POLICY BRIEF

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Practical measures to promote Japanese local governments' environmental collaboration with developing countries with citizens' support

Key messages

- The global community is expecting local governments to play an increasingly important role in promoting sustainable development. However, the ability of local governments to do so, especially in some developed countries, may be weakening due to a possible decline in citizen interest and support as well as worsening fiscal and other constraints.
- Particularly in Japan, some local governments that have capacity and international orientation have been actively engaged in international environmental cooperation with developing countries in the past, but now they are under increasingly severe fiscal constraints, and concerned about whether citizens will support further collaboration.
- This policy brief argues that there are several ways for Japanese local governments with sufficient capacity to continue or begin such international cooperation, in areas such as environmental business promotion, environmental education, and reduction of GHG emissions using international carbon crediting. This applies particularly to prefectures and larger cities.
- Capable Japanese local governments may also consider encouraging citizens to take voluntary actions such as individual carbon offsets and participation in eco-point programmes to generate modest additional funding for international environmental collaboration.
- The results of a survey of citizens in two large Japanese cities which have a history of involvement in international environmental cooperation suggest that citizens in these kinds of cities may be likely to support the measures proposed here.
- Local governments should maintain appropriate citizen consultation mechanisms, similar to existing ones in the field of waste management and recycling, to maintain citizen support as well as obtain ideas for improving implementation or new opportunities for international environmental collaboration.

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I Introduction

Cities and local governments are increasingly expected to play a key role in sustainable development. This may also include international environmental cooperation even though normally local governments do not have a mandate to do this. Asian national governments are calling for cities to contribute more to international environmental cooperation[1]. In Japan, some local governments that have accumulated local experiences and human capital for environmental management, and/or which have an international orientation, as well as sufficient fiscal capacity, have in the past engaged in international environmental cooperation[2]. Technical cooperation projects with the participation of those Japanese local governments have made some meaningful contributions to cities and local communities in developing countries[3]. However, it is becoming difficult for these Japanese local governments to continue international cooperation due to several reasons, including increasing fiscal constraints, and concern about whether citizens will continue to support it. There has also been a decline in Japan's official development assistance (ODA) budget, which has supported local governments' international cooperation activities in the past.

This policy brief aims a) to outline several practical measures for local governments to engage in international environmental cooperation for Japanese local governments, b) to introduce possible financing mechanisms for international environmental cooperation, and c) to provide evidence from a survey of local citizens that the proposed options could attract the support of local citizens. These measures for international environmental cooperation include maintaining traditional technical cooperation, strategic integration with environmental business promotion, linkage with environmental education and eco-point programmes, as well as carbon crediting and individual carbon offsetting[4]. These recommendations are aimed mainly at prefectures, large designated cities and some committed small cities that have an interest in international environmental cooperation[5].

2 Japanese local governments' international environmental cooperation: Changing motivations and means

Of 47 prefectures and some 800 cities in Japan, 43 prefectures and 23 cities have engaged in at least some form of international environmental cooperation activities since the 1980s[6]. A number of the prefectures and cities have been engaged in rather extensive activities, including the establishment of intercity networks. The main forms of cooperation have been technical assistance including training officials from developing countries in Japan, and dispatch of Japanese local government expert officials to developing countries[7]. Concretely, the traditional modality of international environmental cooperation by Japanese local governments has been providing knowledge and expertise for technical assistance projects implemented by the Japan International Cooperation Agency (JICA). Financial assistance, including grants

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1 The High Level Seminar on Environmentally Sustainable Cities, held in Jakarta, Indonesia in March 2010 under the East Asia Summit Environment Ministers Meeting, indicated that the formation of Environmentally Sustainable Cities is a priority in Asia, and in particular, it recommended strengthening support for intercity networks.

2 See Nakamura et al.. 2011, for details.

3 See Fujikura, 1997, Nakamura, 2011. Kitakyushu city's contribution to environmental planning and management in Dalian, China and municipal organic waste management in Surabaya, Indonesia and other regions in Southeast Asia are conspicuous ones among others.

