the articulation of crisis to create space for capitalistic expansion (Büscher, Sullivan, Neves, Igoe, & Brockington, 2012) or the power of narrative to feed donor interest (Mosse, 2014).

My third point is that the underfunding discourse purportedly has a de-politicising effect by focusing on the quantity of funding. Defining the problem as "not having enough money" narrows down solutions to technical interventions measurable by "objective" standards (chapter 2 and 4). However, in practice WWF found solutions to funding through political means: programming and switching with other networks. WWF had to continuously rework and renegotiate its position, and maintain it by being connected to the "space of flows" (chapter 3). This form of power – network-making power - is "more subtle, complex and negotiated" than "an old boys network" or "power elite" (Castells, 2013:46-47). It is relational, coercive, and "conditioned, not determined, by the structural capacity of domination" (Castells, 2013:10). My third point can be mirrored with the concept of framing in policy literature where climate change adaptation is distinguished by scholars as "a 'tame' technical problem versus a 'wicked' problem of governance" (Dewulf, 2013:324). Frames are both empowering and disempowering, impacting power relations by determining what the central problem is, what kinds of action should be prioritised and which actors should be included or excluded (Daviter, 2007; Dewulf, 2013; Peterson, 2007; Pettenger, 2016).

Further, the de-politicising effect obfuscates the non-neutrality of money (Wlodarczyk, 2014). It reductively defines money "as the ultimate objectifier, homogenising all qualitative distinctions into an abstract quantity" (Zelizer, 1989:342). However, sociologists recognise the social, psychological and cultural production, effects and meanings of money (Ingham, 1998; Wlodarczyk, 2014; Zelizer, 1989). This thesis shows that money is not neutral but is composite of the economic, social and political processes

of programming and switching conservation networks, and ultimately of determining directions and volumes of conservation finance flows. Further, "inserting money into a situation has consequences" (Carruthers, 2010:54). This is exemplified by a study that traced financial flows at Podocarpus National Park in Ecuador from origin to destination and how these decisions are made (Johnson, 2009). Johnson (2009:713) shows how such flows influence organisational relationships and priority setting, and concluded that "the patterns and processes by which money flows into, out of, and around a protected area are... critical to enabling or hindering its long-term sustainability." Gubbi (2010) further substantiates this with an example of increased funding for wildlife conservation in India which led to "habitat improvement" activities, although tangibly this meant building artificial water harvesting (water tanks, check dams) and retention structures (rainwater harvesting pits) in Western Ghats forests that receive 8,000 mm of annual rainfall and that naturally retain water. It also meant "weed clearance", that is removing "native secondary vegetation including shrubs, herbs and tree seedlings" that Gubbi (2010:22-23) predicts will result in loss of "nesting sites for birds" and "loss of habitat for ground dwelling amphibians, reptiles and insects". This last example also shows that besides underfunding, nature conservation faces other big problems like poor management (Leverington, Costa, Pavese, Lisle, & Hockings, 2010).

This can be paralleled with the impact of development finance to the local economy, society and environment in poor countries in which, "for example, large investments made to a developing country, only trickles to the local economy, [creating] huge negative social, environmental and human rights impacts; loss of income to developing countries due to special tax deals given to multinational countries; tax exemptions and lighter labour, social and environmental regulations" (Romero, 2016:60). Bebbington (2004:732) argues that resources channeled through development NGOs "'touch ground' unevenly", "hooking" that place into global networks that "would otherwise not have been present there, and brings meanings, resources, forms of exercising power, notions of modernity and a whole range of other influences to bear on a place." He concludes that the geographies of NGO

interventions do not reflect the geographies of poverty and as such "NGOs are not well 'placed' to make great contributions to poverty-reduction strategies nor to the 'even-ing' out of immanent development processes" (Bebbington, 2004:740).

5.2.2 Market-based Approaches

One of the prominent constructs of the "underfunding" discourse are innovative financial mechanisms, particularly through market-based approaches. In the previous chapters of this thesis, I have already expounded on the de-politicising effects of market-based approaches. In the Introduction and in chapter 2, I highlighted the plethora of innovative financial mechanisms – many still in idea or experimental stages – that have subsequently emerged. Contrary to this hype, literature from both proponents and critics of market-based financial mechanisms acknowledge that their actual performance is poor (Dempsey & Suarez, 2016; Fletcher, 2013; Ouma, Johnson, & Bigger, 2018; Parker, Cranford, Oakes, & Leggett, 2012; Sullivan, 2014; Vatn et al., 2011). The critics point out that market-based approaches are performative in producing deep shifts in the discourses, institutional arrangements, goals and operations of nature conservation (Sullivan, 2014) (see chapter 3). Here I reiterate against the apolitical perspective of efficiency-oriented scholars, stressing that the choice of market-based instruments should be viewed as a political choice and not simply as a technical solution. This is explained in chapter 2 by how the flows of conservation financing are driven by networks along economic and political lines, and expounded upon in chapters 3 and 4 which demonstrate how conservation networks follow network logic by including some and excluding many conservation places and needs, and by inference determining who gets access to financing and who does not. The choice of switching with the private sector also has consequences for the goals of the network. WWF's goal includes both transforming business-as-usual into sustainable businesses and using public finance to leverage private finance. WWF has to continuously undergo restructuring and re-strategising to better align with deeper private sector engagement, including working closer with former "enemies" and creating "bankable projects", in spite of debilitating challenges and impediments (chapter 4). This thesis found additional public

funds accessed by effectively utilising private sector techniques and language. By seeking access to important global financial flows and being located in or close to their central nodes and moorings (see Mol & Spaargaren, 2005), WWF could remain wealthy and powerful.

However, the intensive focus on market-based approaches distracts attention from other sources of financing in two meaningful ways. First, although most scholars narrowly focus on for-profit income as a stand-alone category, in practice market-based approaches work within a wider consortium of actors and other mechanisms (Githiru et al., 2015; Muradian & Gómez-Baggethun, 2013). Within the narrow focus, the investigation of WWF's income from "bankable projects" concurred with the general consensus that market-based approaches perform poorly. However, when analysed within the context of a wider portfolio of funds, WWF's funding from market-based sources have significant multiplier effects on income from public sources (chapter 4). This effect is exemplified by WWF's hallmark project ARPA, in which leveraging of public and private funding occurs in both directions, but with a much greater output of public funds. In fact, increased private sector engagement, including adoption of its business discourse, went hand-in-hand with WWF's efforts to maintain and increase public sector funding (chapter 3). Therefore, the use of market-based approaches for nature conservation is productive in increasing public funds, and therefore cumulates to an increase of all funding for conservation. This argument is broader and more grounded in reality than the unfounded hopes from efficiency focused literature (Bos et al., 2015; Phelps, Webb, & Koh, 2011) that anticipate that market-based approaches in and of themselves have the potential to increase for-profit income. It also corresponds to findings from payments for environmental services (PES) studies that show that although the rhetoric on PES has been strong, of itself PES contributes little to the "funding gap", but has the effect of opening up new funding sources (Hein, Miller, & de Groot, 2013; Rosendal & Schei, 2014).

Secondly, this thesis unpacks sources of conservation financing and brings to the fore the substantial contribution of income from private individuals. Chapter 4 touched on the view that conservation financing should move on from depending on fundraising to focusing on the linkages between funders and the combinations of funding streams. However, in working out these linkages and combinations, I found much hype given to the private sector and its concomitant market-based approaches, but missing for private individuals. The highest financial contribution to WWF was and still is from the category of "Members & Donors", that is, from private "ordinary" persons, not from the fanfare accorded high-net-worth individuals or celebrities or corporations. My inquiries into the "Members & Donors" category at WWF were often dismissed by interviewees as "old-school", "boring" and "wholly dispensable". However, the search for innovative financing in the future should not be done at the expense of fostering steady, predictable funding from traditional sources. As David Chen from Equilibrium Capital stressed during the by-invite-only 4th Annual Conservation Finance Conference (with a good turnout of investment banks and advisers), conservation finance needs to become "boring" (Clarmondial, 2017). The findings of this thesis prove that private persons are significantly able to finance one of the world's largest nature conservation organisations. A case in point: In 2017, WWF received €280M from small donors alone (chapter 4) compared to Conservation International's full income of €158M in the same year (Conservation International, Annual Report FY2017).

The history of strong small donor support should, however, no longer be taken for granted; the number of WWF's members between 2013-2017 shrunk by -1% (WWF, 2018) and this is likely to affect the level of contributions made by "Members & Donors" in the very near future. The WWF Dutch office alone lost 63,000 permanent members in 2018 (van Uffelen, 2019). The Dutch office is one of the top five WWF National Offices in terms of income, has about a sixth of all WWF supporters worldwide and enjoys most flexibility in allocating so-called "unrestricted finances". This shrinkage requires further research (see below) to understand how the giving behaviour of private persons today is shifting with the current changing demographics in Western societies. Earlier studies on charitable giving show

unique characteristics between generations of private donors. For example, in the Netherlands elderly people have been found to give more generously and frequently than younger people (Wunderink, 2002). In the UK, young, professional, affluent males working in the city of London have been found to prefer giving to well-established, reputable charities which rewarded them with invitations to special galas and events, and did not require high personal recognition, fiscal incentives, hands-on approach or personal involvement with the charity (Kottasz, 2004). These previous conclusions may not align with the current status as WWF's fundraising teams have instead noticed that the younger generation is more commitment-averse (unlike their parents who would commit to giving, say, 40 euros a year for 40 years) and who are more likely to contribute in kind than in cash. On the converse, there are greater funding opportunities from the "Legacies and Bequests" category with the greying of populations in many richer countries. All in all, I argue that the work towards linking nature conservation funders and combining funding streams should more seriously incorporate private individuals, not only in the humdrum of traditional fundraising activities, but with the same level of optimism elicited by market-based approaches, and with confidence backed by proven evidence.

