

Financing for Conservation

1. Introduction – Snow Leopard

The snow leopard is an integral part of the cultural history of Asia's mountain people. An indicator of strength, stealth and liberty, the snow leopard is revered in all regions where it is found. Snow leopard landscapes are more or less spared from large scale destruction of habitats, though the pressures today are immense. We stand at cross-roads today, where our high mountain biological, economic, and cultural resources are under siege due to unsustainable exploitation. Several threats such as illegal poaching, habitat destruction and climate change threaten the snow leopard and its ecosystem. At the same time, there is an incredible opportunity to ensure wildlife conservation into perpetuity and facilitate sustainable development at unparalleled spatial scales in the Asian mountains.

Improvement in the lives and livelihoods of local communities is a critical aspect of snow leopard conservation and preservation of Asia's mountains. Ensuring that human development in snow leopard landscapes is environmentally and socially sustainable is essential. The risk of not doing so is immensely high, and evident in the increased frequency of natural disasters in mountain regions in the wake of climate change, which make it critical to ensure ecologically sensitive and socially sustainable development efforts. **Thus, resource mobilization from diverse financial mechanisms is extremely essential to sustain conservation and sustainable development efforts.**

2. Threats to Snow leopards and its habitat

Snow leopards need vast areas to thrive but increasing human and livestock populations are rapidly infringing their habitat. New transport infrastructure (roads) and mines are also fragmenting their remaining range. The threats are further intensified by the impact of climate change on the fragile high-altitude ecosystem. Climate change not only poses a major threat for snow leopard and its prey, but also threatens the livelihoods of local communities and the tens of millions of people living downstream of these major watersheds.

3. Economic activity in Snow Leopard landscapes

Agro-pastoralism is the principal livelihood in most of the snow leopard landscapes. *The pastures in snow leopard habitat provide food for livestock, which are vital to the livelihoods of people— as well as some national economies of certain snow leopard range countries, such as Mongolia. In some areas, livestock is the primary or only source of income for mountain communities, as it is in China, Pakistan, and others. Traditional pastoral communities co-exist with and depend on biodiversity for food, fuel, fodder, and medicine. In Pakistan, for instance, 60 percent of mountain people are directly dependent on biodiversity*

– *GSLEP 2013*. The sale of medicinal plants and agricultural produce (such as from walnut fruit forests in Central Asia are critical to the livelihood of the snow leopard community) (for ex: walnut forests in Central Asia). Another growing sector in these landscapes is recreational tourism.

4. Conservation Financing

A report published in 2014 by Lincoln Institute of Land Policy, in collaboration with the GroundTruth Project, estimated that around 50 billion US\$ was spent on habitat and nature conservation, around the globe, with about 80% resources coming from government budgets and philanthropy. *“Even if public and philanthropic investment levels were to more than double to \$100 million per year, the level of investment by the private sector would still have to increase by a factor of 20-30 in order to meet the estimated total annual need of \$300 billion to \$400 billion”*

In order to increase investments, various models for resource mobilization/financing need to be evolved or strengthened. Traditional conservation funding mechanisms, such as a trust fund for conservation provide sustenance to national, regional and global conservation efforts. The Conservation Finance Alliance in 2008 defined conservation trust funds as *“private, legally independent grant-making institutions that provide sustainable financing for biodiversity conservation and often finance part of the long-term management costs of a country’s protected area (PA) system. They can serve as an effective means for mobilizing large amounts of additional funding for bio-diversity conservation from international donors, national governments and the private sector.”* There is also a need to enhance the proportion of corporate social investments in wildlife and landscape conservation (such as Corporate Social Responsibility in India).

Apart from trust funds and social responsibility schemes, there is a need to align conservation financing to market based instruments, such as green/climate bonds. Green bonds, as described by the World Bank, *“are fixed income, liquid financial instruments that are used to raise funds dedicated to climate-mitigation, adaptation, and other environment- friendly projects.”* The Climate Bonds initiative in 2016 estimated an investment of \$694 billion in climate aligned bonds globally. Although majority of the bonds were used for investments in energy, sustainable transport and infrastructure, there is ample scope for diversifying the market to involve biodiversity conservation, habitat protection and carbon sequestration. Revenue flow from snow leopard landscapes, as in the case of tourism can create a revenue model to support debt servicing on the green bonds. There may be additional requirements for sovereign guarantees as well as incentives in the form of tax exemptions.