4 In this policy brief, carbon crediting means utilisation of carbon credits by governments and corporations who manage their own carbon accounts, while individual carbon offsetting means utilisation of carbon offset services by individuals without carbon account management by users.

5 The examples of these local governments include the prefectures of Tokyo, Osaka and Fukuoka, and the cities of Kitakyushu, Kawasaki, Osaka, Fukuoka, and Yokohama. Note that Tokyo's government is formally similar to a prefecture, and Osaka and Fukuoka have both a city government as well as a parallel prefecture-level government.

6 Ibid.

7 Ibid.

and loans, has not been a focus of cooperation at the local level.

Recently, some Japanese local governments have sought to reorient their international environmental cooperation to put greater emphasis on its contribution to overseas business development for local companies although international environmental cooperation of Japanese local governments has tended to focus on providing environmental benefits in developing countries[8].

3 Financing international environmental cooperation by local governments

It is desirable to consider the use of new financing sources for local governments' international environmental cooperation[9]. In the past, international environmental cooperation by local governments was mainly funded by general budgetary funds from the national or local governments, and/or included in kind contributions of staff time of local government officials[10]. However, the availability of these funding sources is expected to significantly diminish in the future. Therefore, if local governments and their citizens want to continue international environmental cooperation, new sources of revenue will be needed. Possible financial sources may include ones specifically raised for international environmental cooperation as well as ones raised for various other environmental management purposes. It is also important to understand that these sources could be used for other purposes, so that using them for international environmental cooperation, as discussed here, would need a specific decision to do so.

For promoting greenhouse gas (GHG) emissions reductions, the main possible options to increase the available financing for this cooperation include carbon crediting and voluntary carbon offsets. Some GHG reduction mechanisms are specifically for low-carbon development. Carbon crediting is a market mechanism which involves obtaining GHG emissions reduction certificates in return through purchasing or other contribution. Another market mechanism is voluntary carbon offsets conducted by citizens[11]. These have never been used as a tool of international environmental collaboration by Japanese local governments.

Options that are not specified for GHG emissions reductions include utilising part of the funds raised through local environmental levies and eco-points. For instance, since 2003, more than half of the Japanese prefectural governments have introduced local levies to protect forest or water resources, and some of them use part of the funds raised by the levy to support citizens' volunteer works for forest protection[12]. Fiscal constraints at both national and local levels as well as decentralisation of government functions have led local governments to develop and implement their own financing mechanisms. For example, Kitakyushu City has used part of *kankyo mirai zei* (local industrial waste dumping levy) for international environmental cooperation since 2005[13].

Eco-points, which are money-like rewards for citizens carrying out environmentally-friendly activities with support of local businesses, can be linked to environmental activities more generally, not just low-carbon development, and they can be used to fund international environmental cooperation, when the programme allows citizens to donate points for it and the participating private companies agree to this. Table 1 summarises the options discussed here for financial sources for international environmental collaboration.

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[8] Nakamura, 2010.

[9] Nakamura and Kato, 2011a.

[10] Nakamura et al., 2011.

[11] Though individual carbon offsetting does not necessarily mean financing local governments' international environmental cooperation, it could be coordinated and/or promoted by local governments, and hence this option is also discussed in the paper.

[12] See Akita prefectural government (2006)

[13] Kitakyushu City, 2011b.

Table 1: Possible new financing sources for local governments' international cooperation for low-carbon development and local environmental management

	From local government budget	Direct from citizens
Mechanism for GHG reduction	●Carbon credits	●Individual voluntary carbon offsets
General mechanism	●Government budgets (national or local) ●Part of local environment fund raised through local levies	●Eco-point programmes

Carbon credits could be used to partly meet the stated GHG emissions reduction targets of local governments. Local governments' utilisation of the credits could be considered as an extension of national government's utilisation of carbon credits under the Kyoto protocol, or in terms of regional carbon accounting, since all prefectures and designated large cities as well as 38 medium sized cities in Japan have estimated their regional GHG emissions as a basis of regional climate policy[14]. These local governments have a basis to incorporate credit utilisation into regional carbon management.