5.2.3 Governance

In the same tone, the dominance of the discourse on market-based approaches from both its proponents and opponents, obscures the strong role played by the state in these approaches. In my research I found a central, but subtle, role of governments in influencing market-based approaches. This differs from MacDonald (2010) argument that, contrary to how large nature conservation organisations portray it, corporate engagement into nature conservation is not initiated by conservation organisations but by businesses, and historically occurs when conservation becomes an obstacle to resource access. Instead Ouma et al. (2018:505) - writing on financialisation of nature – note: "Wall Street is a way of organising nature, we must not lose sight of the role of the state in organising Wall Street, or the fact that the state is a way of organising nature in and of itself...in ways that Wall Street may or may not find palatable." From a broader perspective, Joseph Stiglitz,

recipient of the Nobel Prize for Economics (2001) and chief economist of the World Bank between 1997 and 2000, argues that countries that do well economically are those that employ a great array of institutional arrangements in which the government plays a strong role. He disputes "market fundamentalism and the idea that markets worked on their own" (Stiglitz, 2009:348), stressing that the idea of perfect markets, perfect information, and perfect competition on which conventional economics is based is mythical.

The findings of this thesis therefore go against the notion of "governance without government" in nature conservation (Rosenau, 1992). Governance is conceptualised variously by scholars from diverse disciplines (Bevir, 2011) and holds different forms, interpretations and meanings (Art & Visseren-Hamakers, 2012). Here I simply use it to refer to "new modes of governing that go beyond the confines of the state" (Art & Visseren-Hamakers, 2012:241). In chapter 2 I highlighted the debate surrounding transferring governance of nature conservation from governments to the private sector. The key issue under contention is that the dire state of global biodiversity is indicative of state failure, resulting in a governance gap that needs to be closed by the more efficient private sector. Turnhout and Zouwen (2010:356) demonstrate with a case of the Dutch nature policy plan that even in participatory governance that starts out with a sincere intention for joint responsibility and interactive decision making between actors from diverse sectors, "the central government remained firmly in charge." Relatedly, Corson (2010), using the example of USAID, describes the dynamism in the relationship between the state, NGOs and markets. USAID's tremendous impact on the funding of nature conservation organisations was initiated by the USA's Democratic Congress in the 1980s, was defended against budgetary cuts towards the end of the 1990s by environmental NGOs and in the 21st century culminated in a powerful alliance between USAID, environmental NGOs and the private sector (Corson, 2010).

Therefore, I make three arguments based on my findings and the literature. Firstly, I agree with others (Arts et al, 2009) that the role of governments in contemporary conservation

networks *is not* diminishing, but is instead transforming. Secondly, I also argue that it is not desirable that the role of government should dissolve. African Parks Network, a conservation NGO managing 17 national parks in Africa "on behalf of the government" (African Parks, 2020) epitomises attempts to substitute the state role of regulation and enforcement in Africa to fill a perceived institutional void (Büscher & Dietz, 2005). It represents "self-interested political actors in global governance" (Eberlein, 2019:1126) and has been heavily criticised as follows (Plaut, 2003: paragraphs 17-18):

> "This is an ill-conceived agreement, it borders on theft and plunder of the resources of the people of Barotseland and should be thrown out...No company should be given absolute rights over the people's natural resources unless it is owned 100% by the people of Barotseland themselves,"
>
> Sakwiba Sikota, Zambian MP, at a press conference in Lusaka in April 2003.

The consensus in political corporate social responsibility literature is that "private initiatives by themselves are not sufficient to even partially fill the governance gap" (Eberlein, 2019:1129). Instead – and thirdly – this thesis shows that within the "space of flows" in conservation networks, the boundaries between public-private, market-nonmarket categories are blurring, but not disappearing. Nodes within networks are interdependent but remain autonomous.

Centring Private Persons: Blended Finance's Missing Link

My proposal for the future of biodiversity funding is positioned within the current conservation debates discussed above (see introduction of this section). Both proponents of "new conservation" and critical social scientists emphasise biodiversity's importance to people (whereas proponents of "traditional conservation" emphasise protection of nature for nature's sake). Both sides of the debate make important contributions to the challenges facing global biodiversity. Through the suggestions made by proponents of market-based solutions we know today - after decades of ideas and experimentations - that they are difficult to realise and when implemented are not effective in producing substantial increments in funding. The critical scholars have contributed to deconstructing success narratives and in highlighting broader destructive impacts of neoliberal and capitalistic

undertakings. However, while both sides emphasise biodiversity's importance to people, the debates between them are fixated on markets. In chapter 4 I went beyond these debates to point to an alternative, more grounded approach: blended finance. Blended finance is increasingly becoming the working model for networks between governments, NGOs and market actors. However, as already explained in chapter 4, blended finance's longer history in development finance has been found to be problematic because of its tendency towards conformity with private sector preferences and away from addressing the needs of the poorest of the poor. Here I argue that many of its problems stem from a lack of balance in centering the private sector and markets. Blended finance in its present status therefore does not go far enough as an alternative to address the "widespread agreement that conservation needs to be more bold and ambitious" (Sandbrook et al., 2019). I hope my proposal here will add to these aspirations. It is informed by the historical evidence found in this thesis, is sensitive to contemporary dynamics and pragmatic about the future. This proposal includes the attributes of flexibility, scalability and survivability (see chapter 1) to improve blended finance flows in conservation networks, both in terms of quantity and quality.

I propose a blended finance funding approach that instead centres private persons, and transforms and leverages finance, both public and private. I use the term centre in the same way it is used in network theory to refer to "particularly important nodes" (Castells, 2013:19). This thesis underscores the major contribution of small donor funding, although this topic does not dominate major discussions of funding for nature conservation (chapter 2). At the same time it "bores" practitioners eager for more exciting, innovative financing solutions (chapter 4). Although there was a people-oriented discourse in conservation in the 1990's, this discourse referred to people at the downstream of flows of financing – the local communities and indigenous people (Chapin, 2004). However, my people-centric proposal emphasises people at the upstream of financial flows, the small donors, the private persons. Small donor donations are increasingly making strong impacts in funding wider societal causes as observed during the 2008 Obama campaign which raised US$137

million (Wilson, 2009) and the growing popularity of crowdfunding. The power of private "ordinary" individuals to make financial impact is underscored by the size of global remittances which in 2016, for example, were three times greater than ODA (Daramy, 2016). To put this into perspective, ODA to Africa for the environment is below 1% (Brockington & Scholfield, 2010b). Hypothetically, this means that the potential for tapping funding from the diaspora could significantly exceed international aid.

Centring private persons as key components of blended finance means going beyond traditional fundraising, to mirroring the efforts, rhetoric, resources, platforms, science and experimentations that have gone into market-based approaches. It also means being sensitive to the factors that drive the change in the giving behaviours of today's small donors (as discussed above under Market-based approaches). This would be in keeping with important network attributes of flexibility, i.e. "the ability to reconfigure according to changing environments..." and scalability i.e. "the ability to expand or shrink in size with little disruption" (Castells, 2013:23). These are particularly important in addressing volatile giving behaviour that may be susceptible to populism or scandals. Traditionally, WWF's small donors gave relatively small amounts of finances and were also satisfied with small amounts of information about the causes they donated to. Today's small donors want more. They want to engage more deeply in meaningful causes that reflect their personal convictions and therefore they demand full transparency and hands-on involvement, including through digital forms of engagement and "digital conservation" (van der Wal & Arts, 2015). Other fields like public administration theory and practice are becoming "increasingly concerned with placing the citizen at the centre of policymakers' considerations, not just as target, but also as agent" (Holmes, 2011:2). With the proliferation of social media and smart phones in most corners of the world, governments, NGOs and businesses have been forced to adapt to their constituents to attain legitimacy and the social license to operate.

The centring of private donors does not mean forgetting funding from the public and private sectors. They remain important in these constellations; a network's survivability is "because they have no single centre and can operate in a wide range of configurations, to withstand attacks to their nodes and codes" (Castells, 2013). This proposal is therefore to put small private donors at par with their public and private sector counterparts. Funding from private persons can be used to leverage both public and private sector funding. After all, private persons are also a key basis for both public and private funding; often involuntarily funding the public sector (e.g. through taxes and social premium), and also funding the private sector (e.g. as customers and shareholders). Focusing on private donors would be a means of putting pressure on businesses and governments to bring about the transformative changes necessary to save the planet as outlined by the IPBES (2019) Global Assessment Report. The history of green bonds is a powerful example of how this can happen. When Swedish pensioners became aware that their money was funding some of the world's most dirty extractive industries, they pressurised their fund managers to seek alternative investments in green projects, and in partnership with the World Bank, green bonds were created.