Certain conservation projects which generate adequate, predictable and assured cash flows are amenable to bond financing. In such cases, debt servicing for these bonds can be readily achieved by income contracts for the sale of sustainably harvested forest produce, and payments for ecosystem services through economic valuation and monetization of resources. The case for bond financing of conservation projects is less convincing where revenue generation models are not well established. In such cases, it may be preferable to explore other models for conservation financing such as Government and Donor supported trust funds.

5. Aligning Policies for Green Financing

a) Identifying Green Ready versus Brown Sectors

- total audit of existing economic sectors that are ‘ready’ for green economy and identifying those sectors that are definitely remaining brown.
- outlining what the steps would be required to convert the green ready sectors including

transition costs (e.g. determining where and how many critical watersheds there are for improved management, industry relocation plan be implemented to preserve and protect the vulnerable areas, etc).

b) Green Transportation plans

c) Green Industry Parks

- ensuring renewable energy supply;
- ensuring requisite 'green' stipulations for waste management and resource use;
- ensuring buildings meet LEED Platinum standards;
- ensuring industrial infrastructure meets Best Practice & International Standards (including but not limited to IFC's guidelines; GRI's Foreign Direct Investment analysis; ISO14001; ISO26000; ISO50001; etc.)
- ensuring best practice in externalities measurement & reporting
- modeling these parks on international best-practices

d) Sustainable cities

- investing in creating Human Capital

e) Wild Zones management

- network of priority protected areas
- regional development plans around these wilderness areas
- livelihoods assessments to determine dependence and opportunities

f) Policy reform

Tax the "bads and not the goods".

Schemes that tax corporates higher based on their environmental and social externalities.

6. Possible areas of investments - High mountain ecosystem

- upstream hydrological assessments to determine value of mountain ecosystems and their role in providing downstream services to industries / agriculture / etc.
- Assessing impact of climate change on rural populations / strategies to improve resilience.
- Payments for Ecosystem Services schemes that charge e.g. 1 USD extra on every electricity bill to manage upstream watersheds.
- Assessments of climate change impacts and future impacts on hydroelectricity potential.
- Opportunities in green jobs creation based on a mapping on key industries and potential to "green" these industries or create new skills / enhancement through eco-tourism, etc.
- Agricultural assessment – exploring premium organic markets. Export increase to neighbouring countries / Western markets. Accessing certifications.
- Zero carbon footprint cities – Renewable Energy Sources
- Investment in human capital – university cities, tech / phone apps trainings

- High altitude adventure tourism – better marketing / visibility.

7. Financial Structures

We have evaluated three mechanisms for conservation financing to arrive at an appropriate model for financing snow leopard landscapes in a sustainable manner. The mechanisms under consideration include conservation trust funds, green bonds as well as private sector financing.

7.1 Conservation Trust Funds

A conservation trust fund is an independent legal entity and investment vehicle which helps to mobilize funds from multiple sources, manage the same and allocate these financial resources for bio diversity conservation and related sustainable development interventions. The advantage of conservation trust funds is that they provide strategic focus and predictable allocation of resources to projects. Their legal structure is wherein donors transfer the control of financial assets to a trustee who manages these assets on their behalf. The governance structure of the Trust has a Board, an administrative wing or secretariat, technical advisors and internal and external auditors. As a financing tool conservation trust funds (CTFs) can play a crucial role in ensuring an effective financing for both and short and long-term projects in conservation. Over the years, CTFs have become a robust biodiversity financing mechanism which provides long term financing for conservation and recently also for natural solutions to mitigation and adaption to climate change as well as sustainable development. They have also served as catalysts for the creation of new partnerships with private businesses for the conservation and sustainable use of biological resources

These funds may be further divided into:

1. **Endowment funds:** An endowment fund is an investment fund established to make consistent withdrawals from invested capital. In many of these funds, the principal is invested, and investment income is used to finance specified activities of projects. An example of an endowment fund is the Bhutan Trust for Environmental Conservation.

Bhutan Trust Fund for Environmental Conservation

It is the world's first environmental trust fund, established in 1992 as a collaborative venture between the Royal Government of Bhutan, United Nations Development Program, and World Wildlife Fund. An endowment of US\$20 million was set up as an innovative mechanism to finance conservation programs over the long term in Bhutan. Donors to the trust fund include the World Wildlife Fund and the Global Environment Facility, the governments of Bhutan, Denmark, Finland, the Netherlands, Norway and Switzerland.

