

Japan's private climate finance support: mobilising private sector engagement in climate compatible development

By Shelagh Whitley

At the UN Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) in Copenhagen in 2009 (COP15), developed countries committed to mobilise long-term climate finance to address the needs of developing countries until 2020. The Copenhagen Accord suggested that this 'funding will come from a wide variety of sources, public and private'. The High Level Advisory Group on Climate Change Financing (AGF) to the UNFCCC (among others) has since emphasised the need to mobilise private sector finance, a response, in part, to the scarcity of public resources (UNFCCC, 2010). This Background Note maps some of the different ways in which Japanese public finance is mobilising private investment in climate compatible development, and identifies some early emerging trends.

The Background Note is not intended to comment on the extent to which Japan is meeting its commitments under the UNFCCC. Instead, it highlights some considerations that need to be addressed if developed countries intend to report private finance as part of their overall climate finance commitments over time. While we have aimed to be comprehensive in our review, this paper is based on desk research and information that is publicly available on activities that mobilise the private sector and support climate compatible development. This breadth of sources is essential as there is, at present, no formal requirement for developed countries to report contributions that come from the private sector. The Background Note concludes by drawing out some lessons from the early mobilisation of Japanese funding that are relevant to climate compatible development.

It finds that Japan has a number of interventions through which it supports private sector action on climate change. The country's private climate finance support (PCFS) is often linked to programmes that are either co-financed by Japanese financial institutions, or that use Japanese technology or expertise. It is also tailored to the market conditions of recipient countries, and has an overwhelming focus on climate change mitigation, rather than adaptation.

What is private climate finance support?

Guidance on what may be considered as long-term climate finance under the UNFCCC can be found in a review of the wording of the Copenhagen Accord (and subsequent Cancun Agreements) (Stadelmann et al., 2011). This suggests that long-term finance should be:

- a. mobilised by developed countries
- b. provided to developing country parties, taking into account the urgent and immediate needs of those that are particularly vulnerable to the adverse effects of climate change
- c. balanced in allocation between adaptation and mitigation
- d. committed in the context of transparency on implementation, and
- e. scaled-up, new and additional, predictable and adequate.

These provisions are, of course, subject to further negotiation and agreement by Parties to the UNFCCC. It is reasonable to expect, however, that future decisions on long-term finance, including on finance from private sources, will be guided to some degree by considerations (a) to (e), listed above. The purpose of this Background Note is to

help build a more common understanding of the implications of these considerations for the mobilisation of private sector finance, and to review Private Climate Finance Support (PCFS), which we define as *finance resulting from developed country interventions to mobilise private sector participation¹ in climate compatible development (CCD)* (See Figure 1). For the purpose of reviewing developed country contributions of PCFS, we only consider criteria (a) to (c), as there is less clarity on how to interpret criteria (d) and (e).

The paper reviews PCFS within the following contexts:

1. developed country public flows to the private sector in developing countries
2. developed country private flows to the private sector in developing countries mobilised as a result of developed country intervention
3. developed country private flows to the public sector in developing countries that are mobilised as a result of developed country intervention.

Our review did not consider:²

4. developing country private flows mobilised as the result of developed country public sector intervention
5. developed country private sector flows to developing countries independent of direct developed country public sector intervention (including those that may be more indirect as a result of policy level interventions).

The exclusion of flows 4 and 5 is for ease of attribution of PCFS, however we acknowledge that a focus on PCFS that can be linked directly to the interventions of a particular developed country provides

only part of the picture. There may, for example, be demonstration effects (and others) of flows 1 to 3 that are not so attributable, directly, to a given contributor country. Finance may also be provided to support the enactment of enabling policies that drive investment in climate compatible development, which will also be critical in mobilising flows 4 and 5 at scale.

We also recognise that the five categories of financial flows that we have identified may be difficult to apply rigidly, given the global nature of the financial sector where developed and developing country based actors are partnering, increasingly, on interventions. Nevertheless, these categories are helpful in understanding the range of different public and private finance flows that need to be considered, as they help to identify useful lessons that are relevant to the consideration of long-term funding.³

Review of Japan’s private climate finance support

Japan is the only country to specify the level of ‘private finance’ pledged and mobilised as part of its reporting on Fast Start Finance under the UNFCCC. Its May 2011 report states that within its \$15 billion pledge, \$4 billion will come in the form of ‘private finance’, of which \$3 billion has ‘already been mobilised for assistance to developing countries’ (Delegation of Japan, 2011). The submission does not, however, define ‘private finance’, nor does it provide information on where the funds originated or the types of activities that have been supported.