This is also a call to connect small donors at the upstream of conservation finance flows to the people downstream, where the funds are used in local projects. This step would aid in putting checks in place that would expose the environmental, social, economic and other local impacts of funding, and in so doing addresses some of the serious concerns raised by the critics of market approaches. It is therefore also a step towards achieving a balance of powers in nature conservation. Practically, it also requires a re-orientation of funding mechanisms and concepts. For example, the idea of scaling up "bankable projects" to capture private investor interest (chapter 4), will at the same time mean scaling down to micro-projects within the large projects to meet the very specific purposes that touch small donors. Funding from private "ordinary" persons is often unearmarked and can therefore be used to address the funding distribution problem highlighted in chapter 2. It also has

the potential of making blended finance more accessible to "uninvestable" places, as discussed in chapter 4.

Centring private donors has the potential to become the key that breaks the glass ceiling of public funds, for example, finally moving all ODA contributions towards and beyond the 0.7% of GDP target, and thereby availing more funds for biodiversity conservation. There are already many examples of diasporic associations that build connections between governments – both North-to-South and South-to-South connections – unleashing finance, expertise and knowledge and contributing to environmental and social sustainability. For example, the Diaspora for African Development[12] connects the UK diaspora to the members' home countries for development activities. In recognition of the potential of the diaspora, the UK government created a £1.2 billion Cross-Government Prosperity Fund in 2016 that includes a £33m non-ODA component (UK government website[13]). Remittances are already recognised as one of the important ways of attaining the "billions to trillions" needed to achieve SDG goals. For my argument, they are a powerful example of the impact of focusing on small donor giving.

Above, I have already argued why governments should remain important centres in funding nature conservation (see under topic "Governance" above). I equally think that conservation networks should continue to include market actors. To address the concerns of critics, working with the private sector is not a compromise. They are implicated in the challenges facing global biodiversity declines and should be part of the solution. They are also profiting from nature and should continue to be expected to pay (see quotation in the Introduction of this thesis). They form an important part of the global ecosystem of nature conservation. This is a proposal to bring change from within the system, not outside of it.

[12] http://www.dfad.org.uk/
[13] https://www.gov.uk/government/publications/cross-government-prosperity-fund-programme

However, does this mean that the government would be tempted to transfer its funding responsibilities to private "ordinary" persons? Would it be an argument to further burden private persons? In answering these questions, I borrow the words of Singer (1993) who addresses private donors persuading them to give towards development aid. Against the protest that giving privately allows the government to escape its responsibilities Singer (1993:4) says:

> "to believe that it is seems to assume that the more people there are who give through voluntary agencies, the less likely it is that the government will do its part. Is this plausible? The opposite view – that if no one gives voluntarily the government will assume that its citizens are not in favour of overseas aid, and will cut its programme accordingly - is more reasonable. In any case, unless there is a definite probability that by refusing to give we would be helping to bring about an increase in government assistance, refusing to give privately is wrong for the same reason that triage is wrong: it is a refusal to prevent a definite evil for the sake of a very uncertain gain. The onus of showing how a refusal to give privately will make the government give more is on those who refuse to give."

Completing conservation networks by connecting private persons ("space of places") to governments, large NGOs and markets ("space of flows") would bolster connections between the "space of places" and "space of flows". I suggest that it would have the potential to bring about transformative change to the way nature is appreciated, funded, conserved and used. In Manuel Castells words, "the geography of the new history will not be made, after all, of the separation between places and flows, but out of the interface between places and flows and between cultures and social interests, both in the space of flows and in the space of places. The attempt by capital, media, and power to escape into the abstraction of the space of flows, bypassing democracy and experience by confining them in the space of places, is being challenged from many sources by the grassrooting of the space of flows" (Castells, 1999:302).

5.3 Reflections

In this section I make three reflections on this study: the conceptual framework, methodology and context, in that order.

5.3.1 Conceptual Framework

> "Theory and research are only as good as their ability to make sense of the observation of their subject matter. The value of social research does not derive only from its coherence, but from its relevance as well. It is not a discourse but an inquiry."
>
> (Castells, 2010a:xliii).

An important attribute of conservation finance that was emphasised by answering the first research question was the importance of networks. I therefore turned to network theory in answering the other two research sub-questions. In chapter 3, I motivate my choice of using Manuel Castells theory over other network theories that have been used in the social sciences for many years. I was particularly drawn to Manuel Castells network theory because it recognises important changes in contemporary society and by the wide application he uses in his analyses, that include global finance and global organisations. This thesis adds to earlier works that have recognised the prominence of networks in conservation finance. It goes further to analyse how networking is utilised in maintaining and expanding the flows of financing to large nature conservation organisations. Importantly, the analysis contributes to a broader understanding by tracing the architecture of the networks involved while at the same capturing the dynamics of their linkages and the contextual environment in which they operate. Although the concepts of programming and switching can be considered to use very technical language and computer imagery (Fuchs, 2009), they deviate from efficiency-oriented scholarship by taking the social and power seriously. Programming and switching are power concepts. However, they also diverge from critical scholarship by not taking power a priori, but by facilitating intensive in-depth study and allowing power to emerge from the data.

Nevertheless, this thesis followed the network-making power concepts of Castells but my findings differ from his analysis of environmental organisations. For Manuel Castells environmental organisations belong to the category of resistance movements, or social movements, or "alternative projects" (Castells, 2010b, 2013). As such he positions them outside the space of flows of dominant global processes that concentrate power, wealth

and information (Castells, 2010b). As resistance movements, they introduce "new instruction and new codes" into the programmes of dominant networks, for example, environmental ethics into company evaluations (Castells, 2013:48). His argument is that both resistance to power and power in the network society are achieved through the programmes of the networks and the switches between networks (Castells, 2013:47). He sees the environmental movements as the antidote to the uncontrollable space of flows by "reaching minds, taming capital, courting the state, tap-dancing with the media" (Castells, 2010b:186). They reach minds by "directly connecting to the basic humanistic values cherished by most people" (Castells, 2013:187). They tame capital by being a "consciousness-raising movement" (Castells, 2010b:188) that influences corporations to adapt to new "green" tastes, legislation and values while continuing to fund environmental activities. Environmental organisations court the state by influencing legislation and governance through lobbying and greening of mainstream politics. They tap-dance with the media through a symbiotic relationship that has mastered the "traditional French anarchist tactics of *l'action exemplaire*, a spectacular act that strikes minds, provokes debate, and induces mobilisation" (Castells, 2010b:186-7, italics in original).

Castells' categorisation of environmental organisations is similar to how Harvey (2005) includes them as resistance against capitalistic accumulation by dispossession. However, my findings show that, although WWF's official position is that it seeks to influence public and private finance in line with Castells' argument, in the interest of maintaining and expanding its funding WWF has also internalised into its own programmes dominant instructions and dominant codes from the public and private sector networks with which it has switched. I therefore argue that Castells' analysis of environmental organisations is uni-directional, while the reality as far as WWF is concerned runs in both directions. WWF reconfigured its networks and adjusted its programmes as it was influenced by public and private sector networks, in order to access funding (chapter 3 and 4). This called for WWF to play a dual role, chiding business-as-usual while embracing its new role as a "critical friend" (chapter 3).

Further, by placing counterpower as external to networks of domination, Castells ignores internal conflicts within networks. WWF's strategy was, and is, not in being on the periphery of dominant global public and private sector networks, but in being an integral component of these networks. This points to WWF's intention of influencing both public and private finances from within, not outside, of these systems. Van Dijk has called Castells' focus on the external conflict between networks and collective identities "one-sided". "Social actors take positions inside networks" (Van Dijk, 1999:135) and Castells "denies the possibility of meaningful resistance within the system, assuming the externality of any resistance" (Van Dijk, 1999:136). In addition, WWF also faced internal resistance within its own organisational network. The evidence of this is discussed in chapter 4 where I refer to internal divergent views on market-based approaches, as one of the impediments to WWF's advancement with these approaches.

Yet, Castells' network argument that global networks dominate key economic, political, social and cultural processes in contemporary society was very pertinent to the analysis of this thesis. First, it helped me to perceive the efforts of large nature conservation organisation of maintaining and expanding funding as processes of domination, both in seeking to dominate flows of conservation finance, but also of succumbing to other dominant forces of global finance, both from the public and private sectors. Secondly, Castells' conceptualisation of global networks beyond the borders of the nation-state (Castells, 2010a) was very useful in analysing WWF's funding strategies and processes at the global level of the organisation, as opposed to as a sum of the funding strategies and processes within individual offices. This counters the criticism that the sociology of networks and flows (including Castells' network society theory), is fetishised with the global, hovering at a "bird's-eye view" and lacking groundedness, and as such provides "a view of everywhere, yet a view from nowhere" (Gille 2006:140). The findings of this thesis substantiate the ontology of the global organisation without making the global organisation footloose, but emphasise that although the "'the global overwhelms the local..." (Castells

2013:26), the global is not "placeless" (Castells, 2010a:443). WWF's switchers were strategically located in physical contiguity to the "space of flows" of the public and private sectors.