Some committed Canadian and US local governments have already engaged in international emissions trading[15]. Japanese local governments could learn from these experiences in terms of credit management.

Public support for these various financing mechanisms may differ depending on the preferences of individual citizens. For instance, on one hand, some might think that domestic GHG reduction projects should be prioritised instead of carbon crediting because they think that either tax revenues shall be used domestically or that the use of carbon credits is seen as evading the obligation to reduce GHG emissions domestically. On the other hand, some may support carbon credits because of potential cost efficiencies, long-term contribution to the development of Japanese environmental businesses overseas, and technology transfer to developing countries.

4 Potential for citizens' support of international environmental cooperation by local governments

Survey evidence suggests that Japanese citizens may support continued international environmental cooperation by local governments, although there is some variation in levels of support for specific types of measures. This section reports survey results on citizens' attitudes regarding international environmental cooperation by their local governments, mainly focusing on low-carbon development, including their views on the appropriate purposes, and it addresses implications for possible measures for future international environmental cooperation. A mail-based randomly assigned social survey was conducted in 2010 in two large Japanese cities, Kitakyushu and Yokohama. Both cities have an extensive record of international environmental cooperation and are two of 13 nationally designated Eco Model Cities in Japan, which are committed to low-carbon development. A comprehensive survey in other prefectures and large cities that may have capacity and intention of international environmental activities in Japan is not available, but this one still provides useful insights.

[14] As of August 2011. Medium sized cities refers to "chukaku shi" (core city) with population greater than 0.3 million and "tokurei shi" (special city) with population greater than 0.2 million.

[15] See Western Climate Initiative, 2011.

Citizens' general support of international environmental cooperation by local governments

Overall the citizens in Kitakyushu and Yokohama cities support the idea of international environmental cooperation by their local governments. More than 80% of respondents in each city either agreed or somewhat agreed when they were asked if the city they reside in should continue international environmental cooperation (Fig.1)[16], although there could be selection bias since people who disagree might be more likely to not respond to the survey. Another limitation is that if the citizens had been asked to select important policy areas among various possibilities, they might have prioritised areas other than international environmental cooperation, as suggested in the result of a social survey conducted by Kitakyushu city[17]. Interestingly, the more the citizens were aware of, or had knowledge of, the city's international environmental cooperation projects, the more clearly they supported the city's continuous cooperation, while younger people tended to have less knowledge about the city's international environmental cooperation projects[18].

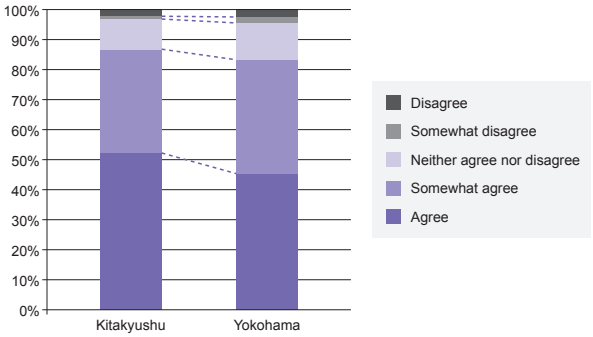

Fig 1: Distribution of answers to the question asking if the city should continue international environmental cooperation[19]

Citizens' views on purposes of international environmental cooperation by local governments

Citizens of the two cities generally agreed that the goals of promoting environmental education, international business linkage and environmental improvement in developing countries all justify international environmental cooperation. In particular, there was strong support for cooperation in areas with direct benefits to the respondent's city. Almost 70% of the citizens supported the idea that it is important to link international environmental cooperation with environmental education in the city, while around 40% of citizens agreed that it is important for international environmental cooperation to be useful for overseas business development and supporting employment in the city. Support was also strong for the goal of responding to trans-boundary environmental pollution (68%), although this question was asked only in Kitakyushu city, which possibly suffers from pollution coming from other countries.

Interestingly, there was also significant support for cooperation to improve environmental conditions in developing countries, even without direct benefits to the citizens' own city. This view was held by around 50% of respondents from Kitakyushu and 60% of the respondents from Yokohama.