The Bhutan Trust Fund for Environmental Conservation is an independent grant-making organization that uses its annual investment income to finance conservation activities such as sustainable forest management, protecting biodiversity while improving rural livelihoods etc. It also promotes measures to support populations most affected by loss of natural resources and biodiversity. It also partners with other civil society institutions and the private sector to promote environmental conservation.

2. **Sinking funds:** A sinking fund is designed to disburse both principal and investment income over a fixed period of time, which is usually long and covers the entire period over which funding is to be provided for activities or projects identified by the fund and/ or its donors. An example of sinking fund is Brazilian Fund for Diversity.

Brazilian Fund for diversity

The Brazilian Biodiversity Fund (Funbio), founded in 1996 on the strength of a USD 20-million donation from the Global Environment Facility (GEF), was created by the Federal Government and representatives from academia, civil society and the business community.

Environmental compensation is an important source of complementary resources for biodiversity conservation in Brazil. The instrument was established by Federal law 9,985/2000, known as the SNUC law (a Portuguese acronym for the National System of Protected Areas). Offset measures are required by the environmental licensing process, a public management instrument that controls the impact of human activities on the environment. In Rio de Janeiro, when a company applies to the State Institute for the Environment (Inea) for licenses, environmental impact studies are conducted to ascertain the amount that has to be paid. Once the offset payment is established, the company can: 1 — execute the funds directly 2 — hire another institution to do so 3 — sign up to the FMA/RJ of Funbio. It is the only instrument of its kind in Brazil, and constitutes a sound alternative for the effective, expeditious and transparent use of environmental compensation deposits at the state's Protected Areas (PAs).

3. **Revolving funds:** A revolving fund is created to ensure sustained availability of finance by facilitating inflows from various sources on a regular basis. For instance, inflows from special taxes levied regularly to pay for conservation programmes can be used to replenish the capital of the fund and provide a steady source of revenues to finance specific conservation activities. An example of revolving fund is Thai Energy Efficiency Revolving Fund.

Thai Energy Efficiency Revolving Fund

The Thailand Energy Efficiency Revolving Fund (TEERF) was established by the Government of Thailand and is managed by the Ministry of Energy, Department of Alternative Energy Development and Efficiency (DEDE). The objective of the TEERF is to provide access to capital for energy efficiency projects, increase awareness of energy efficiency opportunities and improve procedures and implementation of the projects.

The TEERF is funded by a petroleum tax which yields approximately US\$50 million per year. The TEERF provides credit lines to participating Thai banks on a full-recourse basis and at zero interest rate, with the condition that interest cost for the borrower can not exceed 4%. Six major Thai commercial banks have participated in the programme. The Fund initially (2003-2007) provided up to 50% of the project loan, with the balance component coming from the bank's own resources. The TEERF has successfully funded a number of energy saving projects since its commencement.

7.2 Green Bonds

Green Bonds have emerged as a new source of environmental financing since 2007. The functional strategy behind the evolution of green bonds is that investments are made in identifiable environmental assets which generate revenues that can be used for making interest payments and returning principal to the investors. The main advantage of the structure is that it provides a direct mechanism to fund environmentally oriented projects which generate benefits and in turn cash flows that go back to the investor. The World Bank and The European Investment Bank issued the first green bond in 2007. By the end of 2014 about USD 53.2 Billion green bonds were outstanding. However these green bonds just constitute a small fraction of the global bond market.

Despite seeming as an innovative financial mechanism for conservation, most of the green bond investments have been made in renewable energy projects. Some of the major issues in devising a strategy for investment in conservation is the challenge of putting an economic value to ecosystem services. Although several studies (IIFM 2015, TEEB) have made an effort to quantify ecosystem services, there is less clarity on execution of such cash flow models. Therefore, it may be premature to consider green bonds as a mechanism for financing snow leopard conservation.