Relatedly and third, Castells' argument that contemporary society underwent fundamental changes in its structure with rapid ICT advancements sheds light on the operations of global organisations, such as WWF. Implicit within this study is the key role played by ICT in WWF's processes of programming and switching for increased funding. Forums such as PSP and PSFI and their relevant focal points, fundamentally operate virtually. Technology is a pre-requisite – but not a condition - for the structure of the global organisation – or society, in the case of the global network society. There is a dialectical interaction between society and technology so that "technology does not determine society: it embodies it. But nor does society determine technological innovation: it uses it." (Castells, 2010a:5). Therefore, ICT does not make WWF the organisation that it is, but amplifies, reflects and facilitates the organisation in what it already is, and is itself also part of the organisation.

In sum by using network analysis, this thesis contributes to the literature on conservation finance by providing an alternative analysis that investigates their networks and the contexts in which they are embedded while allowing power to emerge from the data. The findings show power as relational and coercive, with WWF seeking dominance through connections and negotiations, and also being subject to domination. This differs from critical scholarship for whom power is more-or-less determined by the structural capacity of domination. Second, it adds to the literature that investigates conservation financing as global processes, arguing that these surpass the sum of its parts. Third, it points to structural societal transformations, including changes in the wider context of conservation finance, that affect how conservation finance is funded and distributed.

5.3.2 Methodology

This study was supported by WWF Netherlands from the onset. In correspondences and a letter of support to my university, WWF-NL mentioned that they were interested in the "wealth of information" that would come out of this study, not only from previous and ongoing literature research, but also from information from their colleagues in other WWF offices. The project started at a time when the Dutch office was going through a new strategic process and they hoped that it would play an "indirect advisory role." WWF's support included a signed confidentiality agreement with my university.

This study begun with a thematic review of literature that was inspired by a systematic review course that I took in its first year. At that moment it seemed that it would be the easiest and most straightforward part of the project, but it turned out to be the most intensive and time-consuming. The process of delving deep into the academic literature at the start equipped me with a broad knowledge of the topic that was very helpful in two key ways. First, the network characteristic of conservation finance emerged out of this process leading me early on into the choice of the conceptual framework that would guide the rest of the study. Secondly, being already conversant with the main conservation finance themes meant that I had an informed approach to data collection and analysis during the subsequent stages of the project. However, although the broad nature of this review meant that, metaphorically speaking, I could see the forest for the trees, it also meant that at times I lost sight of the trees. Concretely speaking, I missed academic papers that dealt with particular mechanisms, regions and cases that did not feature the keywords that I used in the selection process. The decision to only review academic papers also meant excluding the volumes of grey literature that are written on this topic. The grey literature in this field tends to be more up to date with new developments than academic papers that have to undergo an often slow review process. However these limitations turned out to be "teething problems" that were necessary in preparing me to tackle the next stage of the project, that included extensive literature study and document analysis from both academic and non-academic sources.

In the next stage of the project, I was based as a participant observer at the WWF Netherlands office on a part-time basis between October 2014 and June 2019. Following the methodology of triangulation, I used three main methods for collecting data from WWF: intensive document analysis, interviews and participant observation. My guest researcher position gave me access to WWF's institutional archives, staff members, activities and other guests. WWF staff were open to being interviewed, in spite of very busy schedules. Joint interviews were particularly helpful in accessing deeper insider perspectives than interviews where a WWF staff member was not involved. The joint interviews were done together with a WWF Netherlands staff member and always involved interviewing staff members from other WWF offices. The consequence was that these interviewees were relatively easy to access and our interviewees always responded to us with insider information although my guest position was clarified before each interview.

In addition, as a guest researcher I had free access and assistance to financial data. Accessing financial data from the International office turned out to be very helpful because the financial figures from the 66 offices spread all over the world had already been converted into a common currency (the euro) and corrected for inflation and exchange. The international office uses data fed from WWF offices, many of them audited and publicly available in local currencies. However, the aggregated data is not publicly shared. Although the data was given to me openly and with much assistance, publishing its contents was still subject to the initial confidentiality agreement that my university had signed with WWF.

I have three reflections on the methods I used for the WWF study. First, physical presence turned out to be an important attribute in obtaining data at WWF. What I expected, and found to be true, was that it is by being around in the everydayness of work – sharing lunch tables, walking to and from the train station, sharing workstations, bumping into each other in the washrooms, along the corridors, at the coffee station – that important information was shared. This is where I got to hear of the latest developments, was

introduced to the next important contact person, heard the stories that are not written in any official documents. What I did not expect is how changeable my association with the same contact person would be depending on whether we were physically present during the conversation or were communicating online. There was a freeness in physical interactions and barriers in online communication. This was not only true with staff at the WWF-Netherlands office, but more so with international staff from other offices. This underscored a finding highlighted in this thesis, that when it comes to flows in networks of the 21st century, place continues to matter (Sheller & Urry, 2006).

My second reflection is on my insider-outsider positionality at WWF. A WWF login account bestowed on me an insider's identity that I used in my email correspondences. However, this identity was partial; it never gave me a full insider's identity in any situation. I made it clear in most of my interactions that I was a PhD researcher based at the WWF-Netherlands office. At the Dutch office, staff members that were not working on the same side of the building as I sat, often assumed I was a WWF staff from one of their other international offices – and I always clarified my position. Visiting international staff often assumed I was a Dutch staff and online my login details were identifiable with the Dutch office. There was ambiguity in how WWF staff related to me: sometimes as an insider, at other times as an outsider. For example, I was an insider as part of the WWF-Netherlands Protected Areas' Finance Team, but even in this team, I was only included to a certain extent. A few times I discovered in hindsight that a meeting had been held without me being notified or invited. The explanation was always that it was a more insiders' meeting, and I later learnt to decode this as meetings where dissension was anticipated. I also had to personally deal with the tension of managing an insider-outsider balance. I was aware that as a participating insider (in meetings, workshops, presentations and at times in being questioned by staff members as if I were a consultant), that I was potentially constitutive of the organisation that I was researching.

My acquaintance with WWF staff members sensitised me further to the nuances of the data that I was collecting, but also made me more empathetic to their organisational struggles. During the period that I worked from WWF, I simultaneously also worked at Wageningen University where critiques of particular practices of large nature conservation organisations was part of the academic debates. This enhanced my outsider positionality and together with my supervision team, who were always based outside, gave me the distance that I needed in analysing my data.

Third is my reflection on my view into WWF from its Netherlands office. The Dutch office has a geographic vantage point (thanks to Schiphol airport as an important air transportation hub) that makes it a convenient host to many of WWF's staff travelling en route to other offices and destinations. As a leading National Office, it also frequently hosts staff from other offices that it supports (e.g. when they come to give reports or presentations) and from other National Offices that it collaborates with. Due to this, I was able to conduct a good proportion of interviews in person. Within WWF the Dutch office also has the highest proportion of unearmarked income. This potentially gives it the flexibility to pilot new ideas and its staff members that I interviewed consider their office a leading innovator of conservation finance within the organisation. All in all, it was a good entry point to studying the organisational network. An alternative office that would have provided a good entry point would have been the WWF-USA office, but I did not have access nor a budget to explore it. However, if my interest had been studying specific financial mechanisms rather than conservation networks, then other WWF offices would also have been interesting choices, e.g. WWF France on green bonds or WWF Switzerland on venture capital. As such in these cases WWF France and Switzerland act as nodes. However, the limitation of all these suggestions (and this thesis) is that they rely on investigating WWF's global organisational network by looking through the window of one of its offices. An optimal way of conducting this study would have been to spend time in several WWF offices, including its International office and the USA office, and to physically attend WWF global meetings, especially those that hosted its public or private sector staff.

However, it is not unique that this study is restricted to the window of opportunity presented to me; gaining access and trust is typically difficult for scholars working on obtaining data on financing (Brockington & Scholfield, 2010a; Miller, Agrawal, & Roberts, 2013; Waldron et al., 2013). Similarly, these studies show that pragmatic choices have to be made based on research funding, project duration and practicalities.

5.3.3 Context

In this final section of the reflections, I first consider how far the findings of this thesis can be generalised to other large nature conservation organisations. Next I reflect on the context of conservation finance in relation to development finance.

The conclusions of this thesis can be generalised to large nature conservation organisations, although specific findings may not hold for each organisation or a national office of the same global organisation. Substantial programming of large nature conservation organisations arise from external contextual influences, such as the SDGs (previously MDGs) and the Paris Declaration on Aid Effectiveness. Large nature conservation organisations also try to influence conservation financing at a higher level, for example both WWF and CI are GEF and GCF agencies. Large conservation organisations are central nodes within CBD and IUCN networks. They also operate within a highly competitive environment and conform to the demands of the same pool of funders. Therefore, although they may differ in specific tactics, they do not differ much in their visions, goals and strategies. For example, a common mission during their boom in the 90s was large-scale conservation approach branded as "hotspots" for CI, "ecoregions" and "Global 200" for WWF, "ecosystems" and "ecoregions" for TNC, and "living landscapes" for Wildlife Conservation Society (WCS) (Chapin, 2004:22). Even WWF's ARPA project is not unique; it has been replicated in other Project Finance for Permanence initiatives developed by other conservation organisations, for example Forever Costa Rica by TNC (see chapter 4).