Citizens views on possible new financing mechanisms

Table 2 summarises the implications of the survey results for the possible financing mechanisms of carbon credits, voluntary carbon offsets, and eco-point programmes for international environmental collaboration. The results suggest that the mechanisms for GHG reduction would probably be generally supported by the citizens. Regional collaboration through carbon crediting to help Japanese local governments achieve their reduction targets could be conducted either domestically or with developing countries, or both; citizens preferred a balanced approach including carbon crediting both with domestic partner regions as well as with developing countries. More specifically, respondents recommended that around 20% of the reduction should be from carbon credits (half from

[16] Nakamura and Kato, 2011a.

[17] "Promotion of exchange in Asia and city development to accommodate citizens with various nationalities" was ranked 25th as "policy area that should be enhanced further" among 33 policy items listed in the questionnaire (Kitakyushu City, 2011a). The number of subjects was 1,941 and the response rate was 65%.

[18] Nakamura and Kato, 2010b.

[19] The questionnaire was sent to 1,757 adults in each city. Response rates were 38% for Yokohama and 39% for Kitakyushu.

Table 2: Implications of survey results for new financing mechanisms for international environmental cooperation and local level environmental management

Options	Strengths	Weaknesses
Carbon credits	Mostly supported when it is low cost and domestic and international carbon crediting is conducted simultaneously.	Citizens with a strong sense of environmental responsibility are not likely to support.
Individual voluntary carbon offsets	Citizens that have not used offsets seem willing to consider participation.	Citizens with a strong sense of environmental responsibility are not likely to support.
Eco-point programmes	Citizens with a sense of environmental responsibility may be willing to consider participation.	Citizens who are already engaged in eco-point programmes tend to not prefer donation of eco-points for international cooperation.

domestic partner regions and half from developing countries), while 80% of reductions should come from the city itself,[20] assuming that carbon crediting has a lower unit cost of emissions reduction. Citizens who appreciated the benefits of technology transfer and local environmental improvement in partner regions through carbon crediting preferred more collaboration with developing countries. Most citizens had a preference for lower total cost of GHG emissions reduction, except for citizens with a strong sense of environmental responsibility, who believed the city should reduce emissions without using carbon credits. These citizens would support additional efforts by their local government for GHG emissions reduction in developing countries going beyond the local government's target.

The survey also conducted an experiment to assess respondents' preferences regarding the use of offsets by offering them 500 yen[21] of survey remuneration, and asking whether they preferred to receive cash or use it for offsetting[22]. In the survey, around 40% of the respondents chose to use the 500 yen to offset 100kg CO_2eq of daily GHG emissions. The credits issued from clean development mechanism (CDM) in developing countries were used for this offset and certifications were sent to the respondents after offsetting. Carbon offsetting was not widely known among general citizens yet at the time of the survey. Around half of the respondents knew about carbon offsets before participating in the survey but only 1% had actual experience using them. The follow-up survey, which asked why respondents chose or avoided carbon offsets, also found that personal carbon offsets were avoided by some citizens who believe that it is unethical and irresponsible even if it could contribute to low-carbon development in developing countries.

The survey also suggested that citizens may support using an eco-point programme to help fund future international environmental cooperation by local governments[23]. For example, in a typical case, a shopper might earn JPY50 of eco-points for not using a store's plastic shopping bag 20 times. It is estimated that the collected donations would be maximised if JPY5 is donated to international cooperation (about 10 percent of the eco-points) and the customer accepts only

[20] Nakamura and Kato, 2011b. The respondents were asked to select one preferred combination for ratios of domestic credits, international credits, and reduction within the city among six options in two different cost scenarios: (0%, 0%, 100%), (0%, 20%, 80%), (5%, 15%, 80%), (10%, 10%, 80%), (15%, 5%, 80%), (20%, 0%, 80%).

[21] Around 6.4 USD as of December 2011.

[22] Nakamura and Kato, 2012a.

[23] Kato and Nakamura, 2011.