Therefore, we reviewed information that is publicly available on government entities that are seen by the Japanese Ministry of Foreign Affairs (MOFA) as mobilising the private sector on climate change in

Figure 1: Private climate finance support

Private climate finance support:

1. developed country public flows to the private sector in developing countries
2. developed country private flows to the private sector in developing countries mobilised as a result of developed country intervention
3. developed country private flows to the public sector in developing countries that are mobilised as a result of developed country intervention

Excluded:

4. developing country private flows mobilised as the result of developed country public sector intervention
5. developed country private sector flows to developing countries independent of direct developed country public sector intervention (including those that may be more indirect as a result of policy level interventions)

*also excludes other public co-financing

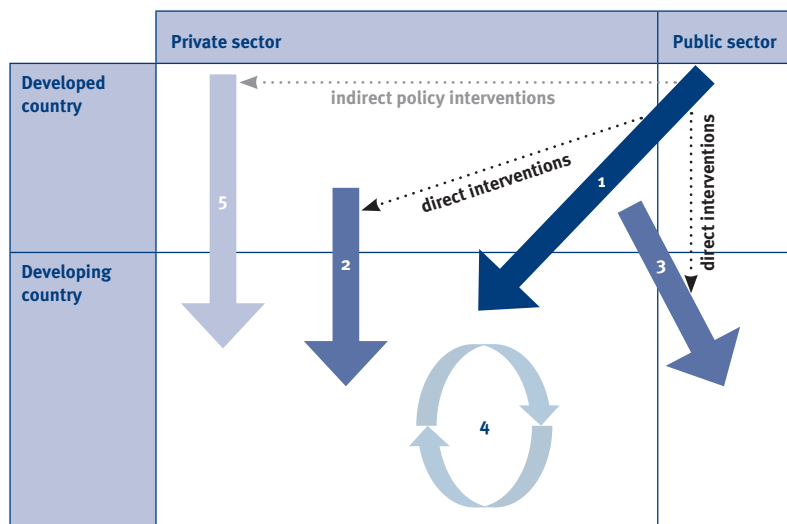


Table 1: Main actors in Japan's Private Climate Finance Support (PCFS) in 2010 and 2011
(as of December 31, 2011 - see Annex 1 for disaggregated figures)

Entity	Role	Number of activities identified	Aggregate PCFS (US\$ million)
Japan Bank for International Cooperation (JBIC)	JBIC is the international arm of the Japan Finance Corporation (JFC), administered by the Ministry of Finance. It acts as both a public financial institution and export credit agency, and its main purpose is to promote economic cooperation between Japan and other countries. The bank is wholly owned by the Japanese Government, and operates in 18 countries with 21 offices. In March 2009, JBIC launched the LIFE Initiative (Leading Investment to Future Environment) to support environmental investments by governments and the private sector in developing countries. In March 2010 this commitment was expanded under the GREEN Initiative (Global action for Reconciling Economic growth and Environmental preservation), which supports projects in developing countries that significantly reduce GHG emissions and seeks to mobilise private funds.	7	2,619
Nippon Export and Investment Insurance (NEXI)	NEXI is an incorporated administrative agency under the Ministry of Economy, Trade and Industry (METI), and provides trade and investment insurance services to facilitate and enhance Japanese companies' international business. NEXI has offices in Paris, New York and Singapore as well as Japan. In 2008, NEXI launched 'Trade and Investment Insurance for Preventing Global Warming' which covers up to 100% of political risks for exports and projects that contribute to climate mitigation.	4	348
New Energy and Industrial Technology Development Organization (NEDO)	NEDO is Japan's largest public management organisation promoting research and development as well as the deployment of industrial, energy and environmental technologies. NEDO has offices in Washington DC, Paris, Beijing, Bangkok, Jakarta and New Delhi as well as Japan. Most of its budget is provided by METI.	1	295
Japan International Cooperation Agency (JICA)	JICA is an independent Japanese governmental agency that coordinates official development assistance (ODA). It is mandated to assist economic and social growth in developing countries, and the promotion of international cooperation. In 2008, JICA merged with the part of JBIC that extends concessional loans to developing countries, making it one of the largest bilateral development organisations in the world with a network of 97 overseas offices, and projects in more than 150 countries. JICA provides Climate Change ODA Loans, with concessional terms based on the recipient country's Gross National Income (GNI) per capita. These are provided to governments and to state-owned companies that may have some level of private ownership.	2	541
MOEJ	Ministry of Environment Japan	1	39
Total		15	3,842

developing countries. These include the Japan Bank for International Cooperation (JBIC), the Nippon Export and Investment Insurance (NEXI), the New Energy and Industrial Technology Development Organization (NEDO), the Japan International Cooperation Agency (JICA), and the Ministry of Environment of Japan (MOEJ) (Table 1). We did not review PCFS provided through multilateral channels.