7.3 Private Sector Investments in Conservation

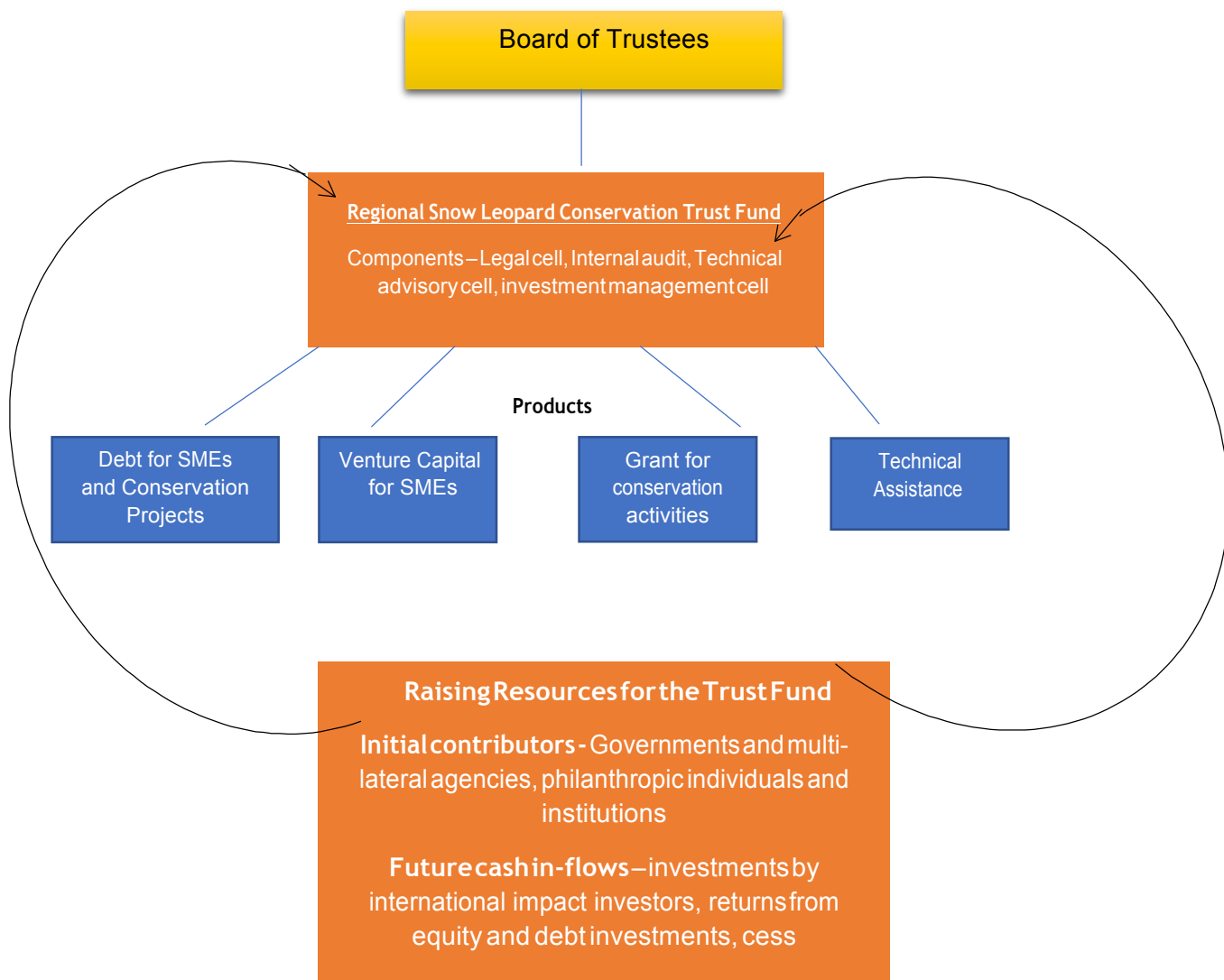
In countries like India, the mandatory Corporate Social Responsibility (CSR) regulation which mandates that corporates should invest a portion of profits for identified socially beneficial activities. It presents an opportunity for meeting funding gaps for conservation and livelihood projects. Apart from fulfilling mandatory and voluntary social commitments, industries can support conservation by incorporating sustainability measures in their production cycle/resourcing etc. Corporate houses can accentuate business models, that increase profitability, provide quality assurance and create an effective marketing mechanism for products derived from sustainable forestry practices. The Wildlife business councils (formed through industry consortium) may be a valuable tool for identifying common areas of investment interest and can lead to pooling of resources from different partners.