JPY45 cash-back[24]. The estimated potential annual amount that could be raised in Kitakyushu city, which has a population of 1.0 million, is between JPY 1.0 and 4.2 million, depending on the participation rates of citizens in the eco-point programme. This amount is not necessarily a very large amount in absolute terms, but it is equivalent to the current local government budget for international environmental cooperation projects. However, the support of the retail businesses participating in the eco-point programmes is also needed to realise this option. Citizens with a strong sense of environmental responsibility may support using some of the proceeds of the city's eco-point programme for international collaboration, although citizens who have past experience participating in the existing eco-point programme generally do not prefer to use a large amount of funds from it for international cooperation. In both Kitakyushu and Yokohama cities, citizens who were concerned about the various problems in developing countries and supported international environmental cooperation by their cities of residence, tended to express a greater willingness than others to participate in eco-point programmes which donate some money overseas.

Local governments' use of carbon credits through collaboration with developing countries has the advantage of producing larger reduction of GHG emissions with the same budget given that the reduction cost is lower compared to locally implemented reductions. Alternatively local governments could achieve the reduction target with less expenditure when using credits. At least the possible utilisation of carbon credits would raise the issue of the cost-effectiveness of low-carbon development policies in the city/region. The disadvantage is that local governments cannot achieve low-carbon buildings, transport and community development just by using credits with partners outside of their jurisdictions.

The advantage of individual carbon offsets and eco-point programmes for international collaboration is that there might be a possibility for local governments to raise funds for international environmental cooperation through voluntary donations, which are complementary to, or could even substitute for, funds raised through taxation and national governmental subsidies. The weakness of these approaches is that ordinary citizens may not be very willing to participate[25]. Moreover, the total amount of revenue may not be very high, and it may be unstable.

5 Possible measures that may be supported by citizens

Japanese local governments which are considering engaging or continuing to engage in international environmental cooperation, mainly prefectures and large cities, could consider the following measures with a reasonable expectation of citizens' support: technical cooperation, linkage with environmental education, linkage with environmental business, new carbon credit mechanisms, individual carbon offsets, and eco-point programmes. However, carbon credit mechanisms and individual carbon offset might not be supported by specific citizens with a particularly strong sense of environmental responsibility.

Continuing technical cooperation

Since most citizens in the survey consider that it is important for international environmental cooperation activities to contribute to environmental improvement in developing countries, local governments can probably continue traditional technical cooperation such as training of local government officials from developing countries in Japan. Therefore, continued collaboration with the JICA remains significant. Since low-carbon development requires more multi-stakeholder institutional development compared to traditional areas of cooperation, such as wastewater treatment and solid

[24] The participation rate declines the larger the portion of the donation is used for international cooperation, and this decreases the total revenue raised by the programme.

[25] Twelve percent (12%) of respondents in Kitakyushu and fourteen percent (14%) of respondents in Yokohama stated that they had donated money for philanthropic and environmental activities overseas in the course of the year before the survey.

waste management where individual technology management is the focus of capacity development, the Japanese local governments' coordination role among various stakeholders should be shared by partner local governments in developing countries.

Linkage with environmental education

Closer linkage between international environmental cooperation and environmental education in the city/region can be recommended, given the high rate of support for this measure by citizens. Continuing the current practice of inviting trainees from developing countries as guests in elementary and secondary education as part of environment and/or development education is desirable. It would also be possible to integrate trainees from developing countries with training programmes in higher education programmes at the universities in the cities where such programs exist.

Linkage with environmental business

Closer connection of international environmental cooperation with promotion of overseas business development for local businesses could also be a way forward[26], although it was not a response of the majority of citizens in the survey. Kitakyushu city has clearly intended this objective from the beginning of its history of international cooperation. Yokohama city's new strategy to promote international environmental business since 2011 is also in parallel with this approach, although its past international environmental cooperation was not especially focused on business development[27]. This measure could be considered by some other local governments that have accumulated local experience and local human capital experienced in environmental management, such as the prefectures of Tokyo and Osaka as well as the cities of Osaka, Fukuoka and Kawasaki[28].