Analysis of the activities of these actors in 2010 and 2011 identified a number of interventions to mobilise the private sector that have the mitigation of climate change in developing countries as their primary or secondary goal. Information was reviewed to determine the private finance flows mobilised, wherever any private sector flows could be linked explicitly to public flows. The full list of projects and programmes and associated levels of funding is presented in Annex 1, and identifies \$3.8 billion in PCFS. Though it is not clear if Japan meant to include all of these interventions in its accounting to the UNFCCC, the results do indicate interesting trends in the way Japan is working with the private sector toward low carbon development, and reveal trends that may apply to the PCFS space more broadly.

Table 2: Summary statistics - Japan's Private Climate Finance Support (PCFS)
(as of December 31, 2011)

Metric	Values
Total PCFS identified (see Annex 1 for disaggregated figures)	\$3.842 billion
PCFS provided by:	
Public sector	91%
Private sector	9%
PCFS by level of development of recipient:	
Upper middle-income countries (UMICs)	25%
Lower middle-income countries (LMICs)	63%
Low-income countries (LICs)	12%
PCFS by targeted climate activity:	
Mitigation	100%
Adaptation	0%
PCFS by sector:	
New fossil fuel-based generation	47%
Renewable Energy (RE) / Energy Efficiency (EE) / Water (other clean technology)	53%
PCFS provided to:	
Privately-owned recipient (or public/private)	89%
Publicly-owned recipient	11%
PCFS to recipient entities that:	
Have some level of local ownership	82%
Have no local ownership	18%
PCFS to recipient entities that:	
Have some level of Japanese ownership	38%
Locally or foreign-owned (not Japanese)	62%

Table 3: Japan’s PCFS measured against the UNFCCC considerations for climate finance

Considerations for climate finance	Implications for PCFS
(a) Mobilised by developed countries	<p>There is, as yet, no definition of the term ‘mobilised’ under the UNFCCC agreement. We have, however, attempted to review public flows to the private sector, and the resulting private flows that can be attributed most directly to those public flows.</p> <p>The distinction between private sector actors and flows as ‘developed’ vs. ‘developing’ is not straightforward, as the country of origin for a private sector actor could be determined by any number of factors including: country of incorporation / registration, location of headquarters, or primary stock exchange listing. For the purpose of this study we have used the country of location of primary headquarters.</p> <p>The majority of the PCFS identified is from the Japanese public sector (91%), with 9% from private sector actors including Mizuho Banking Corporation, Sumitomo Mitsui Banking Corporation, Bank of Tokyo-Mitsubishi UFJ, Credit Agricole (France), Citibank (US), Mizuho Corporate Bank, Sumitomo Trust and Banking Co., BNP Paribas (France), ING Bank N.V. (Netherlands), and HSBC (UK).</p>
(b) Provided to developing country parties, taking into account the urgent and immediate needs of those that are particularly vulnerable to the adverse effects of climate change	<p>The definition of those countries ‘particularly vulnerable to the adverse effects of climate change’ has not been agreed under the UNFCCC. It is anticipated, however, that all of the recipients of Japan’s PCFS will be located in developing countries.</p> <p>Reviewing the interventions with specific country level mandates, Japan’s PCFS is found to be directed primarily to LMICs (63%), then toward UMICs (25%), and finally to LICs (12%).</p>
(c) Balanced in allocation between adaptation and mitigation	<p>The concept of ‘balanced in allocation’ has not been defined under the UNFCCC agreements, and it is not clear if this balance should be achieved at the global level, at the donor or recipient country level, or across specific types of finance (for example public vs. private finance).</p> <p>However, Japan’s PCFS interventions are targeted primarily toward mitigation⁴, with no specific adaptation activities identified. Over 45% of the PCFS identified is directed toward new-build super-critical coal-fired power plants in Indonesia.</p>