Private sector funding can come from three sources i.e. from corporates, foundations and investors. Snow leopard countries will need to put in place a policy framework to support participation by international private investors apart from international multilateral & bilateral donors. This calls for a need to develop new business and financing models for snow leopard conservation. There is a need to create appropriate business models for providing sustainable livelihoods to the local population. This may be done by setting up a venture capital fund, to provide seed capital and growth capital to incubate small and medium enterprises engaged in agro-forestry, eco-tourism and woolen textiles. This activity can be supported by global branding of snow leopard landscape produce, partnerships with global retail chains such as Walmart, Tesco, Amazon etc. and offtake arrangements with large food and textile companies.

8. Recommendations

- Based on the analysis of the above financing options, it is recommended that the snow leopard range countries along with multilateral agencies set-up a regional snow leopard conservation trust fund, with options for private sector capital flows to supplement the corpus of the fund.
- In order to promote business enterprises to support livelihood of local populace, it is recommended that a venture capital fund is setup, either as a separate entity or as part of the conservation trust itself.
- Identify international retail chains and global food companies, which can partner with the trust fund and the venture capital fund to promote products sourced from the snow leopard landscapes.
- Governments need to evolve mechanisms to share some revenues with fund such as cess on ecotourism, portion of sale tax/cess on agro-forestry and textile produce

Suggested Structure of the Regional Snow Leopard Conservation Trust Fund



9. Examples of global sustainability initiatives:

- I. ***USD 113 million pledged by the Global Environment Facility for the Amazon Sustainable Landscapes Program*** – The GEF allocated 113 million USD in 2015 to support the commitment made by Brazil, Colombia and Peru to protect 80% of the Amazon rainforest. It is expected that the three countries will be able to leverage an additional USD 682 million in financing over the next five years. Brazil has been a compelling case leading to this financing because it has reduced deforestation by 82% , demarcated 13% of land as indigenous and established protected areas on 27% of land (WWF, 2015).
- II. ***USAID pledges more than USD 30 million to boost Tanzania’s conservation efforts*** – USAID in 2015 pledged USD 30 million over the next five years to support Tanzania’s efforts in scaling eco-tourism and wildlife protection. In addition to the pledge, small grants totaling USD 2.75 million are to be disbursed by 2020 for anti-poaching activities and to promote innovation in wildlife management with partnerships from the private sector (Association for the Promotion of Tourism to Africa, 2015).
- III. ***The Inter-American Development Bank (IDB) is facilitating access to USD 450 million financing for energy efficiency in Latin America*** – As a part of this, USD 217 million is being provided through the Green Climate Fund for the creation of a regional Energy Efficiency Green Bond where an alternative financing mechanism for energy efficiency projects will be available through the issuance of green asset-backed securities in Latin America and the Caribbean (IDB, 2015)¹.
- IV. ***USD 80 million for mainstreaming climate resilient infrastructure in Bangladesh*** - A total sum of USD 80 million (USD 40 million from GCF, USD 15 million from German Federal Ministry for Economic Cooperation and Development, USD 25 million co-financing by Bangladeshi government) is being targeted towards flood protection benefitting 85,000 people (KfW, 2015). The initiative will not only construct cyclone and climate proof shelters as well as storm-proof access roads, it will also create 1,700 additional jobs and reduce transport costs by 20%².
- V. ***USD 30 million debt swap for Seychelles mobilised by the Nature Conservancy*** – USD 30 million of Seychelles’ debt to be transferred to a fund for the protection of marine areas for the sustainable development of a Blue Economy. Under the agreement achieved in 2015, Seychelles will be able to buy back over 90% of debt maturities owing to the Paris Club over the next six years at a discounted rate (State House, 2015)³.
- VI. ***Asian Development Bank plans USD 222 million urban water supply and wastewater management project for Fiji*** – USD 31 million of this amount has been provided by the GCF under adaptation and the rest will be raised through a USD 67.7 million loan from ADB and other sources. The project will build new infrastructure to clean water supply by 20% and boost wastewater treatment capacity by 200% benefitting 860,000 people, a third of the country (ADB, 2015)⁴.
- VII. ***Apple commits to building 200 megawatts of solar energy projects in China***
Apple’s commitment has led to one of its suppliers Foxconn also committing to building 400 MW of solar energy projects in China by 2018. Apple has also entered into a partnership with WWF China to source all its paper from sustainable sources and to invest in protecting 1 million acres of responsibly managed forests for paper, pulp and wood products in China (Apple, 2015)⁵.