Nevertheless, the pursuit for market-based approaches is one of the important funding issues that unites and at the same time differentiates large nature conservation organisations. These organisations are united in the rhetoric and share leadership in spearheading these approaches. To greater or lesser extent, they all face similar challenges of scale, investor interest, financial acumen and achieving performance. However, the impediments found by this thesis are unique to WWF (chapter 4). This can be exemplified by comparing WWF and TNC. Firstly, WWF was constrained in seeking for-profit returns by legality, including through its subsidiaries. It therefore takes distance by adopting a matchmaking role between investors and projects. However, TNC makes profits through land sales, and its subsidiary NatureVest acts as a direct investor to bankable projects, in expectation of profit. Secondly, WWF also has a restrictive guideline in engaging with corporations, especially from its blacklist, while TNC has fewer squabbles about engaging and receiving funding from corporations from the same list, e.g. from the extractive industry. In its principles of corporate engagement, TNC (2020:1) motivates its private sector engagement as follows: "Companies increasingly understand that investments in conservation help protect business assets, mitigate risk and create opportunities. To not work with companies as they seek to become more environmentally sustainable is to miss an opportunity to create real conservation gains around the world." Thirdly, within WWF are also internal diverging views that have slowed down its uptake of market-based approaches. According to Colman (2019), TNC has adopted a corporate-like culture backed by a board of directors of global finance and business heavy-weights, that have accelerated its uptake of "market-driven formulas" and "Wall Street-style data crunching."

Within broader contexts, international conservation organisations have often worked within the broader context of development finance including very directly through paradigms such as the 1970s Community Based Conservation and the 1990s Integrated Conservation Development Projects (Büscher & Dietz, 2005). This thesis shows how changes in development finance impact on the networking activities of conservation organisations e.g. SDGs (previously MDGs) and the Paris Declaration on Aid Effectiveness. It adds to the

limited cross-referencing found in both conservation and development literature (Brockington & Scholfield, 2010b). Although Brockington and Scholfield (2010b:5) argue that "conservation is a form of development" both in the sense of orchestrating change and adaptation in societies and how conservation NGOs sometimes mitigate development projects, I consider the two fields as distinctly separate yet intricately connected. The IPBES (2019) Global Assessment Report underscores that 80% of the assessed SDG targets related to poverty, hunger, health, water, cities, climate, oceans and land will be undermined by the current negative trends in biodiversity and ecosystems.

Between the two, development finance is often the pacesetter and greater influencer of conservation finance. For example, the concept of innovative financing was adopted into conservation from development. It was used at the International Conference on Financing for Development in 2002, with the establishment of the Monterrey Consensus that called for the exploration of innovative sources of finance to fund the Millennium Development Goals. The idea was to raise "steady, predictable and concessional funding" (Sandor, Scott, & Benn, 2009:1) and like in conservation finance, it is popularised during global development events. Economic development is an important item in the agenda of development NGOs and like conservation organisations, it involves switching with the private sector. Considering that conservation finance often trails development finance, then without the need for experimenting in everything many lessons can be derived from observing development finance, e.g. in studying blended finance.

5.4 Recommendations

This thesis proposes a revised "blend" of conservation financing that "completes" the conservation networks by centring private individual donors together with public sector and private sector funders, the latter two that will continue to be important in the future. My first recommendation is to carry out experimentations with this new approach within different conservation finance organisations, supported by further research (see below). As explained above, I believe that the focus and resources dedicated to pursuing innovative

financial mechanisms should also be directed to the proven potential of private "ordinary" donors and realigned according to changes in their giving behaviour.

My research also shows that it is essential that large nature conservation organisations and other large networks organisations, like WWF, establish knowledge management expertise. What I encountered during my research at WWF was what has been termed "future positive" (Büscher, 2013; Edwards, 2013; Mosse, 2004), the focus on the vision of a better future and disregard of the past; e.g. excitement about the promises of market-based approaches and boredom with good-old fundraising (see above). The working atmosphere at the organisation was often harried, leaving little time for reflection on the past and collective learning. Knowledge management is "a discipline that promotes an integrated approach to identifying, capturing, evaluating, retrieving, and sharing all of an enterprises information assets...[including] databases, documents, policies, procedures, and previously uncaptured expertise and experience in individual workers" (Nicolescu & Lloyd-Reason, 2016:144). This includes the sharing of both explicit and tacit knowledge, success and failures, and is the linchpin of contemporary learning organisations (Webb, 2017). Knowledge management goes beyond storing and sharing knowledge to applying knowledge through feedback loops of learning and implementation. In addition, Andreeva and Kianto (2012) argue that knowledge management significantly increases an organisation's financial performance. Knowledge management is therefore pertinent for conservation organisations that undergo continuous changing internal and external discourses, dynamics and networks, within a highly competitive funding environment.

However, to achieve productive continuous learning, it is important to also create a "safe-fail" culture. Redford and Taber (2000:1568) observed that with conservation NGOs "the cycle of success is actively guarded—renewal of funding is contingent on success..[but] learning requires experimentation, and experimentation sometimes means failure". However, such culture should be extended beyond conservation organisations into the entire conservation networks, including nodes of private persons, public sector and private

sector. Donors should give room to organisations to learn from failures and not penalise them by withholding or reducing funding. In the long run a "safe-fail" culture combined with knowledge management, where failures and successes are shared, saves money, effort and time, all of which conservationists feel a shortage of as they race to "slow the juggernaut of biotic impoverishment" (Redford & Taber, 2000:1568).

5.5 Suggestions for Future Research

My research has only been able to address some of the pressing questions related to conservation finance. To begin with, several questions arise following the robust blended finance approach suggested in this thesis. I suggest future study into the relationship between changing demographics in many Western countries and its impact on the donations of nature conservation organisations. In 2018, a media research on 25 leading charities in the Netherlands found for the first time a drop in total revenues from private donations (van Uffelen, 2019). I also observed this drop in donations during my study of WWF and also a change in the giving behavior between their millennials and older members. Typical questions would be: How is the change in the giving behaviour of individual donors affecting the funding strategies of large nature conservation organisations? In addition, what are the future prospects of contributions from legacies and bequests with the expansion of the greying population in Western countries? I also suggest research that examines if there is increasing environmentalism among millennials compared to other generations, and how this relates to changes in their giving behaviour. Findings from these studies would be necessary for designing and implementing funding strategies for nature conservation that centre private "ordinary" donors.

Second, as this research focused on WWF the findings of this thesis would be furthered by doing a comparative study on funding strategies between other large nature conservation organisations, such as TNC and NatureVest or WCS. In addition, following the network analysis used in this thesis, the same concepts of programming and switching could be used to study other central nodes in conservation finance networks, specifically from the

angle of governments and corporations. Examples could also include multilateral lending institutions such as GEF or World Bank, and finance firms such as Credit Suisse and institutional investors involved in conservation finance.

My third suggestion for future research would be to complete the loop of flows of conservation finance by tracing them from their original sources of funding, through the conduits in which they move, to the places and projects where they end up. Following conservation financing in this way will provide greater insights than the fragmented way in which scholars typically study them. It will also add to knowledge about the missing dimension in this thesis, the "space of places". Mobilities studies offer an innovative way to do this kind of movement research. It refers to a "movement-driven social science in which movement, potential movement and blocked movement, as well as voluntary/temporary immobilities, practices of dwelling and 'nomadic' place-making are all conceptualised as constitutive of economic, social and political relations" (Büscher & Urry, 2009:100). Such a study should also trace all the other forms of flows, such as flows of documents, ideas, personnel and information, that move along with conservation finance in order to understand how they affect conservation finance's degree of motility i.e. potential for mobility (Urry, 2007).

Alternatively, future study could further the network analysis used in this thesis to understand how and to what extent networks pervade WWF where many of its country offices and projects are located. Elliot (2009:281) criticises Castells for "expanding the notion of 'networked communications' to breaking-point" arguing that the analysis is only applicable to expensive well-connected metropoles. However, Castells emphasises that the rise of "those populations and territories [segments of societies, areas of cities, regions, and entire countries] deprived of value and interest for the dynamics of global capitalism" (Castells, 2010c:373) is "inseparable from the rise of informational global capitalism" (Castells, 2010c:170). Further study is needed to see the value of a network analysis in understanding the dynamics at play in determining how and why conservation finance flows

to particular places or projects, while ignoring others (see chapter 2 under Funding Distribution).

Finally, I suggest to study the effect of affect in the decisions and processes of seeking market-based solutions to fund nature conservation. While conducting this research, I was often intrigued by the arousal of strong emotions from individuals and within teams discussing market solutions. This was particularly noticeable because the same individuals exhibited remarkably different emotions during other discussions. There seemed to be a relation between the emotions and if and to what extent market-based solutions would be considered. The tone of academic debates on market-based approaches reflect these strong emotions as well. Affect, whether positive or negative, integral or incidental, has been found to influence judgement and decisions (Peters et al, 2006). Certain kinds of affect "are pivotal to generating financial value and authorising particular circulations of capital"...while other kinds "incite resistance toward the financialisation of nature" (Ouma et al., 2018:504).