Competitive advantage through PCFS

The most striking trend that emerges in reviewing the PCFS interventions in Annex 1 is that Japan supports recipients that are either co-financed by Japanese financial institutions or that support the deployment of Japanese technologies and/or expertise in a particular developing country. This is further highlighted in the summary statistics in Table 2, which show that 62% of the PCFS is targeted to recipients that are at least partially Japanese owned. Given the nature and mission of the actors involved in Japan’s PCFS (Table 1), this is no surprise. It also resonates with public statements made by the MOEJ, the Japanese industry body Keidanren, and JBIC, which have all emphasised that the country’s mission in financing clean energy projects overseas is to expand Japanese exports, create jobs in Japan, and spur the development of Japanese technologies (MOEJ, 2011; Keidanren, 2011; Sato and Tanaguchi, 2010).

Japan is seeking competitive advantages through its PCFS activities. Facing natural resource constraints, the Japanese Government wants to promote the export of value-added products, including low carbon technologies and services. In addition, as domestic low carbon industries face increased price competition from China and South Korea, there is likely to be increased pressure on the Japanese Government from manufacturers who want a slice of the climate finance pie to support exports.

Given the increasingly difficult global economic climates within High Income Countries (HICs), and the levelling of the playing field with the fast growing MICs, this raises additional questions about the implications of potential competition between

providers of PCFS for stakeholders in recipient developing countries, and for global cooperation on climate change.

Bespoke approaches seem to reflect local market conditions

Japan uses many of the different interventions that have been identified as potential tools to mobilise the private sector in climate mitigation in developing countries. These include the provision of untied loans, concessional two-step loans, project finance loans, political risk guarantees, project finance guarantees, overseas investment and loan insurance, and funds for local capacity building and feasibility studies (Sierra, 2011; Patel, 2010; Brown and Jacobs, 2011). It appears that interventions are tailored to the level of market maturity in the recipient country and, to some degree, to the level of involvement of Japanese actors.

As highlighted in Table 3, Japan’s interventions in low-income countries (LICs) are minimal, and are limited to a MOEJ project in Cambodia, JICA’s solar power capacity building work, and a Climate Change ODA Loan to a geothermal project in Kenya (see Annex 1, interventions 13, 14 and 15). In all cases, the projects in LICs involve procurement from Japanese equipment providers, and no financial support is provided to local actors. It is not clear why Japan limits its PCFS in LICs in this way, but this may be because of the same barriers that impede local private sector development in these countries, such as immature markets and uncertain regulatory environments.

Japan’s interventions in lower- middle-income countries (LMICs) account for most of the MOEJ’s bilateral

offsetting crediting mechanism (BOCM) activities (see Annex 1, intervention 15). Under the BOCM, Japanese research and consulting firms are completing feasibility studies on the potential design and implementation of carbon emission reduction projects. Japan is also involved in LMICs through NEXI in the provision of investment and loan insurance in Indonesia, Viet Nam, and Jamaica (see Annex 1, interventions 8, 9, 10 and 11). This insurance provides protection against the political and commercial risks of the projects that are higher in less developed countries and for new low carbon technologies. It is not clear from the available information if this broader insurance coverage is being provided on commercial or concessional terms, but the facility has consistently targeted projects where the investors are Japanese and where most recipients come under some level of Japanese ownership.

Japan uses higher risk and innovative financing approaches in upper- middle-income countries (UMICs) such as Brazil, Turkey, and India, where JBIC is providing untied loans to public and private financial institutions alongside Japanese private financial institutions (see Annex 1, interventions 1, 3 and 4). According to the JBIC website, untied loans are ‘not conditional on procurement of equipment and materials from Japan, and finance projects and programs primarily in developing countries’.

These untied loans are provided to local recipient financial institutions for on-lending to domestic Energy Efficiency (EE) and Renewable Energy (RE) projects. This approach has been pioneered by the European Bank for Reconstruction and Development (EBRD) through its Sustainable Energy Finance Facilities (SEFF), which has deployed almost \$2.55 billion (€2 billion) to local financial institutions since 2004 (EBRD, 2011). The use of untied loans in UMICs may stem from both the availability of bankable projects in these countries and the fact that they are often less tolerant of tied aid.

