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The Final Chapter
**An Integrated Solution to the Environmental
and Economic Crises**

1 A call to action

The world today is faced with two crises that call for immediate action: the financial/economic crisis and the environmental crisis. If we hope to secure a sustainable world, we must integrate the domains of public investments and public policy in what has been called “the Green New Deal” (green employment). This entails that we view the sustainable world from the perspectives of the environment and society, from which it follows that we must invest in job creation, stimulate domestic demand, encourage research and development and do everything that we can to preserve the environment, all of these at the same time. Undoubtedly, governmental expenditure now will burden future ages, but the point is whether the money that is spent will contribute to the laying down of the foundations of sustainability. It is time for us to put our heads together and think daringly about “chasing these two hares of public policy” (Yoshida, 2009).

Barack Obama, the current president of the US, has said that whichever country is the first to provide clean energy will assume the leadership role in the global economy of the 21st century, and to this end he is planning to invest 150 billion dollars for ten years to promote a clean energy economy and create 5 million (green) jobs. The issues under consideration include facilities for renewable energy, the boosting of public transportation, the adoption of insulation and alternative heat sources for millions of houses, and the promotion of the local production of domestic foods. The new ‘Economic Recovery and Reinvestment Act’ focuses, in particular, on large-scale public works projects, with the offer of government aid to insulate buildings and provide for employment in the fields of energy saving. The proposals also seek to promote the extension of public transportation systems such as streetcars and high-speed trains, while working to develop a transmission system called “the smart grid”. The fourth aim is to accelerate the development and spread of renewable energy by such means as wind power, biomass, and solar power. This is the plan. As Chapter 9 explained in some detail, Obama’s new energy policies clarify the strategy by which the US government will adopt the emissions trading system of cap and trade by auction and thereafter by using the sales total of the auction to promote the development of environmental technology, preserve the natural world, and create employment related to these activities.

The EU, too, has a new growth plan, by which it sets out to create industries and employment through the implementing of measures to control or

halt global warming and establish its position as a pioneer, thus leading the world in the search for sustainability. Indeed, ten years have already passed since the EU first began to implement its policies of the Green New Deal.

2 A strategy for a Low-carbon and recycling society

As we mentioned in Chapter 1 (page 6), the latest report of the UN Millennium Ecosystem Assessment (Millennium Ecosystem Assessment Board, 2005), in which more than 1,300 scientists from 95 countries participated, has alerted us not only to the problem of environmental pollution but also to the serious situation brought about by deforestation, overgrazing, natural disasters and the disruption of the ecosystem. We must therefore pay attention not only to global warming but also to the related issues of biodiversity, the vital importance of natural symbiosis, and the worsening condition of endangered species.

With that in mind, we understand that the political issues that will come to dominate every attempt to create a framework wherein to consider all the various global environmental problems will fall within the scope of the Climate Change Policy. The problem of achieving by 2050 the worldwide reduction of CO₂ by half its present rate, especially the 80% reduction required of developed countries, is the long-term policy challenge to which even the US of President Obama gives heed. That is why we submit our design for a Low-carbon society, and why, as a consequence, we should recognize that the design for a recycling society must fall within the plan for dealing with climate change.

When governments aim to restore demand by spending on public works so as to create employment and set off ripple effects throughout the economy, they need to use a sustainability indicator to examine the effect of the project on the reduction of CO₂ and conditions of employment. We also need such a sustainability and employment index to evaluate the construction of infrastructures. Projects that receive high long-term evaluations from the sustainability indicator, such as the construction of public transport systems, networks of Bullet Trains, insulation or anti-seismic works, should be given priority over highway construction projects which have only a short-term effect on local employment.

According to the IPCC, the world's developed countries need by 2020 to reduce their emissions by 25–40% from 1990 levels to keep global warming below 2 degrees Celsius. In the UN General Assembly in September 2009, Japan's short-lived Prime Minister Yukio Hatoyama declared that the

Japanese government's midterm target for 2020 was a reduction of emissions by 25%. The National Institute for Environmental Studies has calculated, on the basis of the 70% reduction model by 2050, that a 25% reduction from 1990 levels will cost 5-6 trillion JPY (\$60 billion) per year. The breakdown for this would include an overhaul of the steel industry, investment in energy saving in the chemical industry, residential solar power for 1.77 million houses, a ten-fold increase in wind power, an 80% introduction of next-generation car design, the construction of energy saving houses, the use of high-efficiency water heaters. Although these are highly expensive projects, they would encourage domestic demand, which in turn would advance the cause of allied industries, create employment and, through technical development, enhance international competitiveness. Two big arguments would first have to be resolved before this plan could be put into operation. One is whether or not these additional costs should be financed by the environmental tax were it to be classified as general revenue as well as by imposing a tax on company businesses. The other is what we should do about emissions trading. Overall, the greatest issues to be settled before the Japanese Green New Deal policy can be established will be how to set a midterm target, and what kind of policy should be adopted.