Final Remark

It has been 40 years since the World Conservation Strategy was published. It has been 40 years of missed opportunities to save global biodiversity. As the clock continues to tick, yesterday's warnings of species extinctions and threats to habitats are becoming proven realities today. Conservation requires the giving potential of the majority – the private "ordinary" persons – in combination with public and private sector financing, to break through into a post-2020 global biodiversity future where nature is appreciated, funded, conserved and used for the benefit of people and sustainability of biological diversity.

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SUMMARY

Summary

We are entering a turning point in the conservation of global biodiversity. The 2019 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Global Assessment Report proves that, except through transformative change, the sharp increase of species extinction rates in the past 50 years will continue into 2050 and beyond. The curtain is closing in on the 2011-2020 United Nations Decade on Biodiversity and ushering in a post-2020 Global Biodiversity Framework. Conservation efforts to combat species decline require significant increments in financing, a recurring issue that has been in discussion in all UN Convention on Biological Diversity (CBD) forums since its inception in 1992.

We have lived through a period marked by a paradox: against the background of overall decline and inadequacy of funding for nature conservation, the budgets of the five largest nature conservation organisations have been growing significantly since the 1990s to command over 50% of globally available conservation funding. Several attempts have been made to estimate the 'funding gap' between globally available funds and conservation needs, and to close it through innovative financial mechanisms. This has led to intensive societal and scientific debates with efficiency-oriented scholars taking an instrumental view on conservation NGOs with a focus on efficiency and the critical social science scholars perceiving conservation NGO's as integral to a "conservationist mode" of production that intertwines wildlife and biodiversity with capitalism. This thesis contributes to these debates through an alternative way of investigating conservation finance using the sociology of networks and flows theory of Manuel Castells. It focusses on World Wide Fund for Nature (WWF) to show how large nature conservation organisations maintain and expand funding for global biodiversity conservation. The central research question is therefore: *How does WWF, as an example of large nature conservation organisations, maintain and expand funding for global biodiversity conservation?* This question is addressed through the methodology of triangulation that included a thematic review, single case study (Yin, 2018), participant observation, document analysis and interviews.

Chapter 2 begins exploratorily with a thematic review of 64 peer-reviewed articles, published in the period 2010 - 2016, to find dominant themes recurring around the topic of biodiversity financing. Academic research on conservation finance is typically narrowed down to specific topics of interest and few studies provide broader overviews. As we approach the end of this UN Decade of Biodiversity there is great need to take stock of where we have come from so we can find inspiration for the future of conservation. This chapter contributes to this, also with the intention of finding an alternative sociological perspective of investigating conservation finance. It addresses the first research sub-question: *What major themes on funding for biodiversity conservation are covered by academic literature published since 2010?* The findings highlight three dominant themes recurring around the topic of biodiversity financing: underfunding, funding distribution and innovative financial mechanisms. These themes are interlinked so that the main challenge in biodiversity financing is not only inadequate funding, but that quite often available funds do not go where they are most needed. Instead conservation networks between dominant economic, political and social players play a crucial role in directing financial flows. A key finding was the importance of networks in conservation financing and this informed the choice for a new way of studying funding of large nature conservation organisations that would take cognisance of the complex social and political networks that determine how and where finances flow. I therefore turned to Manuel Castells network theory to develop and answer research sub-questions 2 and 3. Specifically, I make use of two key concepts of network-making power: programming and switching.

Chapter 3 focusses on public sector funding. The public sector is an important source of funding for biodiversity conservation. WWF's public sector funding constitutes about a fifth of the organisation's income and has great influence on the institutions that drive change. The research sub-question addressed in this chapter is: *How does WWF use networking to maintain and expand funding from public sources?* The findings show that WWF's public sector work has involved constant restructuring and re-strategising from an inwardly

oriented focus on increasing its own income to the ambitious goal of increasing income for all of global biodiversity by influencing public policy. This meant widening its scope to broader government engagement (through environmental mainstreaming) which translated to deeper private sector engagement. But WWF's public finance network was also influenced to reconfigure itself and its switching tactics by diminishing Official Development Assistance (ODA) funds, the Paris Declaration on Aid Effectiveness (revised in Accra 2008), the rise of emerging economies (Brazil, China, Russia, India) and graduated low middle income economies, transition of Millennium Development Goals (MDGs) into Sustainable Development Goals (SDGs) and pressure from some of its funding partners. Some of WWF's Programme Offices in developing countries gained new relevance in the organisation's network. WWF also forged new internal focal point coalitions and external connections in the following sectors: Development, Climate Change, 'Security'-based issues and Emerging Economies. WWF's programme increasingly incorporated a business-like discourse and development/SDG jargon, it worked at converting former 'enemies' into friends and formed internal forums to create 'bankable projects' and opportunities that would be attractive for businesses. This deeper private sector engagement coincided with growth in financing from the public sector at the average rate of 7.5% per annum. This suggests that adopting private sector discourse was productive in increasing public sector funding. WWF has to be in the "right networks", speak the "right language", and connect to "relevant flows". The conclusion is that large nature conservation organisations have to be malleable in their networking endeavours so that they are not only "switchers", but when necessary should be pliable to being "switched" by others.

Chapter 4 turns to private sector funding. The research sub-question addressed is: *What is the extent of corporate sector income into WWF and how does WWF maintain and expand it?* Conservation organisations, spearheaded by WWF, have voiced the necessity to give priority to the pursuit of private sector funding. Few studies have made attempts at estimating the sum of global private funds that go into nature conservation. But to my knowledge, no studies have been done to find how much private financing goes to a specific

large nature conservation organisation. Existing studies show that funds that come from market sources are minimal, predominantly ad hoc and mostly philanthropic. However, these studies confine their analysis to market-based income as a stand-alone category. In this fourth chapter the main argument is that market-based approaches cannot be separated from other financial networks and flows. I therefore situated corporate sector financing within the broader context of funding from other public and private sources to demonstrate its comparable contribution and found WWF's income from the corporate sector contributed an average 11% p.a. to total donated income between 2007-2017. In comparison, income from the public sector contributed an average 19% p.a. in the same period. The combination of income from all private sources, including the corporate sector, contributed an average 81% p.a. of WWF's total donated income. Individuals made the highest contributions to WWF (average 60% p.a.). WWF had approximately 2500 active corporate engagements between 2008-2018 but only 24% of these were involved in philanthropic activities. In this period WWF's corporate sector income grew by about €20m. In absolute terms corporate sector donations were highest in Europe but in terms of growth, grew fastest between 2012-2015 in Latin America/Caribbean.

However, by the time of this study ,WWF's experimentation with market-based approaches through 'bankable' projects has not yet generated any financial income. The main challenges in finding bankable projects are lack of scale, problems with finding investors at the risky start-up phase, lack of track record, and inadequate financial expertise, including poor knowledge of the investment industry by NGOs. These challenges are exacerbated by the following WWF-specific impediments: legal dilemma with a non-profit organisation receiving for-profit returns, strict organisational guidelines on engaging with corporations and internal diverging views on the ethics of market-based approaches. WWF's three main activities that target financing from the corporate sector are impact investing, leveraging with public sector financing institutions and Project Finance for Permanence (PFPs). I turn to the last activity to investigate how WWF circumnavigated its

challenges by analysing its hallmark PFP project, ARPA (The Amazon Region Protected Areas) for life.

ARPA for life attracted US$215 million in blended finance through strategic programming and switching. ARPA exemplified how networking opens up increased private and public sector funding and results in long-term nature conservation. This shows that programming should be accompanied by switching for it to be productive in materialising into financial flows. The conclusion is therefore that the future of innovative conservation financing largely depends on the dexterity with which nature conservationists are able to switch into the space of flows of pivotal public and private sector networks.

Therefore, to maintain and influence funding for nature conservation, WWF uses networking with both the public and private sectors. This involves switching to dominant governmental ministries, bilateral and multilateral organisations, emerging and graduated economies and the private sector that relates closely with them. In conformity to the principles, language and goals of these new connections, WWF goes through continuous cycles of programming and re-programming, changing its strategies, goals and discourse. It also reconfigures its internal networks, positions its main switches in strategic locations that are in close physical proximity to the "space of flows" of public and private sector financing, and positions itself in prominent roles within global funds. This networking process is two-way; WWF remains malleable in its networking endeavours so that it is not only a programmer and switcher, but is also pliable to being programmed and switched by other networks to stay relevant to their goals. Through these processes WWF has been successful in increasing its funding from the public sector at 7.5% p.a., while its income contribution from the corporate sector has remained low at 11% p.a. and stagnant. WWF's most important funding base is private small donors who contribute 40% of its income. In spite of spearheading market-based rhetoric, all WWF's corporate sector income is philanthropic and its "bankable projects" are yet to produce any income. However, through a blended finance model that combines programming and switching with both the public

and private sectors, ARPA for life became WWF's best funded project ever, bringing in US$215 million to protect 15% of Brazil's Amazon biome for at least 25 years. Based on these findings, I propose innovations in conservation financing that combine the time-tested reliability of private small donor funding with the potential of blended finance, that would also address both underfunding and poor distribution of conservation funds for future biodiversity conservation.