Although this study is restricted to PCFS disbursed in developing countries, NEXI and JBIC are also active in high-income countries (HICs). NEXI provides trade insurance in Iceland and New Zealand (geothermal projects) and Spain (solar projects) where Japanese companies supply financing and technology. In South Korea, JBIC provides an export loan for efficient Japanese power generation equipment to be used in the iron and steel industry, and in the United Arab Emirates it invests in a clean technology private equity (PE) fund. It will be interesting to determine if, as countries develop, they move up a type of value chain in terms of PCFS interventions. This could start with capacity building in LICs, move through the provision of grants and concessional loans in LMICs, and eventually toward more sophisticated and higher risk interventions such as co-financing and insurance on commercial terms, and PE investment in UMICs and HICs.

Synergies with multilateral activities and across the Japanese portfolio

Though Japan has tried to help its own industries gain a competitive advantage in its PCFS activities, it is also mobilising the private sector in coordination with other HICs through its contribution of \$322 million to the Clean Technology Fund (CTF), and \$34 million to the Global Environment Facility (GEF) (Climate Funds Update, 2011). For example, JBIC is providing an untied loan to Deniz Bank, Turkey, for energy efficiency investments, which receives funds for the same programmes under the Turkey SEFF, financed by the CTF and the EBRD.

There are also potential synergies across Japan’s portfolio of PCFS activities. NEXI provides untied loan insurance to the Sumitomo Mitsui Banking Corporation (SMBC) for the Song Bac Hydropower Project in Viet Nam, and this project has also been nominated under Japan’s BOCM. JBIC provides a loan for Hitachi technologies to be deployed in a water project in the Maldives, while NEXI provides overseas investment insurance for the same project.

Finally, Japan is taking a multi-intervention approach in Indonesia and Viet Nam, where JBIC, NEXI and JICA provide loans for infrastructure development (RE, EE, transport, and flood management), policy and institutional support (in the development of investment regulations and EE labelling systems), and capacity building in the development of Nationally Appropriate Mitigation Actions (NAMAs) and in Measurement, Reporting and Verification (MRV). JICA has specifically recommended this synergistic approach of using multiple interventions in a single country to the Green Climate Fund, seeing it as a better way to meet the needs of the private and public sector actors (Inada, 2011). Many analysts have encouraged the use of suites of coordinated interventions and combined financing to address climate change (Brown et al., 2011; AGF, 2010; Hosier et al., 2010).

Conclusions

Japan has initiated a number of significant programmes to support private sector action on climate change. Many of these programmes remain in their early stages, and include important elements of innovation whose impact will need to be monitored and evaluated over time as implementation proceeds. This Background Note presents an early effort to synthesise information on these initiatives to advance global understanding of the different ways in which public finance is being used to mobilise private sector action on climate change.

In completing research for this paper, we have observed that it is often difficult to find information on PCFS in the public domain. More specific information on how PCFS is being disbursed at the project and investment level would help inform analysis of

the effectiveness of countries' PCFS contributions, and apply specific lessons learned to the design of future interventions. The collection of such information would be an appropriate priority for emerging monitoring and evaluation of climate change finance.

Achieving the delicate balance between commercial confidentiality and the disclosure required of public funds is a challenge that will face all actors deploying PCFS, as their stakeholders seek to achieve both private financial and public goals of addressing climate change. Parties to the UNFCCC have yet to adopt a common reporting format for climate finance, though the adoption of such a framework might allow more complete, comparable, and transparent assessment of the provision of climate finance. If progress is made in agreeing such a framework, there is likely to be a need to consider whether and how to include private finance in such frameworks (particularly given that some countries, including Japan, already include private finance in their climate finance reporting). This initial analysis has highlighted the following trends from Japan's PCFS, with some general lessons and implications for international climate finance:

- Japan provides PCFS only to recipients that are either co-financed by Japanese financial institutions or which deploy Japanese technologies and/or expertise and appears to be seeking competitive advantage through its PCFS activities. If this competitive approach is replicated in other developed countries, it may have significant implications for recipient countries and for global cooperation on climate change.
- An estimated 89% of Japan's PCFS is directed toward LMICs and UMICs. This is likely to be because of the greater opportunities to invest in mitigation that exist in these countries, the existence of a policy and regulatory environment that more easily fosters private investment, and a reasonable level of readiness to absorb finance. Only 11% of the PCFS identified from Japan is spent on activities in LICs. This initial trend may evolve over time, and will be useful to monitor as programme implementation evolves.
- Japan appears to have been tailoring its PCFS activities to match local market and policy environment maturity. It will be interesting to determine if this could provide a replicable model for what private

sector interventions to use when and where. This could start with capacity building in LICs, move through the provision of grants and concessional loans in LMICs, and eventually toward more sophisticated and higher risk interventions such as co-financing and insurance on commercial terms, and PE investment in UMICs and HICs.

