What innovative actions has Nagano prefecture taken to mitigate climate change and achieve other benefits?

In the wake of the 2011 Fukushima disaster, the Nagano prefecture government established a new climate change policy division. Shortly after my transfer from the Ministry of Environment, Japan, I became the first director of this new division. Once created, our division started to encourage and promote renewable energy as well as energy conservation. One way to promote sustainable energy involved the creation of a renewable energy network called Shinshu Renewable Energy Network (Shinshu-net). Shinshu-net brought together non-profit organisations (NPOs) and companies as well as those experienced/interested in renewable energy to form several locally based partnership associations and committees (between 2011-2013, 18 such associations were created). The network then aimed to spread locally based renewable energy by conducting seminars, sharing information, and awareness raising activities across Nagano.

The Suwa Solar Power Project was the first partnership project to come out Shinshu-net. The project demonstrated the feasibility using prefectural facilities to incubate locally-based businesses. More concretely, Nagano prefecture lent the roof of a public sewage plant to a private company (selected by public offering). The company then installed solar panels on the roof; a portion of the profits from the plant were then collected and donated back to Shinshu-net. Beyond producing energy, the company also conducted an experiment to compare electric power generation through three different solar panels and carried out public energy education programs.

While major energy companies based in Tokyo have sufficiently large resources to develop mega projects, Nagano prefecture has concentrated its more modest resources on renewable energy resources that promote locally owned and community based energy projects. In doing so, there is a recognition that these projects will feed back to the local economy. We therefore promote projects to develop human resources and offer subsidies (loans with no interest) for planning and installation of new technologies. As the local government shoulders part of the risk for the renewable energy program, banks frequently accept loans for the projects (where they might not in a purely commercial setting). During the implementation of these projects, we have become more mindful of their environmental and social benefits—for instance, the projects have brought new revenues to rural areas. We also seek to extend the benefits of these projects—for example, we are using profit from the small hydro-power plants to support initiatives for local children.

Another initiative that promoted new approaches to producing energy was “The 1 Village 1 Renewable Energy Project.” Through this initiative, we have seen the emergence of 162 new registered entities in Nagano. It is nonetheless worth noting that only few are newly established citizen run projects whereas many are owned by existing companies and government...
departments. In the future, we hope to increase the number of locally owned energy projects.

**How has Nagano shared its climate change experiences with cities in and outside Japan?**

Nagano has been in communication with other cities and towns in Japan as well as in Germany. In terms of domestic collaboration, although it was a national level event, Nagano organized and hosted the 5th Small Hydro Energy Summit in 2014 to learn about private sector and national level experience with hydropower. In terms of international cooperation, Nagano started working with Germany last year and held seminars and symposia to share knowledge and experiences as part of that collaboration. Through these exchanges, I found that Nagano and Hessen (Germany) share much in common (such as a desire to implement community-based energy projects) that could lead to constructive collaboration. When there was G7 Summit last year in Toyama, Japan and Germany’s environment ministries indicated their willingness to support communication between local communities in their respective countries. Nagano is therefore hoping to take advantage of this support to promote further local and global partnerships in the future.

**Based on experiences in the Ministry of Environment, Japan, how can cities and national governments cooperate on climate change?**

In Japan the Ministry of Environment (MOE) and Ministry of Economy, Trade and Industry (METI) are both active in climate change policy. These two agencies nonetheless may have competing perspectives on those policies. Hence, policy integration at the national is relatively difficult. Local governments also confront sectoralism. However, since I am in charge of both climate change and energy policy in Nagano prefecture, there is one division for these two policy areas. This makes integration comparatively easier.

Another important consideration is that enacting new policies requires extensive discussions and can confront numerous delays at the national level. In Nagano, we were able to move comparatively more quickly. A new scheme for promoting energy efficiency and saving energy in businesses and buildings is a good illustration of how quickly we can move. The new scheme consisted of not just one but a package of energy conservation policies and measures for business. That package began by laying out the plans and reports of energy conservation for business. Nagano prefecture then provides advice to the businesses so that they can conduct more efficient energy savings. In a final step, we evaluate business activities and plans to agree on ambitious energy savings targets. This scheme is additional to the one at the national level, but was tailored to local needs and likely benefitted from closer engagement with the business sector. A possible lesson from this experience is it may be prudent to encourage local government to develop their own systems; the national government can then help spread and scale successful cases. A favorable sign is that after the Paris Agreement both national and local governments began to share a long-term vision for climate change and tried to strengthen their partnership.

**Updates**

ICLEI - Local Governments for Sustainability (East Asia Secretariat) invited the Institute for Global Environmental Strategies (IGES) and Stockholm Environment Institute (SEI) to provide co-benefits training for its Capacity Building Programme on Climate Change and Air Pollution Co-Control from 24 to 28 April 2017 in Seoul, Korea. Attendees consisted of 11 public officials from 9 ICLEI member cities in Asia who received training on identifying, quantifying and integrating co-benefits (from IGES) and a software package called LEAP-IBC tool for estimating co-benefits (from SEI).

**Publications**