3 The environment industry and employment

The collection of used products for recycling requires additional work, which also means that it creates opportunities for new jobs. Since the number of people employed in the resource recovery and distribution of used products is already relatively large, we shall need to consider in detail the employment effects on such related matters as the classification, or re-classification, of separate collections of various waste products, including used container packing, wastepaper, used household appliances, used cars, as well as the recycling of food. Also important are the employment effects in the processing of the collected products and the effects of the recycling on the reduction of CO₂. Conventional technical development aims mainly at 'saving labor cost', but the core purpose should be 'saving the environment' (reducing the environmental load).

The labor costs of forest-related public works projects that support forest improvement make up a high percentage of the project costs, and whereas the costs for land compensation account for an extremely small proportion of the project costs, the number of direct employees per project cost is large, which means that the employment effect on forest improvement is extremely high and

contributes to the activation of the economy. Forest improvement is important because it can achieve the securing of the quantity of CO₂ absorption and of local employment. To accomplish the targets of the Kyoto Protocol, the Japanese Government's Forestry Agency evolved a plan for the six years from 2007 to promote the yearly thinning of 550,000 ha (an area equivalent to twice that of metropolitan Tokyo), a total of 3.3million ha over the 6 years, thus aiming to fulfill its long-term forest absorption target of 13 million t-C (ton of carbon). Serious problems remain to be solved, however, in terms of both quantity and quality (Kobayashi, 2008: 234–236).

The first problem is that of quantity. Although the Forestry Agency prepared a budget of tens of billions of JPY, the area thinned in 2007 was less than 30–40% of the target of 550,000 ha. There are three main reasons for this. The first is the low profitability and heavy burden of the thinning. Since the thinned materials are usually sold below cost, the work of thinning is supported by a government subsidy of approximately 50% and a local government subsidy of approximately 20%, but this is difficult for local governments as they themselves are also under severe financial pressure. The second reason is a growing shortage of forestry workers associated with this type of employment and the aging of those who do remain. Approximately 50,000 people work in the national forestry business, but the numbers are declining and more than a quarter of those employed are 65 or older. Although workers with low skills or volunteers can cut and thin young trees, they lack the appropriate skills for pre-commercial and commercial thinning, and it is therefore essential to find workers immediately and conduct short-term skills training. A final reason is that the borders of forest areas are uncertain.

As for skills training, we may learn a useful lesson from “the Shinshu woodcutter lecture” that Mr. Yasuo Tanaka gave when he was governor of Nagano and ran a training course on thinning for construction workers. Here in Japan we cannot escape the need to establish frameworks that suit our particular circumstances if we hope to realize the aims of the ‘Economic Activation Act’ and the ‘Global Warming Solution Act’ and so deal with the two crises, just as the US is attempting to do with its own ‘Recovery and Reinvestment Act’. One effective means, in terms of the creation of employment and the saving of energy would be, for example, the provision of financial assistance to improve the heat insulation of buildings.

4 Asian cooperation: from crisis to creation

Since the countries of East Asia — especially Japan, South Korea and

China — have for some time been the major producers of exports to Europe and North America, they have become known as “the world’s factory”. The region has also become the source of the world’s largest emissions of CO₂ and waste. While Japan has continued to export its digital products and cars and has had to lay off many workers in the manufacturing industries to increase export competitiveness, the bursting of the financial bubble meant that Japan had to depend more and more on its external markets, and by pricing her exported digital products more cheaply than she prices the same goods in the domestic market, Japan has begun to compete with South Korea in what amounts to a price war. Such a structure, wherein an export-oriented and profit-seeking economy makes laborsaving cuts with the intention of selling cheaply abroad and expensively at home, is nevertheless consistently exposed to the vagaries of consumer spending and overseas exchange rates. Furthermore, Chinese and Japanese exports are stocked in American treasury holdings in dollars, and these two countries are influenced much more strongly by America’s financial crisis than countries less bound to the dollar. It is therefore necessary that China, Japan and South Korea should expand their domestic demand, improve “the quality of life” of their workers, and cut the people’s working hours; and the most effective way to do that would be to adopt the Green New Deal policy that connects public works spending to environmental measures. The time is now ripe for those areas of East Asia where the degree of dependence on exports is high and the worker protection system is weak to give up their role as a ‘manufacturing’ colony of the US (or the EU), and aim instead to improve ‘the quality of life’ of their own people. It is time to recall that the origin of the word ‘economy’ is “governing a nation and providing relief for the people”.