This thesis closes with chapter 5. This chapter situates the findings of this thesis within the ongoing debates for the post-2020 global biodiversity framework and current academic discussions to discuss three cross-cutting issues: Underfunding, Market-based approaches and Governance. The first discussion addresses the performativity and de-politicising effects of the discourse of underfunding of nature conservation, arguing that it produced two opposite and contradictory effects, first in constituting the 'funding gap' in ever expanding measures and secondly in expanding the funding of the largest nature conservation organisations. The second discussion points at the de-politicising and tunnel-vision effects of market-based approaches that obscures their significant multiplier effects on income from public funds and the evidence that private 'ordinary' persons significantly finance one of the world's largest nature conservation organisations. The third discussion focuses on the strong role played by the state in market-based approaches and goes against the notion of "governance without government" in nature conservation. Instead this thesis culminates in a proposal for a robust blended finance model that centres private persons alongside the public and private sectors. Through balance of powers this proposal hopes to address the concerns from critical scholarship while working with efficiency-oriented scholarship to bring about diversification of funding from proven sources. The chapter closes with reflections on the conceptual framework, methodology and context and provides suggestions for future studies and recommendations for WWF and other organisations. Research and experimentations with the proposed blended finance model highlighted by this thesis would prepare conservation finance for the post-2020 global

biodiversity future where nature is appreciated, funded, conserved and used for the benefit of people and sustainability of biological diversity.

Samenvatting

Er worden meer plant- en diersoorten met uitsterven bedreigd dan ooit in de menselijke geschiedenis. Het recente *Global Assessment Report* van het *Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services* (IPBES, 2019) toont aan dat deze trend zich zal doorzetten tot in 2050 en daarna, tenzij er een transformatie plaatsvindt. Tegelijkertijd is er steeds meer maatschappelijke en politieke aandacht voor het verlies aan biodiversiteit. Na de 2011-2020 *United Nations Decade on Biodiversity* gaat nu ook het *post-2020 Global Biodiversity Framework* van start. Tijdens de forums van de *UN Convention on Biological Diversity* (CBD) wordt al sinds de oprichting in 1992 gepleit voor grote financiële inspanningen om het uitsterven van plant- en diersoorten tegen te gaan.

De afgelopen decennia werden gekenmerkt door een paradox. Tegen de achtergrond van de algemene daling en ontoereikendheid van de financiële middelen voor natuurbehoud, zijn sinds de jaren 90 de begrotingen van de vijf grootste natuurbeschermingsorganisaties aanzienlijk gegroeid. Samen beheren ze tot meer dan 50% van de wereldwijd beschikbare financiering voor natuurbehoud. Er zijn verschillende pogingen ondernomen om de 'financieringskloof' tussen wereldwijd beschikbare en noodzakelijke fondsen in te schatten en te dichten door middel van innovatieve financiële mechanismen. Dit heeft geleid tot intensieve maatschappelijke en wetenschappelijke debatten tussen pleitbezorgers van efficiëntie met een instrumentele kijk op natuurbeschermingsorganisaties en meer kritische beschouwers ie deze organisaties zien als een integraal onderdeel van een '*conservationist mode of production*', die natuur en biodiversiteit met kapitalisme verweven. Dit proefschrift draagt op een alternatieve manier bij aan deze debatten door de financiering van natuurbehoud te onderzoeken met behulp van Manuel Castells' theorie over de netwerksamenleving. Daarbij richt ik me op het *World Wide Fund for Nature* (WWF), met haar Nederlandse tak Wereldnatuurfonds, om te laten zien hoe grote natuurbeschermingsorganisaties hun financiering behouden en uitbreiden. De centrale onderzoeksvraag is dan ook: *Hoe weet WWWF, als een voorbeeld van grote natuurbeschermingsorganisaties, haar financiering te behouden en uit te breiden ten behoeve van het behoud van de mondiale biodiversiteit?* Deze vraag zal worden beantwoord door gebruik te maken van verschillende onderzoeksmethoden.

Nu we het einde van dit *UN Decade on Biodiversity* naderen, is er grote behoefte om de balans op te maken, zodat we inspiratie kunnen opdoen voor de toekomst van natuurbehoud. Het tweede hoofdstuk draagt hieraan bij en behandelt de eerste sub-vraag van het onderzoek: *welke belangrijke thema's op het gebied van financiering van het behoud van biodiversiteit zijn behandeld in wetenschappelijke literatuur die sinds 2010 is gepubliceerd?* De resultaten laten zien dat in de wetenschappelijke literatuur steeds drie dominante thema's terugkomen: onder-financiering, de verdeling van financiering en innovatieve financieringsmechanismen. Deze thema's zijn met elkaar verbonden, aangezien niet alleen ontoereikende financiering een probleem is, maar ook de verdeling daarvan. Beschikbare financiële middelen komen vaak niet terecht waar ze het hardst nodig zijn. Dominante economische, politieke en sociale actoren en netwerken spelen een cruciale rol bij het aansturen van financiële stromen. De resultaten van mijn literatuurstudie bepaalden ook mede de keuze om in dit proefschrift de financiering van grote natuurorganisaties op een nieuwe manier te bestuderen: het analyseren van de complexe sociale en politieke netwerken die bepalen hoe en waar het geld terechtkomt. Om een antwoord te vinden op sub-vragen 2 en 3 van mijn onderzoek heb ik daarom gebruik gemaakt van twee centrale concepten in Manuel Castells' netwerk theorie: '*programming'* (programmeren) en '*switching'* (schakelen).

Hoofdstuk 3 richt zich op overheidsfinanciering. De publieke sector is een belangrijke financieringsbron voor natuurbeschermingsorganisaties. Overheidsfinanciering maakt ongeveer een vijfde van het inkomen uit van WWF. De deelvraag die in dit hoofdstuk wordt behandeld is: *Hoe maakt het WWF gebruik van netwerken om de financiering door publieke bronnen te behouden en uit te breiden?* Mijn onderzoek toont aan dat in relatie tot de publieke sector, WWF zich ontwikkeld heeft van een organisatie met een naar binnen gerichte focus op het vergroten van de eigen inkomsten, naar een organisatie met de ambitieuze doelstelling alle financiering van biodiversiteitsbehoud te vergroten door het beïnvloeden van het overheidsbeleid, ook op ander beleidsterreinen dan alleen natuurbehoud. Zo heeft WWF getracht haar financiering te vergroten door verbindingen te leggen (via '*environmental mainstreaming'*) met beleid op het terrein van ontwikkelingssamenwerking, klimaatverandering en veiligheid, en zich meer dan voorheen te richten op landen met opkomende economieën. Sommige van WWF's programma kantoren in economische sterk ontwikkelende landen werden daardoor belangrijker in WWF's netwerk. Maar WWF werd zelf ook weer beïnvloed door overheden, en genoodzaakt zichzelf opnieuw te programmeren en aan zich aan externe

ontwikkelingen aan te passen. Bijvoorbeeld, aan de vermindering van financiering uit fondsen voor ontwikkelingssamenwerking, aanpassingen aan de *Paris Declaration on Aid Efficiency* (herzien in Accra 2008), de veranderende rol van opkomende economieën (Brazilië, China, Rusland India), de overgang van de Millenniumdoelen naar de Duurzame Ontwikkelingsdoelen (SDGs) en de druk van enkele van haar financieringspartners. Mijn resultaten tonen ook aan dat WWF zich in toenemende mate bediende van een zakelijk discours en zich ook het ontwikkelings/SDG-jargon eigen maakte. Bovendien probeerde WWF vrienden te worden met voormalige 'vijanden', vooral uit het bedrijfsleven, en vormde het interne fora om projecten op te zetten en kansen te creëren voor samenwerking met bedrijven. Deze nauwe betrokkenheid met de private sector viel opmerkelijk genoeg samen met de groei van de financiering door de publieke sector, met gemiddeld 7,5% per jaar. Dit suggereert dat het aannemen van een zakelijk discours nodig was om de overheidsfinanciering te vergroten. Hiervoor moest WWF zich in de 'juiste netwerken' bevinden, de 'juiste taal' spreken en verbinding maken met 'relevante financieringsstromen'. Mijn conclusie is dan ook dat grote natuurbeschermingsorganisaties flexibel moeten zijn in hun netwerk inspanningen, zodat ze niet alleen zelf '*switchers*' zijn, maar wanneer dat nodig is ook plooibaar zijn om 'ingeschakeld' te worden door anderen.