- Japan has used multiple PCFS interventions in a number of countries. JICA has recommended this approach to the Green Climate Fund, and as outlined above, several studies have encouraged the use of suites of coordinated interventions and combined financing within a given country to address climate change. It is important to track the effectiveness of these 'blended packages' against that of isolated interventions.
- All of Japan's PCFS appears to be targeted toward mitigation programmes and projects, with no PCFS directed specifically to adaptation activities. It is unclear at what level (global, donor, recipient, or flow) the balance between mitigation should be achieved under the UNFCCC agreements, but this early review suggests that PCFS flows to adaptation activities may be limited at present. This may be because of the current challenges in defining what constitutes adaptation interventions and the implications this has for understanding the specific contributions that can be made by the private sector. Similarly, many countries are still at the relatively early stage of identifying and incorporating climate related risks and vulnerabilities within their national planning processes. As these progress, private sector investments in adaptation are likely to be better understood.

Further reviews of the PCFS interventions of the US, UK, and Germany seek to provide further evidence relevant to the issues and questions that have emerged in the context of this review of Japan's PCFS.

Written by Shelagh Whitley, ODI Research Fellow (s.whitley@odi.org.uk). The author is grateful for support and advice from Neil Bird, Smita Nakhoda and Isabella Massa of ODI, and Koji Fukuda from the Institute for Global Environmental Strategies (IGES). This Background Note replaces a previous version published by ODI in February 2012, which has been updated to reflect on the complexities of mobilising private climate finance in the context of UNFCCC negotiations.

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Endnotes

1. Within the definition of PCFS, 'private sector participation' includes both private sector investment and private sector provision of goods and services.
2. For the purpose of this research PCFS for a given country also excludes all co-financing by other public sector actors (other countries).
3. Future research will look more closely at the nature of these various flows.
4. As there is currently no agreed UNFCCC definition of what constitutes climate finance for either mitigation or adaptation this further complicates an accurate assessment of whether PCFS is meeting these broad UNFCCC criteria.

Annex 1: Japan's Private Climate Finance Support (PCFS) in 2010 and 2011

No.	Public sector funder	Private sector funder(s) / participant(s)	Financial instrument	Year	Recipient entities / countries	Sector(s)	Total amount – million US\$ (including co-financing)
1	JBIC - GREEN Initiative	Mizuho Banking Corporation (MHBC), Sumitomo Mitsui Banking Corporation (SMBC), and Bank of Tokyo-Mitsubishi UFJ (BTMU) providing co-financing	Untied loan, JBIC provided guarantee for co-financed portion and \$180 m	2011	Brazil's public Banco Nacional de Desenvolvimento Economico e Social (BNDES)	Renewable Energy (RE)	300
2	JBIC - GREEN Initiative	BTMU and MHBC providing co-financing	Untied loan, JBIC provided guarantee for co-financed portion and \$180 m	2011	The Corporación Andina de Fomento (CAF) Latin America's public/private development bank	RE	300
3	JBIC - GREEN Initiative	SMBC providing co-financing	Untied loan, JBIC provided guarantee for co-financed portion and \$120 m	2011	ICICI Bank (private Indian bank)	RE, Energy Efficiency (EE) and other environmental projects	200
4	JBIC - GREEN Initiative	MHBC providing co-financing	Untied loan, JBIC provided guarantee and \$12 m	2010	Deniz Bank (Turkish private bank)	RE and EE	up to 20
5	JBIC – LIFE Initiative	BTMU, SMBC, MHBC, BNP Paribas Bank (BNPP), Crédit Agricole Corporate and Investment Bank (Crédit Agricole), ING Bank N.V. (ING), and Hong Kong and Shanghai Banking Corporation, Ltd. (HSBC), providing co-financing	Project financing loan agreement, JBIC provided funds and a political risk guarantee for the co-financed portion	2010	PT Paiton Energy (private Indonesian company) in which Mitsui and Tokyo Electric Power Company, Inc. (TEPCO) have equity stakes	Supercritical coal fired power plant	1,200
6	JBIC – LIFE Initiative	BTMU, SMBC, MHBC and ING providing co-financing	Project financing loan agreement, JBIC provided funds and JBIC and Korea Eximbank provided a political risk guarantee for the co-financed portion	2010	P.T. Cirebon Electric Power (Indonesia – private company) Marubeni Corporation has an equity stake	Supercritical coal fired power plant	595
7	JBIC – LIFE Initiative	MHBC providing co-financing	Loan	2010	Hitachi Plant Technologies implementing via Male' Water and Sewerage Company Private Limited (Maldives)	Water supply and sewerage system operation project	4 (0.3 billion yen) * This is the value of the only reported JBIC investment to the Maldives in 2010
8	NEXI	Funding provided by MHBC	Overseas investment insurance	2010	Hitachi investment in water supply and sewerage system operation project in the Maldives	As above	Not available