- VIII. Ghana increases levy on petroleum to fund solar power projects** – In 2015, Ghana increased the levy on petroleum by USD 0.02 per litre. Additionally, a levy of USD 0.02 will be charged on per KWh basis on electricity transmitted. The revenue from both the levy's will be utilised partially to fund the Renewable Energy Fund with a focus on scaling solar PV. This plan has received strong support and additional financing of USD 40 million from the Climate Investment Funds (African Development Bank, 2015)⁶.
- IX. United Kingdom imposes levy on sugar, to be introduced in 2018** – The levy is expected to raise USD 749 million in the first year. The tax will be paid by producers and charged on products containing more than 5 grams of sugar per 100 ml, with a higher tax on products that contain more than 8 grams of sugar⁷.
- X. Gordon and Betty Moore Foundation's environmental conservation grants** – One of the major areas of funding for the Gordon and Betty Moore Foundation is environmental conservation. Cumulative amount disbursed by the foundation is USD 1.27 billion and about 1,009 grants⁸. Examples of some of the grants are:
- a. The Gordon and Betty Moore Foundation, announced a renewed commitment to its Andes Amazon Initiative with a new pledge of USD 100 million through 2020. The Andes Amazon Initiative helps reinforce and advance effective management of protected areas and indigenous lands across Brazil, Peru, Colombia, Ecuador and Bolivia⁹.
 - b. The Forests and Agricultural Markets Initiative - Seeks to scale deforestation-free production of beef and soy globally. This is planned to be achieved by leveraging the influence of multinational companies with sufficient market reach to set sourcing standards that encourage producers to adopt practices that prevent deforestation in the Amazon, Cerrado and Chaco regions. The first grant was awarded in 2013 and a total sum of USD 34,907,901 has been awarded till date¹⁰.
- XI. Investment towards Morocco's Noor 1 concentrated solar power plant by Climate Investment Funds** – The concentrated solar power plant of over 500 megawatts is being constructed and would be supplying power to over a million Moroccans by 2018. The project cost a total of USD 435 million which was provided by the Climate Investment Funds¹¹.
- XII. European Union's Euros 11.2 billion funding for urban mobility and clean transportation** – The EU funding from 2014-2020 is focusing on low carbon and energy efficient technologies with direct loans for projects (>25 million Euros) and intermediated loans for small and medium-scale projects. The funding also prioritises air quality, emissions reduction projects and urban environment when selecting proposals¹².
- XIII. Asian Infrastructure Bank** – The multilateral development bank will focus on the development of infrastructure and other productive sectors in Asia, including energy and power, transportation and telecommunications, rural infrastructure and agriculture development, water supply and sanitation, environmental protection, urban development and logistics, etc¹³.

1 <http://www.iadb.org/en/news/news-releases/2015-11-24/latin-america-boosts-energy-efficiency,11334.html>

2 https://www.kfw.de/KfW-Group/Newsroom/Aktuelles/Pressemitteilungen/Pressemitteilungen-Details_309568.html

3 http://www.statehouse.gov.sc/news.php?news_id=2692

4 <http://www.adb.org/news/adb-project-fiji-among-those-first-financed-green-climate-fund>

- 5 <https://www.apple.com/pr/library/2015/05/11Apple-Announces-New-Environmental-Initiatives-in-China.htm>
- 6 <http://www.afdb.org/en/news-and-events/article/ghana-receives-resounding-endorsement-of-investment-plan-to-transform-its-renewable-energy-sector-14234/>
- 7 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/470179/Sugar_reduction_The_evidence_for_action.pdf
- 8 <https://www.moore.org/programs/environmental-conservation>
- 9 [https://www.moore.org/article-detail?newsUrlName=moore-foundation-commits-\\$100-million-to-consolidate-and-amazon-initiative-conservation-gains](https://www.moore.org/article-detail?newsUrlName=moore-foundation-commits-$100-million-to-consolidate-and-amazon-initiative-conservation-gains)
- 10 <https://www.moore.org/initiative-strategy-detail?initiativeId=forests-and-agricultural-markets-initiative>
- 11 <https://blogs.worldbank.org/climatechange/empowering-greener-future>
- 12 http://www.mobilityweek.eu/fileadmin/files/Presentations/39th_Coordination_Meeting/Eu_commission_financing.pdf
- 13 <http://www.aiib.org/html/aboutus/AIIB/?show=0>