Recently, public-private partnerships (PPPs) focusing on the water business are one example of an emerging business opportunity for Japan to benefit from Asian economic growth and environmental infrastructure development in collaboration with local governments[29]. Development of a platform among the relevant private entities and local governments is a way to exchange information and promote collaboration. The role of Japanese local governments in this partnership would be to provide credibility to Japanese private companies dealing with foreign governments based on their past relationship with local governments in developing countries.

Carbon credits, individual voluntary carbon offsets, and eco-points

Local governments could consider utilisation of carbon credits from developing countries to partly meet their own GHG emissions reduction targets (around 10% for instance), although this measure may not be fully supported by all citizens. The cost of carbon crediting should be lower than that of GHG emissions reduction in the city. Citizen support for these measures increases when they include benefits for developing countries and when the credits are issued both in Japan and in developing countries. Therefore, international carbon crediting programmes should include simultaneous carbon crediting from both domestic and international partner regions in order to maximise citizen support. To find partner regions and projects issuing credits, local governments could consult and collaborate with the Carbon Offset Association whose members include Japanese carbon offset providers. To find domestic partner regions, local governments could obtain relevant information from the Japan Carbon Action Platform, supported by Ministry of the Environment, in which some local governments have already participated. Management of credits can be a natural extension of GHG emissions accounting that

[26] One option for linking business and international cooperation is the base-of-the-pyramid (BOP) business model since it is often difficult to directly transfer Japanese technologies and management to developing countries without localisation. See Kato, 2011, pp. 232-241.

[27] Forty one percent (41%) of the respondents in Yokohama said that it is important to contribute to overseas business development for local environment companies when the city conducts international environmental cooperation. Citizens' attitudes are in line with the city's new strategy.

[28] The analysis which identifies these prefectures and cities is in Nakamura et al., 2011.

[29] See the city's press release for the case of Yokohama: http://www.city.yokohama.lg.jp/kankyo/kisha/h22/110106-1.html.

is already in practice for all prefectures and large cities. Still, some citizens with a strong sense of environmental responsibility believe that emission reduction measures to achieve the city's stated emission targets should be implemented only within the city. This preference might be modified or influenced by greater recognition of concrete budget implications[30] of the higher cost of meeting the city's targets if only city-based measures are used[31].

Another method of collaboration that could be considered by local governments is providing matching grants for some individual citizens' voluntary carbon offsets to encourage their offsetting of extensive GHG emissions[32], in order to support initial market development for personal carbon offsets. Local governments could also look into developing specific carbon offset programmes with sister/partner cities/regions in developing countries from which they can obtain the credits for offsets, working with international intercity networks such as ICLEI-Local Governments for Sustainability and CITYNET, as well as carbon offset providers referred by the Carbon Offset Association.

Local governments could examine utilising eco-point programmes not only for encouraging citizens' environmentally friendly actions at the local level, but for contributing to international environmental cooperation activities in developing counties, though the amount of revenue that could be raised is relatively small. Incremental administration costs are not large when there is an existing eco-point programme. One of the strengths of this measure is that local governments could earn a small amount of money that can be used without significant constraints. Another benefit is possible enhanced engagement by the citizens with a sense of environmental responsibility. They would be more likely to participate in an eco-point programme that brings environmental benefits to both the city and developing countries, since the benefits are realised through their direct actions, without compromising their beliefs.

Capacity of local governments

Local governments that have sufficient fiscal and personnel capacity and intention to conduct international environmental cooperation could maintain or introduce the measures presented above. Local governments require two types of capacity to execute international environmental collaboration: a) personnel capacity with expertise in specific environmental policy and management and language ability, and b) organisational capacity to introduce new programmes within the local government and coordinate with stakeholders within and outside of the local government. To conduct conventional technical cooperation, local governments that have personnel capacity could respond to requests from JICA to share their experiences with developing countries, utilising the schemes managed and funded by JICA. It would be easier when such cooperation is a training course conducted in Japan where professional language support service for local government officials is available through JICA. As for linkage with business or education, task coordination or reallocation among the relevant departments would suffice. In addition, local governments with organisational capacity, such as Kitakyushu and Yokohama, have shown the ability to create and implement new programmes, exemplified by Kitakyushu Asian Center for Low Carbon Society and Yokohama Partnership of Resources and Technologies (Y-PORT) respectively. The existing organisational capacity of selected local governments could be used to introduce and manage new mechanisms such as carbon crediting and eco-point programme. It should also be noted, however, that generally, the personnel and organisational capacity of local stakeholders such as private companies and NPOs are also important for implementing international environmental cooperation.