Hoofdstuk 4 gaat over financiering door de private sector. De onderzoeksvraag die hier aan de orde komt is: *Wat is de omvang van de financiering door de private sector en hoe onderhoudt en vergroot het WWF deze financiering?*
Natuurbeschermingsorganisaties hebben, onder leiding van WWF, in de afgelopen decennia aangegeven meer prioriteit te willen geven aan financiering door bedrijven. Er zijn echter weinig tot geen studies die precies kunnen aangeven wat het aandeel is van de private sector in de financiering van natuurbeschermingsorganisaties. Bestaande studies tonen aan dat fondsen afkomstig uit de 'markt' vrij beperkt, overwegend ad hoc en meestal filantropisch zijn. Deze studies beperken hun analyse bovendien tot op de markt gebaseerde financiering als een op zichzelf staande categorie. Het belangrijkste argument in dit vierde hoofdstuk is dat deze op de markt gebaseerde benaderingen niet van andere financiële netwerken en stromen kunnen en moeten worden gescheiden. Ik heb daarom financiering door bedrijven binnen de bredere context van financiering uit andere publieke en private bronnen geplaatst om de relatieve bijdrage aan te tonen. Ik vond dat in de periode 2007-2017 de inkomsten uit het bedrijfsleven voor WWF gemiddeld 11% per jaar bedroegen. Ter vergelijking: het

inkomen uit de publieke sector droeg in dezelfde periode gemiddeld 19% per jaar bij. De combinatie van inkomsten uit alle private bronnen, inclusief het bedrijfsleven, droeg gemiddeld 81% per jaar bij aan het totale budget van WWF. Individuen leverden de hoogste bijdragen aan WWF (gemiddeld 60% per jaar). WWF had tussen 2008 en 2018 ongeveer 2500 actieve zakelijke activiteiten, maar slechts 24% hiervan waren filantropisch van aard. In deze periode stegen de inkomsten van WWF uit het bedrijfsleven met ongeveer € 20 miljoen. In absolute termen waren de donaties uit het bedrijfsleven het hoogst in Europa, maar groeiden deze donaties tussen 2012-2015 het snelst in Latijns-Amerika/het Caribisch gebied.

Ten tijde van dit onderzoek hebben de experimenten van WWF met 'vermarktbare' projecten dus nog geen substantiële financiële baten opgeleverd. Projecten zijn vaak te klein en NGOs ondervinden problemen met het vinden van investeerders in de risicovolle opstartfase. Ze hebben ook vaak geen aantoonbare ervaring en onvoldoende financiële expertise. Deze uitdagingen worden nog versterkt doordat WWF als een non-profit organisatie juridisch gezien geen *'for-profit'* bijdragen kan ontvangen, er strenge organisatorische richtlijnen zijn met betrekking tot omgang met bedrijven, en er interne uiteenlopende ethische opvattingen zijn over samenwerking met marktpartijen. De drie belangrijkste activiteiten van WWF die gericht zijn op financiering uit het bedrijfsleven zijn impactbeleggingen, het vergroten van private financiering door het te koppelen aan publieke financiering en het zogenaamde *Project Finance for Permanence* (PFP).

In het vierde hoofdstuk richt ik me ook op deze laatste activiteit door een succesvol PFP-project, ARPA (*The Amazon Region Protected Areas*), te analyseren. Door middel van strategische programmering en het koppelen van een aantal financieringsbronnen heeft ARPA 215 miljoen US dollar aan gemengde financiering aangetrokken om 15% van het Braziliaanse Amazonegebied gedurende 25 jaar te beschermen. ARPA illustreert hoe netwerkvorming kan leiden tot meer private en publieke financiering en daarmee tot natuurbehoud op lange termijn. Op basis van deze casestudy concludeer ik dan ook dat de toekomst van innovatieve financiering voor natuurbehoud grotendeels afhangt van de behendigheid waarmee natuurbeschermingsorganisaties financiële stromen van cruciale publieke en private sectornetwerken aan elkaar kunnen knopen.

Op basis van deze bevindingen stel ik voor om innovaties op het gebied van financiering de beproefde betrouwbaarheid van donorfinanciering door particulieren te combineren met andere publieke en private financieringsbronnen om hiermee tegemoet te komen aan de uitdagingen van de onder-financiering alsmede de ongelijke verdeling van financiering voor natuurbehoud.

Dit proefschrift sluit af met hoofdstuk 5. Dit hoofdstuk koppelt de belangrijkste resultaten van dit proefschrift aan lopende maatschappelijke en wetenschappelijke debatten. Een eerste punt van discussie gaat over de performativiteit van het discours van onder-financiering. Ik beargumenteer dat dit discours twee tegengestelde en tegenstrijdige effecten heeft opgeleverd. Aan de ene kant heeft het geleid tot een steeds grotere inschatting van het 'financieringstekort'. Tegelijkertijd heeft dit discourse bijgedragen aan een enorme toename van de financiering van de grootste natuurbeschermingsorganisaties. De tweede discussie richt zich op de depolitisering en de tunnel-visie effecten van de op de markt gebaseerde benaderingen. Door deze tunnel-visie wordt onvoldoende het (ook toekomstige) belang onderkend van belangrijke multiplier-effecten van publieke financiering en het feit dat private personen aanzienlijk bijdragen aan de financiering van WWF. De derde discussie richt zich op de rol van de overheid ten aanzien van marktgerichte benaderingen, en verzet zich tegen het idee van '*governance without government*' in natuurbehoud. In plaats daarvan resulteert dit proefschrift in een voorstel voor een gemengd financieringsmodel dat bijdragen van private personen centraal zet naast de publieke en private financieringsbronnen. Dit voorstel komt tegemoet aan zowel de critici van marktgerichte benaderingen als aan diegenen die een meer op efficiëntie gerichte benadering voorstaan. Het hoofdstuk sluit af met reflecties op het conceptuele kader, de methodologie en context en geeft suggesties voor toekomstige onderzoek en aanbevelingen voor WWF en andere natuurbeschermingsorganisaties. Vooral onderzoek naar en experimenten met het voorgestelde gemengde financieringsmodel, dat in dit proefschrift wordt benadrukt, kan bijdragen aan een toekomst waarin natuur wordt gewaardeerd, gefinancierd, beschermd en gebruikt op een manier die bijdraagt aan zowel de mens als aan biologische diversiteit.

About the Author

Nowella Anyango-van Zwieten is a lecturer at the Forest Nature and Conservation Group of Wageningen University and Research. She holds a Master's degree in Leisure, Tourism and Environment from Wageningen University and a Bachelor of Arts degree in Business Management from Moi University, Kenya. She has been part of a team of researchers commissioned by the Royal Dutch Embassy in Nairobi to carry out a study on aid investments in the tourism sector of Kenya's arid and semi-arid lands. She has also published in *Annals of Tourism Research*, *Biodiversity Conservation* and *Environmental Conservation* on themes ranging from payments for ecosystem services, human-wildlife conflicts, the locality of tourism expenditure and funding of nature conservation. She has been a reviewer for a couple of academic journals and is a member of the Conservation Finance Alliance. Nowella Anyango-van Zwieten has had a long career in Kenya's corporate world, taking on management roles in various sectors and volunteering in several local initiatives that target the youth, women and children.

Magdaline Nowella Anyango-van Zwieten
Wageningen School of Social Sciences (WASS)
Completed Training and Supervision Plan

Name of the learning activity	Department/Institute	Year	ECTS*
A) Project related competences			
Writing Project Proposal	WASS	2014	6.0
Systematic Approaches to Reviewing Literature	WGS	2015	4.0
Political Ecologies of Conflict, Capitalism and Contestation (PE-3C) - summer school	WASS	2016	3.0
Sociological Perspectives on Environmental Change, ENP32806	WUR	2014	6.0
Critical Perspectives on Social Theory	WASS	2015	3.5
'Tracing Conservation finances as Global Flows'	WASS PhD day	2015	1.0
'Topical themes in Biodiversity Financing'	GEO PhD days	2014 - 2019	2.0
Reading Group, Das Kapital (Karl Marx)	CSPS	2016	2.0
B) General research related competences			
WASS Introduction Course	WASS	2014	1.0
Tourism Captured by the Poor: Evaluation of Aid Investments in the Tourism Sector of Kenya's ASALs	GEO/Commissioned by the Embassy of the Kingdom of the Netherlands in Nairobi	2014	2.7
Tackling Transparency: the Methodological Challenges of Research on Disclosing Sustainability - summer school	ENP	2016	2.2
Data Management	WUR Library	2014	0.2
CSPS & WCSG PhD Writing Retreat (organiser and participant)	WASS	2018	1.0
Reviewing a Scientific Paper	WGS	2018	0.1
C) Career related competences/personal development			
Mobilising your Scientific Network	WGS	2015	1.0

Brain Training	WGS	2015	0.3
Infographics Workshop	ENP	2017	1.0
WASS Education Committee, independent PhD member	WASS	2016 - 2020	1.0
Guest Lectures: Sustainable Development Course , Globalisation Course, Qualitative Data Analysis	GEO	2017 - 2019	2.0
Supervision Masters theses	GEO	2016 - 2018	1.5
Co-organiser, GEO Landscape Conversations	GEO	2018/2019	1.0
Co-organiser, Workshops on “Balancing Sanity and Productivity in PhDs” for PhDs	CSPS	2017/18	1.0
Co-lecturer: Academic Publication and Presentation for Social Scientists	WASS	2020	0.5
Dutch language lessons (A2 level)	Dienst Uitvoering Onderwijs	2017	1.0
Total			**45.0**

*One credit according to ECTS is on average equivalent to 28 hours of study load

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