Annex 1: cont'd

No.	Public sector funder	Private sector funder(s) / participant(s)	Financial instrument	Year	Recipient entities / countries	Sector(s)	Total amount – million US\$ (including co-financing)
9	NEXI	Funding provided by SMBC and Crédit Agricole	Overseas untied loan insurance	2011	Underwriting loans provided by SMBC and Credit Agricole Corporate Investment Bank to Braskem S.A. in Brazil	Upgrade for Green Polyethylene (Green PE) Plant. Part of the Green PE is sold to Toyota Tsusho Corporation.	200 (credit facility insured)
10	NEXI	Funding provided by MHBC and Citibank	Overseas untied loan insurance	2010	Underwriting loans provided by MHBC and Citibank Japan to the Jamaica Public Service Company	Hydropower project expansion in Jamaica	98 (loans provided)
11	NEXI	Funding provided by SMBC	Overseas untied loan insurance	2010	Underwriting a loan from SMBC to the private Song Bac Hydropower Joint Stock Company in Viet Nam	Hydropower project in Viet Nam	50 (loan provided)
12	NEDO	Promotion of private sector participation in Japanese technology development projects, support for private research and development efforts and dissemination of newly developed technologies.	Relevant NEDO programmes include: 1) National Projects, Energy and 2) New Energy and Energy Conservation Introduction and Dissemination Activities	2010	Activities in China, Indonesia, Malaysia, Morocco, Tunisia, Turkey, and Viet Nam	Smart grid, intelligent transportation systems, zero energy building (ZEB), water treatment, solar cooling and heat, pumped-storage, wind power, waste power generation, and smart communities	295 (23 billion yen) * Total funds for both programmes is 91.6 billion yen including for initiatives in developed countries (25% of that has been included here as an estimate of funds to developing countries)
13	JICA	Participation of Kansai Electric Power, Sharp Corp., Sanyo Electric, Kaneka Corp., Kyocera Corp., and Osaka Gas Co.	JICA partnered with the Kansai Economic Federation (a region which has a number of solar power companies) to implement training on solar power, targeting government administrators for energy conservation and alternative energy in developing countries.	2010	Afghanistan, Belize, Burundi, Cambodia, Djibouti, Egypt, Gabon, Ghana, Laos, Malawi, Marshall Islands, Micronesia, Mongolia, Nepal, Pakistan, Palestinian Authority, Syria, Tajikistan, Tonga, Uruguay, and Yemen.	Goal is to formulate solar power projects that can be financed by grant and loan aid from JICA	154 (12 billion yen) 34% is to Least Developed Countries (LDCs)
14	JICA	Kenya Electric Generating Company Limited (30% of company is publicly listed)	ODA Loan	2010	Kenya Electric Generating Company Limited (KenGen)	Olkaria 1 Unit 4 and 5 Geothermal Power Project	387 (30 billion yen)
15	Ministry of Environment, Japan (MOE)	24 Japanese Research Entities (research organisations and consulting companies)	Feasibility studies for Bilateral Offset Crediting Mechanism (BOCM) projects	2011	30 projects in: Thailand (5), Indonesia (5), China (3), Viet Nam (3), Mongolia (2), India (2), Sri Lanka (2), Lao, Malaysia, South Africa, Angola, Cambodia, Mexico, Colombia and Brazil	Under the BOCM, Japan provides low carbon technologies, products and services, to developing countries and the reductions are used by Japan to meet its domestic emission reduction target.	39 (3.04 billion yen in FY2011 budget plan)

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This Background Note has been funded by UK aid from the UK Government, however the views expressed do not necessarily reflect the UK Government's official policies.