[30] For example, a reduction in city services.

[31] This point was not asked in the survey.

[32] This idea is similar to grants for purchasing energy efficient appliances, light emitting diode (LED) bulbs, household photovoltaic (PV) systems, etc. An analysis of the effects of local governments' subsidies can be found in Nakamura and Kato (2012b).

6 Conclusion

This policy brief has three main messages. First, local governments, mainly prefectures and large cities which have sufficient capacity and intention to engage in international environmental cooperation, could consider several ways to continue or begin such international cooperation, in areas such as environmental business promotion, environmental education, and reduction of GHG emissions using international carbon crediting.

Second, these local governments could consider several possible financing options such as carbon credits, offsets and eco-points. Citizens generally tend to support these options, although there is a range of views on each option. Each option has various advantages and disadvantages. In particular the options of local governments' utilisation of international carbon credits and encouragement of citizens' individual voluntary carbon offsets could contribute both to fundraising for international environmental collaboration and to climate change mitigation globally.

Third, the survey results suggested that citizens of Japanese prefectures and cities that have capacity and intention of international activities may be likely to support or continue to support international environmental cooperation by their city or prefectural governments, even if the cooperation contributes more to environmental improvement in developing countries than direct business oriented benefits to their city or prefecture[33]. Therefore, it is reasonably likely that citizens would support this kind of cooperation.

The current trend is for some Japanese local governments to increasingly link international environmental cooperation to environmental business promotion and job creation. Although there was strong citizen support for this direction, it was not as strong as support for cooperation for environmental improvement in developing countries. Nevertheless, this direction can also be recommended.

This policy brief argues that it is desirable for local governments to use appropriate citizen consultation mechanisms to help sort out which of these measures is best for each local government, to maintain citizen support, and obtain ideas for improving implementation or new opportunities for international environmental collaboration. Although Japanese local governments engage in comprehensive consultation and collaboration in the field of waste management and recycling, there are still only a few cases in the area of international environmental cooperation. Close consultation on international policy with citizens at the local level in Japan is rare, unlike at the national level where the ODA charter has been discussed and revised based on both formal and informal stakeholder dialogue[34]. Further efforts to implement citizen consultation processes are encouraged.

[33] Also note that more respondents stated that (non-business oriented) benefits for the city's environmental education were important than those who stated improving the environment in developing countries was important.

[34] See http://www.grips.ac.jp/forum/newpage2008/oda.htm for the multi-stakeholder consultation activities and advocacy by Nihon no ODA wo kaeru kai (Group to reform Japanese ODA).

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• References

Akita prefectural government, 2006, Kaku ken ni okeru shinrin kankyou zei no omona shito (Main expenditure items for local forest protection tax by each prefectural government). Manuscript at < http://www.pref.akita.lg.jp/www/contents/1157363299755/files/dai4kai-siryou4.pdf > [cited 9 December 2011].

Fujikura, R., 1997, Kankyo kokusai kyoryoku ni okeru chiho kokyo dantai no yakuwari to kadai (Roles and challenges for local governments in international environmental cooperation). *Kokusai Kaihatsu Kenkyu* 6, 75-88.

Japan International Cooperation Agency, 2010. Kusanone gijutsu kyoryoku jigyo (Grassroots technical cooperation projects). Manuscript at < http://www.jica.go.jp/partner/kusanone/what/chiiki.htm > [cited 23 June 2010].

Japanese government, 2003. Seifu kaihatsu enjo taiko (Guideline for Official Development Assistance). Cabinet decision.