At the same time, we ought not to forget that as well as signifying ‘danger’ a crisis may also offer us ‘opportunities’. The present crisis asks us whether we have the ability and the determination to leave our present wasteful way of life behind us and spend the rest of the 21st century laying the foundations of a sustainable world. While political conflicts over such matters as territory or resources are always likely to be a challenge, we shall not be able to achieve world peace unless we can establish the basics of political cooperation in the commonly agreed upon fields of economics and the environment. This is the vitally important lesson that the European Union has taught us.

The present unofficial ‘union’ of Japan and China and South Korea has sometimes been referred to as a collaboration that holds the fate of East Asia’s environmental and economic future in its hands, and if we wish for the environmental preservation of the whole of East Asia, then it is indeed true

that cooperation between these 'big three' is indispensable. The air quality and the marine life of the coastal areas of Japan and the Korean peninsula are at present seriously polluted by effluents issuing from Mainland China, and joint action by the three countries is urgently called for to combat air pollution, to reduce emissions of CO₂, to prevent the contamination of water and halt the pollution of marine life.

5 "The Green Economy": from three standpoints

The Green New Deal was proposed to integrate financial, economic and environmental policies, and while it has achieved some results, it is limited by a large deficit, it has little effect on employment, and it operates a poor policy against global warming. We need therefore to move on from "the Green New Deal" to "A Green Economy", which has a much longer perspective.

We may sum up the ideals and aims of 'The Green Economy' by reflecting on its characteristics as seen from the three standpoints that have grounded this book and offered viewpoints for its arguments: sustainability, capability and governance.

Sustainability rests upon three foundation stones: the environment, economics and society, and if the world is not to go bankrupt (which at the present rate is just where it *is* going), then governments must work together to integrate policies, impose regulations and public policies on the market so as to reform the current situation and so stabilize the ground on which sustainability stands.

Capability reflects what persons or communities are capable of doing when human talents are given full scope to act at their best. The development of human capability is the basic condition essential for economic development as it is fostered by education and training in environmental management, by an employment policy that encourages on the job training and education, and that takes measures to counter the falling birthrate and balance the aging population. Especially important will be policies designed to protect the weakest from the effects of economic depressions and the enveloping environmental crisis.

Governance, too, needs a stable base, with a field of vision able to command an effective strategy: a combination of actions at all levels of society, from those at bottom just as much as from those at the top, as the conductor of an orchestra can do nothing without the players who may rely on him (or her) for guidance. In Asia, we particularly need unification of policy, local studies and international cooperation throughout the region to safeguard the

environment.

Japan herself needs to set a midterm target by 2020 and a long-term target by 2050 to prevent further global warming, and must lay down concrete plans for that end in its medium-to-long term plans. In the short term, it is important to reform the system of investments and the flow of funds, and rather than defend a route for major companies to secure a market, it must adopt policies and provide support for spontaneous development, it must find workers to thin forests, it must activate responsive local revitalization and restore the environment. It must support green industries, boost employment in the regions and expand welfare. Measures to realize such ends focus on changing the structure of taxation and finance, and that of finance and investment. A system reform that adopts the green tax reform and the Feed in Tariff for renewable energy is indispensable for the Green Economy. Should we in fact be able to provide remedies to treat the consequences of giving up the mechanism of global capitalism responsible for the financial, economic and environmental crises that have affected the globe, the results of those treatments will be limited, and many people fear that similar situations will arise again and again. Yet first of all, along with policies that lead to the reform of the courses taken by the capitalist engine as well as attending to the results, we need countermeasures to aid the weakest people who are damaged most seriously by those results, as, for instance, the inhabitants of small island states who are likely to be harmed by the menacing rise in sea levels.

A question, though, remains: can the prescribed economic and fiscal policies to be carried out as Green Economy policy in every country actually create conditions of true employment, protect the environment, activate the economy, and become the genuine foundation for sustainability in terms of society, the environment and the economy? We need national debates and close study to answer that question, and this book offers an analytic viewpoint for that purpose.

The warning signs are dire and are there for all to see. As the UN Millennium Ecosystem Assessment concluded: "The future lies in our hands". As this book has sought to make clear, sustainability does not mean sustaining (or upholding) current conditions; it entails changing them before the world goes bankrupt. We must correct the way in which we have been producing and consuming and must banish unfairness from the earth: such measures are indispensable. We here submit the Theory of Environmental Governance to enhance human capability as a blueprint and prescription to provide for that outcome.