Kato, T., 2011, Henkyo kara sekai wo kaeru: Sosharu bijinesu ga umidasu “mura no kigyoka” (Changing the world from the periphery: “Village entrepreneurs” produced by social business). Tokyo, Japan: Daiyamondo sha.

Kato, T. and H. Nakamura, 2011, Sishoson no eko pointo jigyo wo tsujita shimin no kankyo kokusai kyoryoku: eko pointo no kifu ni chakumoku shite (Funding International Intercity Environmental Cooperation through Eco-Point Programs: Japanese Citizens’ Attitudes toward Donating Eco-Points). *Kankyo Kagaku Kai Shi* 24(4), 341-352.

Kitakyushu City, 2011a, Heisei 22 nendo shimin ishiki chosa: Shisei hyoka to shisei yobo (Fiscal year Heisei 22 citizens’ awareness survey: City policy evaluation and request). Kitakyushu, Japan: Kitakyushu City.

Kitakyushu City, 2011b, Kankyo mirai zei gaiyo (Brief contents of environmental future levy). Manuscript at < http://www.city.kitakyushu.lg.jp/zaisei/file_0057.html > [cited 6 February 2012].

Nakamura, H., 2010, Enhancing low-carbon development through international co-operation between cities in Japan and in Asian developing countries: Roles and activities for an international platform on low-carbon cities in Asia. IGES Discussion Paper. Hayama, Japan: Institute for Global Environmental Strategies.

Nakamura, H., 2011, Lessons learnt from regional intercity networking - To promote sustainable cities in Asia -. IGES Policy Report. Hayama, Japan: Institute for Global Environmental Strategies.

Nakamura, H., and T. Kato, 2010a, Chikyu ondanka to kankyo kokusai kyoryoku ni kansuru shimin chosa: Kekka gaiyo (Social survey on climate change and international environmental cooperation: brief results). Paper presented at study meeting on low carbon city, Hosei University, Tokyo, Japan on 25 June.

Nakamura, H., and T. Kato, 2010b, Jichitai niyoru kankyo kokusai kyoryoku ni taisuru shimin no ninchi to shiji tono kankei (Citizens’ recognition of local government’s international environmental cooperation and their support). IGES Discussion Paper. Hayama, Japan: Institute for Global Environmental Strategies.

Nakamura, H. and T. Kato, 2011a, Jichitai niyoru kankyo kokusai kyoryoku ni taisuru shimin no shiji kozo: chikyu ondanka ni kansuru kokusai toshikan ren-kei heno shisa (Japanese citizens’ perspectives on municipal governments’ international cooperation for the environment: Implications on International Intercity Collaboration on Climate Change). *Kankyo Kagaku Kai Shi* 24(2), 89-102.

Nakamura, H., and T. Kato, 2011b, Climate change mitigation in developing countries through interregional collaboration by local governments: Japanese citizens’ preference. *Energy Policy* 39, 4337-4348.

Nakamura, H., and T. Kato, 2012a, Japanese citizens' views on using voluntary carbon offsets for collaboration with developing countries: An experimental social survey of Yokohama and Kitakyushu. IGES Discussion Paper. Hayama, Japan: Institute for Global Environmental Strategies.

Nakamura, H., and T. Kato, 2012b, Kabon ofusetto wo tsujita tojokoku teitansogata hatten shien no kanosei: kitakyushu shimin no jidosha riyo ni kansuru ofusetto iko bunseki (Low carbon development in developing countries through carbon offset: Preference of offsetting emissions from driving in Kitakyushu City, Japan). IGES Discussion Paper. Hayama, Japan: Institute for Global Environmental Strategies.

Nakamura, H., M. Elder, and H. Mori, 2011, The surprising role of local governments in international environmental cooperation: The case of Japanese collaboration with developing countries. *The Journal of Environment and Development* 20(3), 219-250.

Western Climate Initiative, 2011, WCI cap & trade program. Manuscript at < http://www.westernclimateinitiative.org/the-wci-cap-and-trade-program > [cited 20 January 2012].

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